Grampians Health

Clinical Services Plan 2022

Clinical Services Plan

FINAL REPORT

20 July 2022

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LIST OF ABBREVIATIONS

ABG	Arterial Blood Gas
ACE	Acute Care of the Elderly
ACFI	Aged Care Funding Instrument
ACSC	Ambulatory Care Sensitive Conditions
ACU	Australian Catholic University
ADL	Activities of Daily Life
ALOS	Average Length of Stay
AMHS	Area Mental Health Service
AMU	Acute Medical Unit
ANUM	Assistant Nurse Unit Manager
AOD	Alcohol and Other Drug
ASA	American Society of Anaesthesiologists
ASR	Age Standardised Rate
AV	Ambulance Victoria
BAROC	Ballarat Austin Radiation Oncology Centre
BPSD	Behavioural and Psychological Symptoms of Dementia
BOHS	Ballarat Oncology and Haematology Services
BRICC	Ballarat Regional Integrated Cancer Centre
CACPS	Community Aged Care packages
CCL	Cardiac Catheter Laboratory
CCU	Coronary Care Unit
CDAMS	Cognitive Dementia and Memory Services
CGS	Clinical Governance Structure
CHC	Complex Health Care
CHF	Chronic Heart Failure
CHSP	Commonwealth Home Support Program
C-L	Consultation Liaison
COPD	Chronic Pulmonary Lung Disease
CRG	Clinical Related Group
CSP	Clinical Services Plan
DAP	Daily Accommodation Payment
DCR	Direct Current Reversion
DRG	Diagnostic Related Group
EACH	Extended Aged Care in the Home
ECG	Electrocardiogram
ECR	Endovascular Clot Retrieval
ED	Emergency Department
ENT	Ear, Nose and Throat
ERAS	Enhance Recovery after Surgery
FACEM	Fellow of the Australasian College for Emergency Medicine
FTE	Full-Time Equivalent
GEM	Geriatric Evaluation Management
GH	Grampians Health
GI	Gastro-Intestinal
GP	General Practitioner
GPHU	Grampians Public Health Unit
GPO	General Practitioner - Obstetricians
HARP	Hospital Admission Risk Program
HIP	Health Independence Program
HITH	Hospital in the Home
HMO	Hospital Medical Officer
ICT	Information Communication Technology
ICU	Intensive Care Unit
IPM	Inpatient Projection Model
LAC	Local Area Co-ordinators
LGA	Local Government Area
LOS	Length of Stay
LPHU	Local Public Health Units
MAPU	Medical Assessment and Planning Unit
MBS	Medicare Benefits Schedule
MCRG	Major Clinical Related Group
MOU	Memorandum of Understanding
MTD	Multi-Disciplinary Team
NDIS	National Disability Insurance Scheme
NP	Nurse Practitioner
OAHKS	Osteoarthritis Hip and Knee Screening
O&G	Obstetrician and Gynaecologist

PAC	Post-Acute Care
RN	Registered Nurse
PBS	Pharmaceutical benefits Scheme
PCP	Primary Care Partnership
POC	Point of Care
PPE	Personal Protective Equipment
QEC	Queen Elizabeth Centre
RAD	refundable Accommodation Deposit
RCH	Royal Children's Hospital
RIR	Residential-In-Reach
RIPRN	Rural and Isolated Practice Registered Nurse
RLOS	Relative Length of Stay
SACS	Subacute Ambulatory Care Services
SC4RC	Strengthening Care for Rural Children Clinician
SCN	Special Care Nursery
SSU	Short Stay Unit
STEMI	ST-Elevation Myocardial Infarction
STOP	Surgical Termination of Pregnancy
SXRT	Superficial Radiotherapy
TCP	Transition Care Program
TOE	Transthoracic Echocardiography
UCC	Urgent Care Centre
VCAT	Victorian Civil and Administrative Tribunal
VMO	Visiting Medical Officer
VPCC	The Victorian Perioperative Consultative Council
VTS	Victorian Stroke Telemedicine
WASE	Weighted Ambulatory Service Event
WHO	World Health Organization
WIES	Weighted Inlier Equivalent Separation
YPARC	Youth Prevention and Recovery Care Unit

TERMS

ACE	Acute Care for the Elderly (ACE) is a service model designed to meet the acute health needs of older people, particularly those at risk of functional decline and poor outcomes, including those with dementia and delirium. Defining features include comprehensive multidisciplinary assessment, high acuity care and early discharge planning and transfer to GEM, Rehabilitation, Transition Care, home, or another service.
ACFI	Aged Care Funding Instrument (ACFI) is the basis on which the Commonwealth Government funds public and private residential aged care facilities. It is a funding instrument that will change to the Australian National – Aged Care Classification.
ALOS	The Average Length of Stay (ALOS) refers to the average number of days patients spend in hospitals. ALOS is calculated by dividing the total number of days stayed by inpatients by the number of separations over a particular period.
AN-ACC	Australian National – Aged Care Classification is a new funding instrument by the Commonwealth Government to fund residential aged care facilities. The new funding instrument will come into effect in October 2022 and has a transition period of up to two years.
Baseline Projections	Baseline projections are demand estimates derived from the Department of Health's Inpatient Projections Model and ED Projections Model.
DRG	Diagnosis Related Groups (DRG) are a classification system which provides a clinically meaningful way to relate the number and type of patients treated in a hospital to the resources required by the hospital. AR-DRGs group patients with similar diagnoses requiring similar hospital services.
HITH	Hospital-in-the-Home (HITH) is a program that has been in Victoria since the mid-90s. HITH provides admitted care in the patient's home or other suitable location. HITH is an alternative to a hospital stay and can be offered to patients as an option.

MAPU	A medical assessment and planning unit (MAPU) is a short-term medical/surgical unit for timely care of a patient in their first 24-48 hours in hospital. Patients are rapidly assessed by multidisciplinary staff and treatment is commenced as early as possible. If appropriate, they may be discharged directly home. However, if required, they may be transferred to a specialty ward or other service for ongoing care. The aim of the MAPU is to reduce a patient's time in hospital. Referral to a MAPU usually come from Emergency Department.
Market Share	Market Share is the rate of a *health service* to meet the health care needs of a (defined) localised catchment population. By definition, the inverse of market share indicates the rate that the local catchment population receives treatment at other health services. It is a health service-based rate.
NWAU	National Weighted Activity Unit is a measure of health service activity expressed as a common unit. It is the National Weighted Activity Unit. It is the measure against which the National Efficient Price (NEP) is paid. It now replaces WIES as the activity measure and basis of payment in Victoria.
PRE(M)s	Patient-reported experience (measures) are the formally reported patient experience of services provided. Themes covered in PRE(M)s generally include service access, timeliness of service delivery.
PRO(M)s	Patient-reported outcome (measures) are the formally reported status of a patient's health condition without interpretation of the patient's response. Themes cover in PRO(M)s can include symptoms, daily functioning and quality of life. PRO(M)s are usually measured on two or more occasions to enable comparisons to be made over time.
RLOS	The Relative Length of Stay (RLOS) is the duration of stay in hospital for a single episode relative to the typical average length of stay across all hospitals for the same clinical condition, or clinical grouping. Relative Length of Stay is sometimes referred to as the Relative Stay Index. The terms are synonymous.
RIR	Residential In-Reach (RIR) is a service led by specialist nursing and/or medical staff who treat residential aged clients for acute health issues in their residential facility. The service is designed to reduce resident dislocation/disorientation and reduce Emergency Department presentations from residential aged care facilities.
RUR	The Relative Utilisation Rate (RUR) is the number of services used over a period divided by a population denominator, compared with health care utilisation across the state (or other larger population denominators).
Self-Sufficiency	Self-Sufficiency is the proportion of a (defined) *catchment population* that is being treated by any health service in the catchment. It is about the population's needs being met locally. By definition, the inverse of the self-sufficiency rate indicates the proportion of the population that need to travel out of the catchment for treatment. It is a population-based rate.
WASE	Weighted Ambulatory Service Events (WASE) are the occasions of service (events) used to measure fund acute specialist and non-admitted activity in Victoria. Public service events generate public WASE and are paid a WASE public price. MBS-billed service events generate MBS-billed WASE and are paid a WASE private price.
WIES	Weighted Inlier Equivalent Separation (WIES) is a cost weight (W) that is adjusted for time spent in hospital (IES) and represents a relative measure of resource use for each episode of care in a DRG. WIES allocated to an episode depends upon the episode's DRG, the amount of time spent in hospital and the episode's eligibility for WIES co-payments. WIES prices vary between hospitals to account for differences in specialisation, economies of scale and levels of remoteness.

DATA

The CSP approach has also required specific consideration of demand projections that are meaningful to a newly amalgamated entity. In this regard, the CSP has been cognisant of the impact of COVID-19 on service utilisation and patient access in 2020-21 and 2021-22. To avoid distorting future demand, the CSP has based any projections on the latest consolidated information pre-COVID-19, namely 2019-20, which were largely - but not completely - unaffected by COVID-19 with respect to emergency presentations, elective surgery or ambulatory and community-based services. Where the CSP deviates from this base, the projections have been explicit in defining the baseline for the projections.

It should also be noted that although the narrative within the report refers to each campus of Grampians Health as Ballarat, Dimboola, Edenhope, Horsham and Stawell; the data presented in tables and figures refer to the new the campuses by their previous entity names as the source data for analysis presents data in this format.

DISCLAIMER

Please note that, in accordance with our Company's policy, we are obliged to advise that neither the Company nor any employee nor sub-contractor undertakes responsibility in any way whatsoever to any person or organisation other than Grampians Health in respect of information set out in this report, including any errors or omissions therein, arising through negligence or otherwise however caused.

Executive Summary

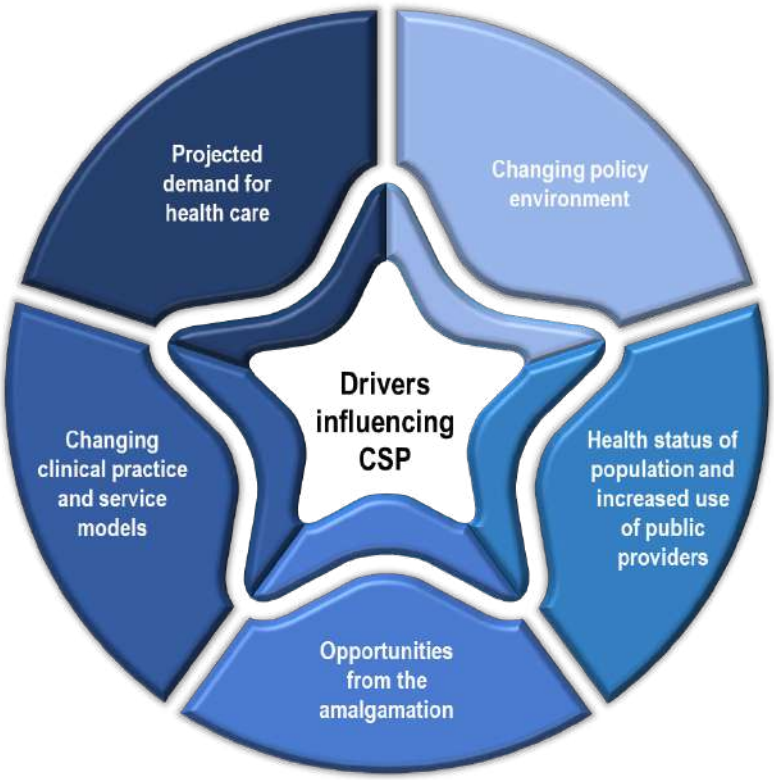
The development of this clinical services plan (CSP) has provided the new entity of Grampians Health with an early opportunity to comprehensively plan health services for it primary catchment, and the broader regional catchment, to identify how to best demonstrate enhanced service provision.

Specifically, the CSP articulates the scope of expected services including addressing priority service gaps, and changes to the model of service delivery for *all clinical service types* at the entity level, and detailed strategies for each campus for the period 2021-22 to 2036-37.

DRIVERS

There are many drivers that can influence the development of a CSP as outlined in section 2, the main drivers for this CSP are summarised in Figure ES-1.

Figure ES-1: Key drivers of Grampians Health CSP



KEY THEMES

The key themes identified across most of the CSP clinical streams and service types are summarised in Figure ES-2 and discussed below.

Figure ES-2: Key Themes

This CSP has identified important themes that run through the document, which are consistent with the broader Grampians Health strategic plan. The themes cut across the clinical streams and campuses and can be synthesised as follows.

1. **Improving Access.** *This is about more services closer to home and addressing amalgamation commitments. This is a cornerstone theme with principal strategies that:*
   a. **Enhance self-sufficiency** *for the region and specifically improving market share for Grampians Health communities*;
   b. **Develop new models of care** *that support services closer to home, improve patient flow, and support services at home and in community settings*;
   c. **Address Service Gaps.** *Provision of additional services over time for services that can reasonably be expected to be provided in the Grampians Region;*
   d. **Increased availability of specialist clinic services, especially to the western campuses of Grampians Health;**
   e. **Improve access to mental health services;** *and*

f. **Develop Ballarat campus as a genuine 7-Day hospital**. *Extending the hours of operation to enable the normal functions of a five-day hospital to be extended, improving access and flow, and timely and more comprehensive care.*

2. **Enhancing Service Integration**. *This is about more seamless health care for the patient* through *partnerships and alignment of Grampians Health services with other health care providers including GPs, community health services and quaternary hospitals in Melbourne. It includes maximising opportunities for holistic care*.

3. **Clinical Capability.** *Across the new organisation, there is an expectation that services will have enhanced clinical capability. As the regional referral health service, Ballarat is a level 5 clinical capability service in almost all clinical services, and aiming to develop level 6 in selected clinical streams. Horsham is a level 3 service with an expectation of developing some level 4 capability across core medical and surgical services.*

4. **Improving the Patient Experience.** *This is focused on patient-centric care, and creating Patient Value, and measuring and reporting patient outcomes.*

5. **Leadership**. *Grampians Health, as the regional service provider and the largest health service, has a core role for clinical and governance leadership in the region. It will also mean maximising opportunities for networking, collaboration and developing Grampians-wide services.*

6. **Workforce** *is a key enabler and has been 'singled out' as a critical factor across almost all clinical streams. There are some high priority areas of workforce recruitment/engagement/ development as well as more longer-term issues relating to education, and training that have been identified.*

7. **Digital Health transformation** *is also a key enabler, including an eMR capability, virtual and real time clinical care, data entry at point of care, and real-time data for operational efficiency and patient flow. This is premised on investment in a fit for purpose, robust ICT infrastructure and platforms that ensure interoperability across all areas of the organisation, inter and intra campus.*

8. **Improve Capital Infrastructure that is consistent with the proposed service developments,** *requiring improved utilisation of existing infrastructure in the short to medium-term; and master planning and new/contemporary capital infrastructure developments at all campuses*.

Each of these themes are inter-dependent and are overlapping to some extent.

PRIORITY STRATEGIES

This CSP has at its core, around 280 different strategies. Each of the strategies address, or contribute to addressing, improved patient access, more demand met locally, enhanced patient experience and outcomes, and innovative and contemporary service models. This executive summary highlights the most significant of these strategies.

The following priority services are highlighted:

Increase Regional Self-Sufficiency

Increase self-sufficiency in aggregate for acute and subacute inpatients from 80.9% in 2019-20 to at least 85% by 2027-28, and potentially increasing to 90% by 2036-37. Noting each clinical stream will have a separate self-sufficiency 'target'.

Enhance clinical capacity & capability of Western Campuses of Grampians Health

Deliver care closer to where patients live, establish more patient-centric models of care, with fewer patients having to travel to Ballarat for services/care, and relieve demand pressure on Ballarat campus services.

This is a challenging strategy, but one that is a cornerstone for the CSP. The strategy has many components, including:

- Support higher levels of acuity/complexity at Horsham for elective and emergency surgery, ICU, ED, and ACE models. This requires a substantial addition to specialist physicians and surgeons, registrars, specialised nursing and allied health practitioners.
- Develop greater sustainability of acute, subacute, ED and GPs services operated by Grampians Health.
- Re-establish Horsham as a sub-regional surgical hub, delivering surgery to Nhill and Stawell, as well as specialist medical services consultation and support to the sub-region.
- Outreach (travelling sub-specialist surgery teams) from Ballarat to Horsham and Stawell.
- Further develop Stawell as a specialist centre for Day Surgery (requiring a 2nd operating theatre) for Ophthalmology, Endoscopy, Gynaecology and General Surgery. This may include patients on waiting lists from Ballarat and Ararat.
- Develop integrated community hub services at Horsham and Stawell.
- Eliminate out-of-pocket costs at Stawell UCC
- Develop a single integrated ED across Grampians Health, including protocols and practices that support secondary consultations and enable remote clinical management.
- Broaden available in situ and virtual specialist (outpatient) clinics from Horsham, Dimboola, Stawell and Edenhope.
- Expand HITH and Better@Home programs at western campuses.
- Strengthen women's and children's service including midwifery group practice (maternity continuity model) for Horsham.
- Establish 'Recovery Closer to Home' program for patients that have tertiary care in Ballarat or Melbourne returning to western campuses of Grampians Health.
- Introduce service system navigators for Edenhope and Dimboola communities, and clinical stream navigators at Horsham and Stawell.
- Develop Capital Master Plan Horsham, Stawell and Edenhope campuses.
- Expand capacity (beds/cubicles/consultation rooms) to meet projected demand in core services at Horsham and Stawell. This includes a Short-Stay Unit at Horsham.
- Substantially enhance mental health services in the western campuses to include 4-6 acute mental health beds at Horsham, a responsive community mental health program to **double** its current capacity, an available Consultation-Liaison service by psychiatrists, fully collaborate with the new Mental Health and Wellbeing Hub at Horsham and a more inclusive approach to patient eligibility and support by Grampians Health.
- Develop a specialist 'challenging behaviour and dementia' unit at Horsham.

Reinvigorate, expand & clinically enhance community-based service	▪ At Ballarat, increase HITH from 1% to 6% of total separations, and increase subacute care from 8% to 25% of total separations to Better@Home by 2025-26. ▪ At Ballarat, to 2036-37, increase HITH to 10% of acute separations and 30% for subacute separations. ▪ Develop a new model of care that can sustain higher acuity patient in greater volumes in the community. ▪ Substantially enhance community aged care capacity under a post-HCP regime. ▪ Enhance diversion and substitution of HIP/SACS. ▪ Enhance focus on community-based services which will require new community (ambulatory services) hubs at Ballarat, Horsham and Stawell that consolidates and collocates most community-based services.
Regionally responsive mental health service	▪ Develop a mental health and alcohol and drug Crisis Hub at Ballarat. ▪ Further develop a Consultation-Liaison service and improve clinical advisory services to provide a more responsive service to all Grampians Health campuses and progressively to other health care providers. ▪ Increase acute (adult and aged) inpatient beds from 48 to 63, including a new 4-6 bed capacity at Horsham. ▪ Lifting community mental health capacity from ~113,000 occasions in 2019-20 to a baseline of 163,900 occasions by 2036-37 founded on increased prevalence, and then to ~300,000 occasions per annum with increased service intensity consistent with the national demand projections model. This represents a doubling of the existing service volumes and is likely to require 70-75 consultation POCs across the Grampians Region. ▪ Develop service models that recognise lived experience. ▪ Establish a *new integrated community health hub at Ballarat* that collocates HITH, Better@Home, selected specialist clinics, satellite dialysis, chemotherapy, community rehabilitation, community palliative care, community health, community aged care, and NDIS services. ▪ Integrate with the proposed (2025) Community Mental Health and Wellbeing Hubs at Horsham and Ballarat, as determined by government.
Integrated ED service model	▪ Establish a single integrated ED services across Grampians Health. ▪ Expand ED capacity at Ballarat from 27 to 69 POCs, and Horsham from 7 to 13 POCs by 2036-37. ▪ Improve patient access and flow through ED with the development of specific initiatives identified in other strategies. This is designed to improve patient access and achieve waiting time targets for ED. ▪ Introduce a virtual ED that provides responsive telehealth support including direct management of patient care.
Improve Access & Flow	▪ Establish a Discharge Coordination Hub for complex patients at Ballarat. ▪ Develop a sustained focus on patient access and flow that results in an exemplar service for operational efficiency at Grampians Health ▪ Restructure of *HITH, Better@Home, and related programs* that: ▸ Includes senior medical oversight: ▸ Expanded capacity for multi-disciplinary nurse and allied health team; and ▸ A 'pull system' from the 'wards and from ED.

	▪ Integrate all clinical stream services across Grampians Health. For example, establish a cardiac service department with integration of clinical cardiology, interventional cardiology, cardiac specialist clinics and cardiac rehabilitation[1]. ▪ Establish a MAPU/AMU at Ballarat to strengthen rapid and comprehensive assessment undertaken by a core, stable group of clinicians and including a geriatrician at Ballarat. ▪ Establish an acute care of the elderly (ACE) program to promote multi-disciplinary management of older patients with complex acute care needs at each campus. ▪ Establish separate CCU and ICU at Ballarat with expanded capacity and capability. ▪ Establish a Midwifery Group Practice continuity model of care at both Horsham and Ballarat. ▪ Enhance Specialist Clinic access reducing average waiting times for appointments, including New:Review ratios and virtual clinics.
An Exemplar Aged Care Service	▪ Explore the development of a Centre of Excellence for Aged Care. ▪ Develop a strategy for regional 'challenging behaviour and dementia units' at Horsham and Ballarat. ▪ Strategically position Grampians Health as a preferred community aged care package provider. ▪ Develop a consistent service model across all RACS facilities. ▪ Enhance the market position of RACS, noting the most significant market weakness relates to (relatively) poor capital infrastructure. ▪ As part of the broader capital infrastructure programs, include a master plan for public RACS across Grampians Health, including a feasibility study at the QEC site. ▪ Develop the basis for a future conversion of beds to community care packages.
7-Day Hospital @ Ballarat	▪ Plan and progressively develop a 7-Day Hospital at Ballarat, extending operating hours that enable the normal functions of a 5-day hospital to weekends and into the evening, improving access, and timely and more comprehensive care.
Enhance Specialist Outpatient Services	▪ It is proposed that Grampians Health progressively (and demonstrably) improve access to specialist clinics, particularly for residents of the western campuses of Grampians Health. This includes access to specialist acute and subacute clinics, including virtual clinics at all Grampians Health campuses. ▪ As a priority service develop a staged roll-out of additional specifical acute and subacute clinics, including telehealth clinics over the next eight years to 2030. ▪ Enhance Specialist Clinic access by reducing average waiting times for appointments, including New:Review ratios, virtual clinics, and further develop diversion initiatives such as OAHKS and GLA:D.
Regional Surgery Framework & Service Models	▪ Create a single and comprehensive regional elective surgery waiting list. ▪ Streamline patients access to appropriate services according to their need, location, and the elective surgery capability framework. ▪ Increase the use of established and new same day models of surgery. ▪ Establish shared and fast-tracked pathways of care, improve perioperative processes, patient flow and the introduction of an Enhanced Recovery After Surgery (ERAS) program.

[1] This is becoming more common practice for multi-campus entities. The exemplar model is Cleveland Clinic.

	▪ Create opportunities to improve the timeliness of patient access to surgical procedures.
Value Based Healthcare	▪ Progressively develop the foundation steps that demonstrate Value-Based Healthcare, and specifically, 'end-to-end' seamless services that are patient-centric, and patient outcome measures across all service streams.

Workforce Capacity & Capability	▪ Develop sustainable GP services at Stawell, Edenhope and Horsham.
	▪ Support the further development of Rural Generalists (in emergency, obstetrics and anaesthetics in the western campuses of Grampians Health)
	▪ Develop a single Grampians Health Workforce Training Framework for all direct patient workforce streams (medical, nursing, allied health, peer workforce) to be consistently delivered by Grampians Health, irrespective of the different education/training organisations.
	▪ Develop sustainable, locally available medical specialist workforce models for the western campuses of Grampians Health including:
	  ▸ Anaesthetists (ICU and Surgery) and rotating FACEMS (ED), and additional specialist physicians;
	  ▸ Core surgery capability including total of 4 general surgeons, a (local or rotating) orthopaedic surgeon, medical sub-specialists in geriatrics, two psychiatrists, a neurologist and 4 general physicians.
	▪ Recruit medical sub-specialist for Ballarat, including urology, plastics, gynaecology, amongst others.
	▪ Develop an entity-wide operational plan that can address current and projected nursing workforce shortages.
	▪ Develop an entity-wide operational plan that can address current and projected allied health shortages.

Fit for Purpose Infrastructure	▪ Increase hospital-based capital infrastructure capacity by ~37%, or an additional ~200 acute, subacute, ED and mental health *inpatient* POCs across the campuses. ▪ Renew master plan at Horsham (for at least ED, MH, acute beds, a community-based services hub and RACS). ▪ Develop a master plan for Stawell (that includes a second operating theatre, acute bed configuration changes, RACS and a new integrated ambulatory hub). ▪ Develop a master plan for Edenhope, excluding RACS. ▪ Commission the proposed Capital Plan for Ballarat campus. ▪ Increase capital infrastructure of *community-based services* by an estimated 90-100 POCs for Ballarat. This requires the development of a new major integrated community health hub facility that could include dialysis, chemotherapy, community mental health, selected specialist clinics and community rehabilitation, the HITH and Better@Home services, community palliative care, and collocate with other non-Grampians Health community services. ▪ Establish *Challenging Behaviour & Dementia Units*; a 12-16 bed unit at Horsham, and an 8-12 bed unit at Ballarat. ▪ Improve operational efficiency of existing infrastructure including residential aged care and operating theatres at all campuses, the Ballarat catheter laboratories, and acute bed use at all western campuses of Grampians Health. ▪ Lead the development of community asset development in the Grampians region for medi-hotel services and staff accommodation, particularly in the western campuses of Grampians Health.

	▪ Develop a strategy that includes community engagement for the expansion of staff accommodation at each campus, and medi-hotel capacity at Stawell and Horsham, and expanded medi-hotel at Ballarat.
Digital Transformation	▪ Implement an integrated eMR. ▪ Implement Point of Care digital data entry and real-time access to clinical information. ▪ Implement remote monitoring and virtual clinical management for EDs and UCCs, HITH, Better@Home program, mental health, and Health Improvement Programs. ▪ Consider the development of a digital real-time 'control tower' coordination hub for managing hospital patient flow. ▪ Enable greater consumer access and engagement. ▪ Increase digital literacy of staff and the community. ▪ Provide for an adequate WiFi platform at each location/site.

In addition to the priority strategies for Grampians Health outlined above, there are clustered strategies by campus in Section 24.

1. Background, purpose and approach

1.1. BACKGROUND

In November 2021, the Grampians Health was established as Victoria's newest health service. Grampians Health has been formed through the amalgamation of Ballarat Health Services (BHS), Edenhope & District Memorial Hospital (EDMH), Stawell Regional Health (SRH) and Wimmera Health Care Group (WHCG).

The voluntary amalgamation under section 64A of the *Health Services Act 1988 (the Act)* was premised upon **improving the quality, accessibility, and sustainability of services for the respective local communities** of the merger health services.

A key driver for the amalgamation of the four health services to form Grampians Health was to address the persistent inequalities in the health outcomes of people in the broader Wimmera region and to improve access to local health care. ***Specifically, the amalgamation sought to address the pressing and growing challenges to the sustainability of local health services,*** including:

- Low and declining access to health care locally;
- Missed opportunities to better utilise capacity across the region to grow local services; and
- Severe challenges in recruiting and retaining key medical, nursing and allied health workforces.

The merger agreement for the formation of Grampians Health was the culmination of an extensive due diligence process undertaken by the four participating health services. It has included a clear definition of the shared objectives and consideration of a full range of options, extensive engagement with patients, staff and the respective communities, and a comprehensive examination the implications of future options leading to a fully informed decision in the best interests of each of their communities.

1.1.1. Merger Health Services

BHS is the largest health service, and the main public referral health service in the Grampians Region. It comprises two main campuses in Ballarat – Ballarat Base Hospital and Queen Elizabeth Centre. The health service provides a comprehensive range of acute, mental health, child and family, subacute, aged care, and some community health services. BHS provided almost two-thirds of all public hospital care for Central Highlands residents and almost half for Grampians' residents. BHS is the largest residential aged care public provider in Victoria through nursing home care for permanent, transition care and respite residents. It is also the main teaching, training and research provider for the Grampians region. BHS employed around 3,000 full-time equivalent (FTE) positions, including 217 medical officers, 1,278 nurses, 59 sessional clinicians, and 238 allied health positions.

EDMH is a small rural health service (SRHS) located in the southern part of the West Wimmera Shire. Its services consist of acute and urgent care for low acuity patients, 40 bed residential aged care service, 19 independent living units, and a range of community health services including district nursing, post-acute care, cancer resource nursing, a community mental health through the Rural Outreach Program and health coordination. It provides approximately 16% of the public hospital care to West Wimmera residents.

SRH is a local rural health service and primary health provider for residents of the Northern Grampians Shire. The health service provides 24/7 urgent care, acute and a range of surgical services, 36 bed residential aged care, day oncology services, and comprehensive primary and community health services. SRH also operates a general medical practice (the Stawell Medical Centre) comprising seven GPs. SRH provides approximately 39% of the public hospital care for North Grampians residents. It employs close to 180 FTE, including 76 (FTE) nursing, 43 administration, 19 allied health and 2.5 medical officer positions.

WHCG is a sub-regional health service serving the Wimmera end of the Grampians region, with campuses in Horsham and Dimboola. It is the acute referral hospital for the Wimmera region, accounting for almost two-thirds of the public hospital care for Wimmera residents. WHCG provided a wide range of specialist medical and surgical acute, subacute, emergency department, maternity, specialist outpatients, primary, and community health. The health service also operates three residential aged care facilities. WHCG employed almost 700 FTE positions, including 32 medical officers, 317 nurses, no sessional clinicians, and 56 allied health positions.

1.2. PURPOSE & SCOPE

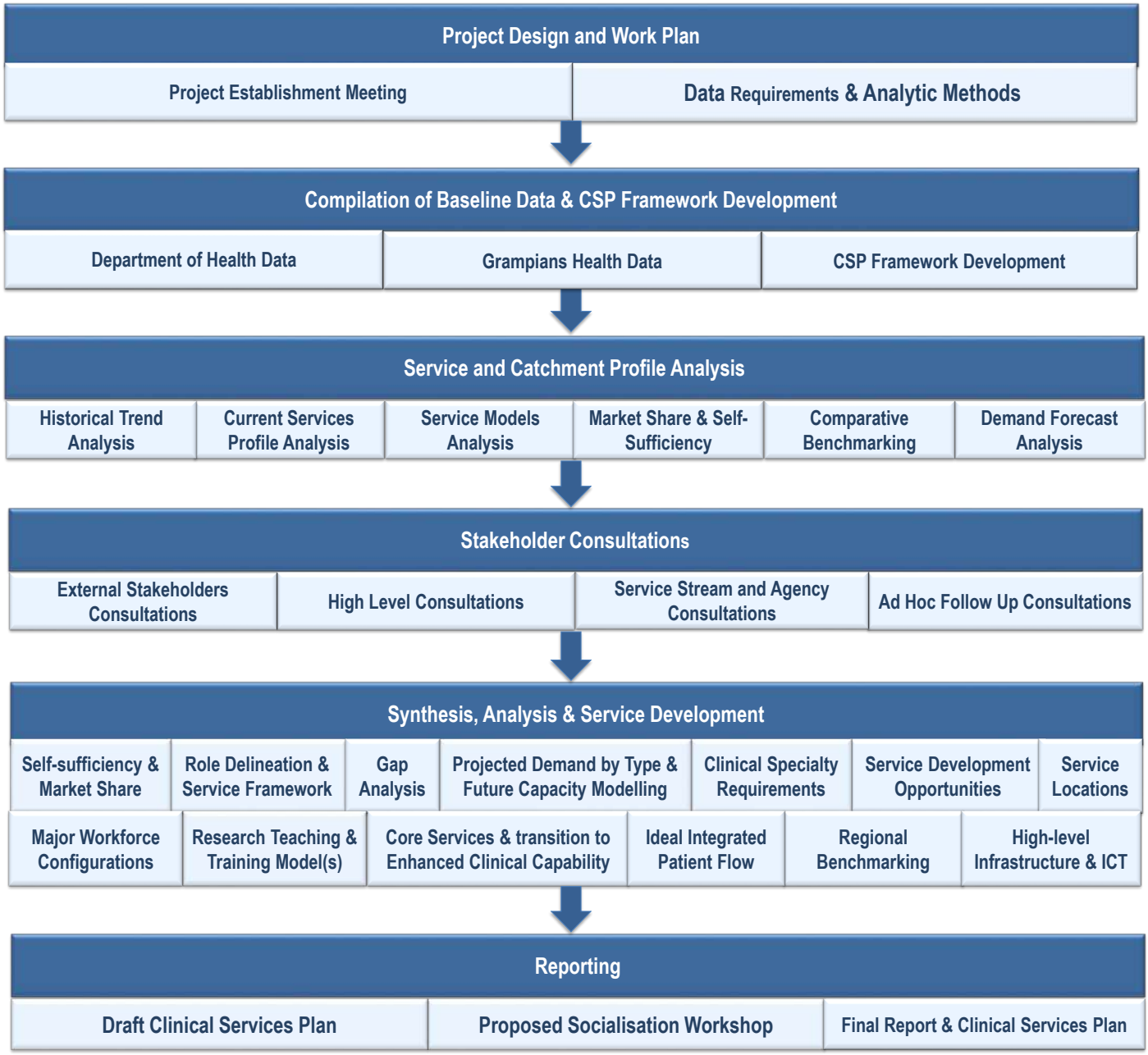
The development of this clinical service plan (CSP) provides the new Grampians Health entity with an early opportunity to comprehensively plan health services for its different primary catchments, as well as the broader Grampians Region. The amalgamation affords new opportunities that were not previously available. This CSP identifies tangible benefits that enhance access and enable services closer to home.

Specifically, the CSP seeks to articulate new models of service delivery across the different clinical streams for Grampians Health, as well as at a campus level, with detailed strategies for the period 2022 to 2032.

1.3. APPROACH

The project approach is illustrated in Figure 1-1 which details the key stages involved in development of the CSP. The CSP intersects with work undertaken by PricewaterhouseCoopers in relation to development of the Grampians Health Strategic Plan. Both plans have been undertaken concurrently.

Figure 1-1: Approach for development of Grampians Health Clinical Services Plan



2. Key Drivers of Service Delivery

There are several factors that influence the development of this CSP for the newly formed Grampians Health. Key amongst these drivers are the commitments of the amalgamation relating to *improved health outcomes and local access* to core services, and consideration of current and future need. Another equally important key driver has been ensuring *safety and quality* of services in the context of clinical capability and capacity, and *government policy* imperatives.

This section also provides a synopsis of salient findings from the PwC *Grampians Health Strategic Planning: Current State Analysis, Supplementary Report May 2022, as well as* population characteristics of the catchment that need to be addressed through service development strategies in the CSP.

2.1. POLICY CONTEXT

Australia's health system involves multiple layers of policy and funding responsibility that create complexities that must be navigated by individual health service providers in the context of strategic planning and future service development. This is particularly relevant in ensuring that the service system is integrated and holistic from a health consumer perspective, rather than artificially siloed due to funding, jurisdictional, and policy responsibility.

In more recent times, key changes in program direction are likely to be the result of recommendations emanating from the policy directions that empower patients/clients (such as NDIS and Royal Commissions into *Aged Care and Disability*[2]*),* and the State Government's *Royal Commission into Victoria's Mental Health System* as well as previous inquiries into family violence, amongst others.

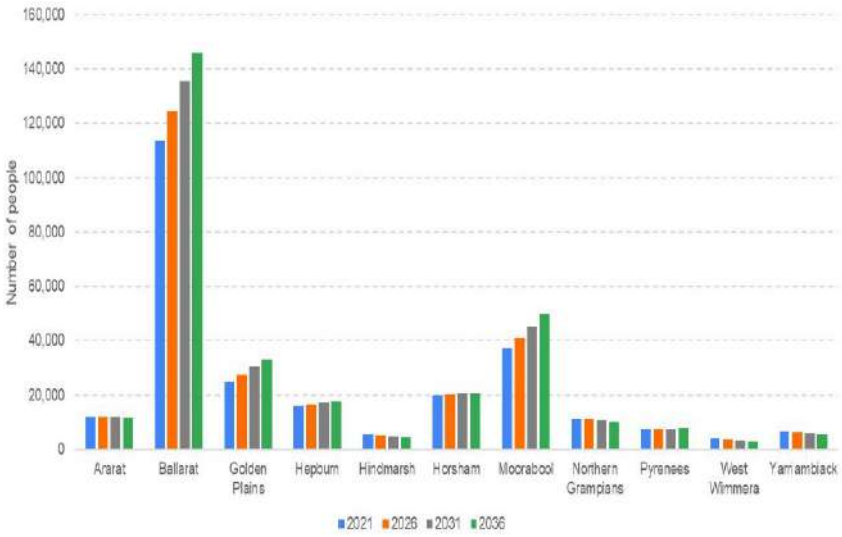
Governments and service providers need to examine how they operate in the future to ensure they embrace the range of recommendations that often require a paradigm shift with respect to service integration and seamless care that places the client at the centre. Despite significant rhetoric around person-centred care for over a decade, the health system, particularly acute care has been slow to shift the focus from provider-centred services to patient/client-centred care. The recent royal commissions and public focus on the inequities highlighted have provided a greater empowerment of consumers to demand change in this area.

2. The Roal Commission into Aged Care *Quality and Safety* and Royal Commission into *Violence, Abuse, Neglect and Exploitation of People with Disability*

2.2. CATCHMENT CHARACTERISTICS

Population

Historic population growth across the catchment over the period 2016 to 2020 was 1.4% per annum which (was *significantly lower than the statewide average* of 2.1% per annum.[3] City of Ballarat and Moorabool Shire were the exceptions.



Projected population growth over the period 2021 to 2036 is *anticipated to be a modest 1.2% per annum which is lower than the forecast statewide average* of rate (1.6% p.a.).

Higher growth than statewide averages is expected for the local government areas (LGAs) of Ballarat (1.7%), Golden Plains (2.0%) and Moorabool (2.0%). Ararat is expected to remain static. Importantly, some LGAs in the catchment are *projected to experience population decline*. This includes Northern Grampians (-0.6%); Yarriambiack (-1.0%); Hindmarsh (-1.2%); and West Wimmera (-1.3%).[4]

Ageing of the population is a core driver of health service demand. Between 2021 and 2036, the proportion of the catchment aged *70 years or older is projected to increase from 13.7% to 17.5%.*

By 2036, the greatest proportion of the population will be aged 15-44 years. Despite this, the greatest projected rate of annual change is for *those 85+ years (4.1% p.a.),* followed by those *70-84 years (2.7% p.a.).* [5]

	0-14 years	15-44 years	45-69 years	70-84 years	85+ years
2016	46,074	86,648	78,620	23,660	5,690
2021	48,011	92,906	81,563	29,151	6,083
Historic change p.a.	**0.8%**	**1.4%**	**0.7%**	**4.3%**	**1.3%**
2036	52,601	111,088	91,728	43,647	11,124
Projected change p.a.	**0.6%**	**1.2%**	**0.8%**	**2.7%**	**4.1%**

Sociodemographic Profile

There is extensive research and evidence that links social determinants and health outcomes. Inequalities in health outcomes are linked to lower socio-economic indicators, as is common for most countries.

It is noted that socioeconomic indicators, such as mortgage and rental stress, unemployment, and other social barriers impact on health care. These are measured by the Index of Relative Socioeconomic Disadvantage (IRSD)[6] across Australian communities.

3. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022 (Source ABS)
4. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022 (Source VIF2019)
5. Ibid
6. The ABS defines socio-economic status advantage and disadvantage in terms of access to material and social resources, and ability to participate in society and is measured by the IRSD which has a base score of 1,000.

IRSD scores above 1,000 indicate relative advantage and scores below indicate disadvantage. Key socio-economic indicators reveal that in 2016, except for Golden Plains (1,035) and Moorabool (1,010) each of the *catchment LGAs demonstrated relative disadvantage* when compared with the Victorian score (1,010). Other pertinent sociodemographic information for the catchment indicate that the residents of Ballarat (2.4) and Horsham (2.3) had the *highest reported rate of difficulty accessing health care* (age standardised rate (ASR) per 100) when compared to the rest of the catchment (2014 data) and that Ballarat had the *highest proportion of low-income families* (6.9%) when compared to the rest of the catchment (2017 data)[7]. Between 2016 and 2021, the *rate of family incidents* per 100,000 population were *highest* in Ararat (2,801.3), Horsham (2,661.1), Northern Grampians (2,492.5) and Ballarat (2,140.6) which are all well above the Victorian rate of 1,389.1.[8]

2.3. HEALTH OUTCOMES

Burden of Disease, Mortality & Risk Factors

The leading causes of death among people aged 1–44 years are generally external causes, such as accidents and suicides. Conversely, chronic diseases feature prominently as leading causes of premature mortality among people aged 45 and over.

As such, premature mortality is a leading indicator of the burden of disease in the population, however, caused. There are specific indicators for the catchment. These include:

- Rates of diabetes (ASR per 100) are above regional average (4.4) except for Golden Plains (4.0) and Hepburn (3.8);
- Higher rates of heart disease, stroke, vascular disease (ASR per 100) in all LGAs within the catchment except for Hindmarsh (5.0), Northern Grampians (5.0) and Hepburn (4.4); and
- Overall, the estimated number of people with poor self-assessed health are higher than Victorian rates in several LGAs within the catchment Table 2-1.

Data on premature mortality for catchment LGAs indicates that:

- In the period 2015 to 2019, *Hindmarsh had the highest rates of premature mortality (323.8)* and avoidable deaths (171.3) from all causes;
- In the same period, *Golden Plains reported the lowest life expectancy in the region for males (74.0 years) and females (80.0 years); and*
- The rates of *premature mortality and avoidable deaths due to circulatory system and respiratory system* are highest in *Hindmarsh*.

It is also noteworthy that the range of behavioural risk factors (smoking, unhealthy nutrition, at-risk alcohol consumption and physical inactivity (SNAP)) varies according to sociodemographic factors including gender, education, and location. More importantly behavioural risk factors, those that individuals have the most ability to modify, are also associated with a range of biomedical risk factors that impact on chronic diseases.

In the context of early childhood development, there is growing awareness of the impact of Adverse Childhood events and the need to understand these to address long term outcomes.

7. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022 (Source PHIDU)
8. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022 (Source Crime Statistics Agency)

Information on modifiable risk factors indicate that rates that several LGAs within the catchment have higher rates of overweight/obesity compared to the statewide rate.[9]

Other pertinent information on the catchment population indicates that:

- The rates of increased lifetime risk of *alcohol-related harm were above the statewide* rate (59.5%) for all catchment LGAs except Hindmarsh (58.9%) and Horsham (56.6%). The rate was highest in Pyrenees (76.2%) and Moorabool (67.2%).
- *Hindmarsh had the highest rate of suicide / self-inflicted injuries* (28.4 ASR per 100).
- *Ballarat had the highest rates of intentional injuries treated in hospital* (6.3 per 1,000 population).
- Residents of Ballarat (14.3), Moorabool (13.8) and Pyrenees (15.2) (ASR per 100) experienced the most *significant levels of psychological distress* (2017-18 data).
- *Alcohol related hospital admissions* (per 100,000 population) was highest in West Wimmera (572.8) compared to the statewide average (539.3).
- *Illicit drug hospital admissions* (per 100,000 population) were highest in Ballarat (244.1) which was nonetheless below the statewide average (277.0).

Table 2-1: Chronic disease profile[10]

Index	Period	Source	Ararat	Ballarat	Golden Plains	Hepburn	Hindmarsh	Horsham	Moorabool	Northern Grampians	Pyrenees	West Wimmera	Yarriambiack	VIC	Regional Vic
Estimated number of people (ASR per 100)															
Aged 15 years and over with fair or poor self-assess health	2017-2018	PHIDU	17.3	16.9	14.5	17.4	14.3	14.6	15.7	15.6	19.1	15.8	14.8	*14.2*	*16.0*
Diabetes Mellitus	2017-2018	PHIDU	5.6	4.5	4.0	3.8	4.8	5.1	4.6	5.2	5.5	5.3	4.9	*4.8*	*4.4*
Heart, stroke and vascular disease	2017-2018	PHIDU	5.6	5.2	5.1	4.4	5.0	5.1	5.4	5.0	5.6	5.8	5.2	*4.9*	*5.0*
Asthma	2017-2018	PHIDU	15.2	16.2	14.0	15.6	13.2	15.5	16.1	14.2	14.8	14.2	13.7	*11.5*	*14.5*
Chronic obstructive pulmonary disease (COPD)	2017-2018	PHIDU	2.6	2.8	2.3	2.4	1.6	2.7	2.7	2.6	3.0	1.8	1.7	*2.1*	*2.5*
Arthritis	2017-2018	PHIDU	19.0	19.5	18.0	15.6	17.1	18.1	16.4	16.7	18.8	19.0	17.5	*15.6*	*17.4*
Osteoporosis	2017-2018	PHIDU	3.8	3.9	3.4	3.1	2.8	3.2	3.2	3.5	2.7	3.1	2.8	*3.6*	*3.6*
Comorbidities															
Doctor diagnosed ≥2 chronic diseases (% adult population)	2017	VPHS *(PHN)*	34.3%	27.4%	26.3%	34.5%	35.5%	31.8%	30.9%	32.7%	22.5%	24.0%	33.7%	*NA*	*N/A*

Primary Health

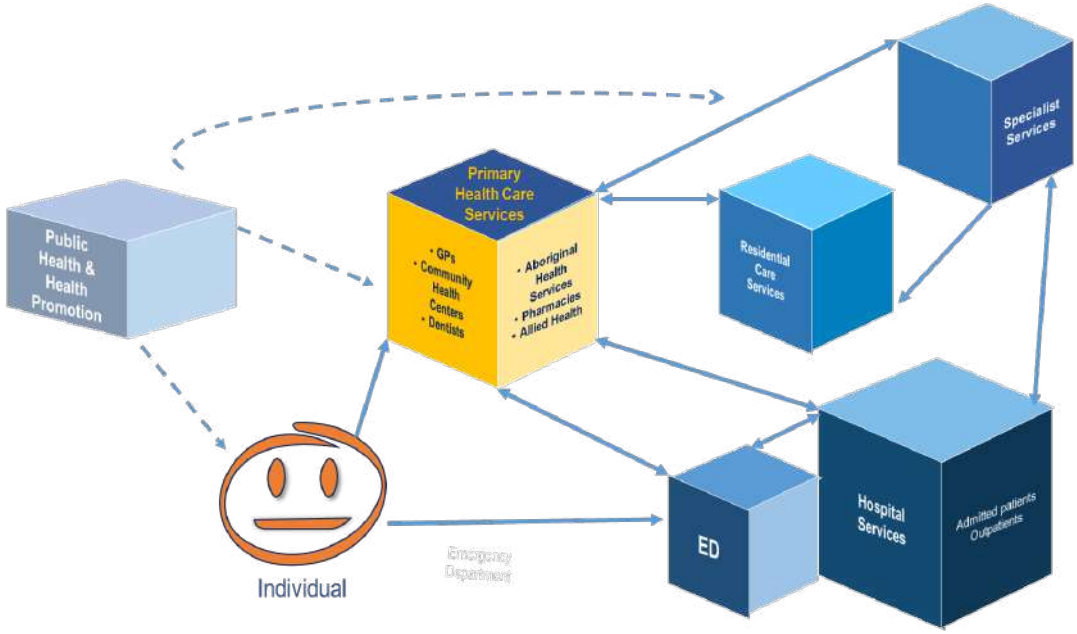
It is generally recognised that access to primary health care services helps reduce the number of avoidable hospital visits, improves population health and reduces inequality. Effective primary health care is important in the prevention and treatment of risk factors and conditions as well as improving health outcomes. Primary health should be accessible from various health professionals including general practitioners (GPs), dentists, nurses, aboriginal health workers, local pharmacies, and other allied health professionals.

The recently released *Australia's Primary Health Care 10 Year Plan 2022-2032,* notes that an effective primary health care is essential in improving health outcomes to the community at a lower cost than hospital and secondary care and helps to avoid unnecessary hospitalisations.[11]

9. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022
10. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022
11. Commonwealth of Australia (Department of Health) 2022, Future focused primary health care: Australia's Primary Health Care 10 Year Plan 2022-2032

An earlier AIHW document provides a useful diagrammatic representation of the significance of primary care within the Australian health care system (Figure 2-1).

Figure 2-1: The role of primary health within the Australian healthcare system[12]



In this context, it is interesting to note that the data for the Grampians Health catchment shows that:

- From 2018/19 to 2020/21, with the exception of Ballarat (with 5.9 GPs per 100 persons), there were *fewer GP attendances and poorer after-hours GP access in all other catchments* when compared to the national averages (5.9 GPs per 100 persons and 0.5 GPs per 100 persons respectively). After-hours GP attendances in Grampians (0.2 GPs per 100 persons) were the lowest in rural Victoria.
- *Medical Specialist attendances were lower than national average* at 0.9 per 100 persons for all areas except Ballarat, which had 1.1 per 100 persons.
- On average, there was a lower rate of *"people who did not claim a GP attendance"* across the region when compared with the national average (12.5%), except for Barwon-SouthWest (17.0%).
- In 2020/21, allied health attendances per 100 persons rates *were lower than the Australian average for physical health care* in all catchments, with the exception of Barwon-SouthWest (108.2). *Allied health mental health care was higher that the Australian average* (103.5) for all catchments except Grampians (89.0).
- In 2020/21, rates of attendance other MBS services such as for *nursing and Aboriginal health worker services were generally higher than Australian benchmarks* (16.8).
- There are also *fewer dental clinics* available and *low rates of Indigenous health checks* provided across the region.

It is important to recognise that although primary care and public (population health) has historically not been the core business of Grampian Health it now hosts the Grampians Public Health Unit and will have a key role in partnering with the primary and community health providers within the catchment in ensuring a seamless and effective continuum of care in the patient journey. This includes a role in providing some components of community and primary health services (refer Section 14) as well as playing its role in public health (refer Section 6).

12. Adapted from Review and evaluation of Australian information about primary health care, AIHW 2008 – p.2

3. Strategic Positioning

This section summarises the new Grampians Health strategic plan vision, role and strategic priorities (sections 3.1 and 3.2) and the flow on impact for the CSP themes (section 3.3 to 3.5). The new strategic plan has been developed to capture the most important reasons for bringing the amalgamated organisation into existence and is therefore important as a basis for developing the CSP.

3.1. STRATEGIC PLAN

The Strategic Plan articulates the purpose of Grampians Health as,

"To deliver quality care for our community through safe, accessible and connected health services."

The role of Grampians Health's is set out as,

"The regional health service and the referral point for complex care and delivery of specialist services to meet the health needs of the Grampians community."

and

"… work in partnership … to provide leadership for health services in the region, including the provision of clinical advice, specialist support, and clinical teaching and training."

Achieving this role will require Grampians Health to:

The vision and values to underpin Grampians Health to be a *"trusted, progressive and innovative leader of regional and rural healthcare"* have been developed through an extensive consultation process across all merger health services, their respective communities and key stakeholders. The vision and values represented the collective views of Grampians Health.

3.2. STRATEGIC PRIORITIES AND MEASURING SUCCESS

The recently developed Grampian Health Strategic Plan identifies *four strategic priorities* central to delivering quality, person-centred care seeks to transform the how the health service work together to build a strong foundation for an ambitious future is represented in Table 3-1.[13]

Table 3-1: Strategic Priorities

Strategic Priorities	Goals	Measures of Success
Accessible care We provide exceptional regional and rural care which is high quality, accessible & timely	▪ Provide strong leadership and governance to enhance our services ▪ Deliver care that is responsive to local community needs ▪ Transform service models to improve access to care in the most appropriate setting ▪ Achieve the goals of the voluntary amalgamation	▪ Improved patient safety outcomes ▪ Continued improvements in quality performance indicators ▪ Increased number of clinical and clinical-support services into the region ▪ Introduced priority clinical services across our communities ▪ Expanded homecare-based services to deliver care closer to home ▪ Increased use of advance technology to deliver remote care (e.g., telemedicine, virtual health consultations)
Our People Our people are caring, skilled, highly trained and professional	▪ Grow our workforce, enhance skills and knowledge to support a high performing culture ▪ Support the safety, health and wellbeing of our people ▪ Provide enhanced opportunities across our organisation through innovative workforce models	▪ Enhanced education and training to support our people as part of high performing health care teams ▪ Improved diversity and inclusion in the workforce that reflects our community ▪ Increased workforce engagement ▪ Targeted recruitment to identified workforce gaps ▪ Enhanced 'safety first' culture
Our Partners We engage with our partners and consumers to lead connected health care.	▪ Partner with our communities through collaborative engagement ▪ Enable consumer, carers and families to make informed decisions and support ownership of health and wellbeing choices ▪ Strengthen partnerships to support service integration and regional development	▪ Increased community engagement (e.g. greater number of volunteer roles and participation in community reference groups, governance committees, accreditation processes) ▪ Increased positive impact of community reference groups on the delivery of care ▪ Reduced hospitalisations through access to shared models of person-centred care (e.g., greater access to 'substitution and diversion' pathways) ▪ Increased contribution of partners in care design
Our Future We are leaders in regional and rural healthcare and effectively use our resources	▪ Develop future-focussed infrastructure to support our health care services ▪ Embed technology, research and innovation to meet our workforce and community needs ▪ Demonstrate the responsible use of financial and environmental resources	▪ Progress against digital health and infrastructure plans ▪ Enhanced culture of research and innovation ▪ Increased commercial business revenue to support increased service provision ▪ Reduced impact on the environment from daily operations

13. PWC GH Strategic Plan 2022-2024 (draft)

3.3. THEMES FOR THE CLINICAL SERVICES PLAN

Consistent with the broader strategic plan, this CSP has identified important themes that run through the document. These themes run through the different clinical streams and across campuses and can be synthesised as follows.

The themes are:

1. **Improving Access.** *This is about more services closer to home and addressing amalgamation commitments. This is a cornerstone theme with principal strategies that:*
   a. Enhance self-sufficiency *for the region and specifically improving market share for Grampians Health communities*;
   b. Develop new models of care *that support services closer to home, improve patient flow, and support services at home and in community settings*;
   c. Address Service Gaps**.** *Provision of additional services over time for services that can reasonably be expected to be provided in the Grampians Region;*
   d. Increased availability of specialist clinic services, especially to the western campuses of Grampians Health;
   e. Improve access to mental health services; *and*
   f. Develop Ballarat campus as a genuine 7-Day hospital. *Extending the hours of operation to enable the normal functions of a five-day hospital to be extended, improving access and flow, and timely and more comprehensive care.*

2. **Enhancing Service Integration**. *This is about more seamless health care for the patient* through *partnerships and alignment of Grampians Health services with other health care providers including GPs, community health services and quaternary hospitals in Melbourne. It includes maximising opportunities for holistic care*.

3. **Clinical Capability.** *Across the new organisation, there is an expectation that services will have enhanced clinical capability. As the regional referral health service, Ballarat is a level 5 clinical capability service in almost all clinical services and aiming to develop level 6 in selected clinical streams. Horsham is a level 3 service with an expectation of developing some level 4 capability across core medical and surgical services.*

4. **Improving the Patient Experience.** *This is focused on patient-centric care, and creating Patient Value, and measuring and reporting patient outcomes.*

5. **Leadership**. *Grampians Health, as the regional service provider and the largest health service, has a core role for clinical and governance leadership in the region. It will also mean maximising opportunities for networking, collaboration and developing Grampians-wide services.*

6. **Workforce** *is a key enabler and has been emphasised as a critical factor across almost all clinical streams. There are some high priority areas of workforce recruitment/engagement/ development as well as more longer-term issues relating to education, and training that have been identified.*

7. **Digital Health transformation** *is also a key enabler, including an eMR capability, virtual and real time clinical care, data entry at point of care, and real-time data for operational efficiency and patient flow. This is premised on investment in a fit for purpose, robust ICT infrastructure and platforms that ensure interoperability across all areas of the organisation, inter and intra campus.*

8. **Improve Capital Infrastructure** that is consistent with the proposed service developments, *requiring improved utilisation of existing infrastructure in the short to medium-term, in combination with a master planning and new capital infrastructure developments program at all campuses.*

Each of these themes are inter-dependent and are overlapping to some extent.

3.4. CHANGE IS CONSTANT - CREATING PATIENT VALUE

The **themes and priority strategies** identified in this CSP are expected to make a discernible improvement in patient care. Grampians Health will then have the opportunity to 'take the next step' to develop *value-based health care*[14]***, which is the embodiment of 'end-to-end' care and patient-centric care that is structured to support operational effectiveness and accountability for patient outcomes***.

The core elements of value-based health care are premised on 'value' to the patient/client. The underlying principles of value-based healthcare are:

- Organise (or reorganise) *services around the patient*, not the clinician, or health service. This means developing integrated practice (that is, changing clinical practices where needed to avoid siloed practices and behaviours). The objective is *wholly integrated practice units that are clearly defined, that can span different settings, and have clinically accepted patient pathways*.
- Organise *the right skill set/team* that can deliver the healthcare across settings.
- Introduce *'internal bundled payments'* for the patient pathway.[15] This reinforces the structure and workforce changes and embeds integrative behaviours.
- Measure *patient outcomes/impacts* (including through use of patient reported experience (measures) [PREMS] and patient reported outcome (measures) [PROMS], amongst other tailored measures, together with and patient costs.
- *Build and extend an enabling technology platform(s)* that addresses the above four elements.

Using this CSP as a springboard, a next step for Grampians Health - beyond the next 15 years – is to then redesign ***all*** *elements of the service delivery system.* There are exemplar international case studies that are instructive in improving patient outcomes at the same time as improving efficiency[16].

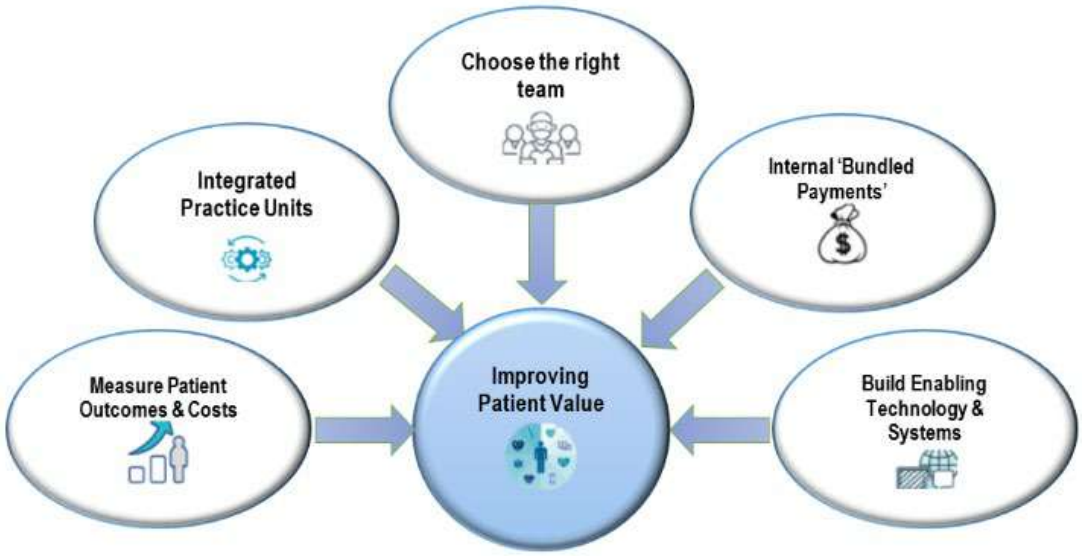
The redesign of the basic delivery systems needs commitment to change in each of these elements to make a real difference. Change/implementation can be:

- Staggered *across the different clinical service streams*, and
- Staged *within particular service streams*, but the results are not as evident and therefore more difficult to reference as the basis for demonstration of benefits to the stakeholders involved.

This is a longer-term strategic development that requires good planning and strong engagement across the 'early adopters' of service re-design.

14. Based on Porter, M. & Lee, T. Harvard Business School, The Strategy That Will Fix Health Care', October 2013
15. Bundled payments involve the total allowable acute and/or post-acute expenditures for an episode of care being combined and is designed to shift care to value-based care by incentivising care providers to advance coordination and efficiency of care while also improving quality and outcomes at lower costs.
16. Porter, M. & Lee, T. Harvard Business School, The Strategy That Will Fix Health Care', October 2013

Figure 3-1: Improving the Patient Experience and Service Re-design



3.5. CLINICAL SERVICE DEVELOPMENT STRUCTURE

There are thirteen service streams with support services outlined in sections 4 to 16.

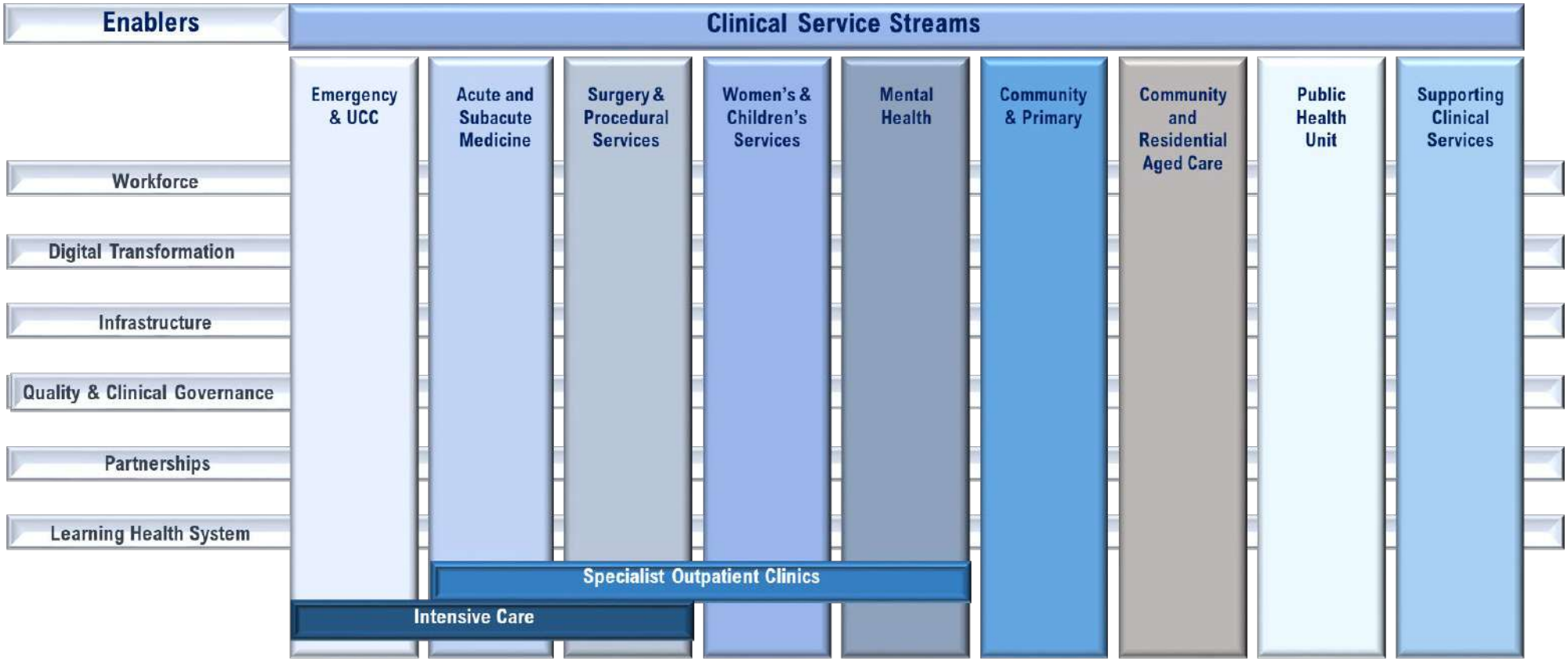
Each of the clinical service streams identifies the current/historical service provision, provides demand projections, current and anticipated issues, and clinical developments appropriate to the service stream, which are also consistent with the role and overarching role and strategic themes identified above. This means that there is specific consideration given to the drivers of the amalgamation including enhanced service access, innovative service models that improve patient flow that is patient-centric, and integrated services between the five Grampians Health campuses.

Section 24 also collates the main strategies and initiatives that are particularly relevant at each of the four campuses.

Figure 3-2 summarises the clinical service streams at Grampians Health across the entirety of the health service. Each service stream operates as a matrix with other key enablers including:

- Workforce and workforce development;
- ICT and digital transformation;
- Infrastructure;
- Teaching, Training and Research;
- Partnerships; and
- Quality and Clinical Governance.

Figure 3-2: Grampians Health Clinical Service Streams and Enablers



4. Emergency Department and Urgent Care

This section describes and analyses the emergency services at Grampians Health. Specifically, the Emergency Departments (EDs), located at Ballarat and Horsham, and the Urgent Care Centres (UCCs) at Stawell and Edenhope.

4.1. CURRENT OPERATIONS

Ballarat Hospital ED

At present, there are 27 cubicles in the ED, which includes a Fast-Track area and three designated resuscitation bays in the main ED. There are a further two rooms converted from a 'pseudo-resuscitation' area and would not meet the required standards for a designated resuscitation room. A Fast-Track area has been created through conversion of a previous outpatient area near the ED and includes a procedure and plastering room, together with a splinting area and storage.

The current ED, which is supported by five designated ambulance bays for the separate emergency entrance, has:

- A 20-chair waiting area the main area with a transparent half-wall separation for paediatric patients;
- A separate COVID-19/respiratory waiting area safely accommodates six patients. Any overflow patients are required to wait outside, or in a car;
- A negative pressure cubicle in the Respiratory/COVID-19 zone, which is also the resuscitation area for that zone;
- Two triage desks and a chair for assessments; and
- An additional triage space has been created on a mobile trolley near the entrance to the respiratory area, which is staffed by a triage nurse in full PPE.

ED does not have de-escalation rooms or low stimulus or behavioural specific zones. Acutely aroused patients are managed and sedated either in the resuscitation bays with sedation sometimes being undertaken in the ambulance bay.

There is a 12-bed short stay unit (SSU) comprised of all single rooms. Given paediatric workforce shortages, paediatric cases would be more appropriately be accommodated in the paediatric inpatient unit which also has a day medical unit and protocols consistent with those in the SSU.

Consultations indicate that current workforce constraints have seen a shortage of registrars and HMOs, which has necessitated an increased number of Fellows of the Australasian College for Emergency Medicine (FACEMS) on roster. FACEM shifts remain the same across weekdays and weekends. There is also a shortage of nursing staff in senior roles due to an exodus of senior nurses during the pandemic. Ballarat does not currently have allied health in the ED.

The ED operates an *Acute Admissions Plan* for all inpatient units (medical and surgical) when there is a bed available, and where the inpatient unit has not seen the patient within two hours of referral. The Plan requires the ED consultant to review the patient to ensure they are safe and that the patient is not in MET criteria or unstable. The ED consultant writes up the *Acute Admissions Plan* for medications/fluids.

The Ballarat ED provides clinical advice and secondary consultations to other regional EDs, UCCs, GPs and Ambulance Victoria (AV) crews who wish to transfer patients or prevent transfer. There are currently no standardised policies or procedures in place for these interactions. Ballarat also integrates with Melbourne EDs when necessary.

Horsham Hospital ED

There are six general ED cubicles at the Horsham plus a behavioural assessment room (BAR) which is located near the single resuscitation cubicle. The ED also has:

- A plaster room which is predominantly used as an acute cubicle;
- The second resuscitation bay that is no longer suitable for resuscitation and is now used as a Personal Protective Equipment (PPE) donning and doffing area to meet COVID-19 guidelines;
- One triage desk space with a small space within the triage room with a modified bed to allow for basic assessment and treatment; and
- A designated eye cubicle which is physically not suitable for general assessments as there is no room for prone examinations.

The ED is supported by:

- Two external ambulance bays; and
- Medical imaging services proximal to ED comprising CT, x-ray and mobile ultrasound and x-ray available from 07:30 to 24:00. (It is noted that there is also an MRI located in a van that is virtually impossible to access for ED patients). Medical imaging afterhours, radiology is available on an on-call basis subject to adherence to set clinical criteria as per the radiology protocol for ED.

The ED does not have:

- Sufficient waiting space. It has only seats six people whilst meeting COVID-19 guidelines;
- A separate waiting area for paediatrics or vulnerable clients, and no space for distressed relatives;
- A second resuscitation cubicle;
- A second triage and interview space that would meet clinical standards;
- A negative pressure room;
- An internal ambulance ‘off-load’ area;
- Storage space, especially with PPE requirements;
- A Fast-Track capacity within ED. The Fast-Track area is outside the main ED; and
- An SSU.

Stawell Campus UCC

The Stawell UCC has three cubicles (POCs) including a resuscitation bay. It also has:

- A 12-chair waiting area;
- A single triage desk (shared with the hospital reception);
- An enclosed (door) COVID-19 bay with scrubber but currently no observation window;
- Plaster room; and

- An additional room that is currently used as a space for doctors to write up notes and two overflow rooms. Short stay beds are in a designated area within the ward.

The UCC is staffed from the ward and would typically have additional staff rostered (for the AM and PM shifts) for UCC, with assistance from an ANUM if required. Overnight coverage is by the rostered ANUM/After Hours Coordinator. GP or NP coverage occurs through the VMO roster currently from 0800hr through to 2200hrs, although this may change due to concerns of GP fatigue.

The SRH UCC has a triage policy and uses clinical pathways for chest pain, sepsis, and stroke medication protocols.

Edenhope Campus UCC

The Edenhope campus UCC has one space, with a consultation room used as a second space if required. The UCC also has:

- A three-chair waiting area; and
- A plain x-ray machine located adjacent the UCC.

There is no designated triage desk/area with patients triaged in the foyer.

Staffing for the UCC is from the ward. Availability of administrative staff during the day provides some support with managing phone calls for ambulance or doctor. However, out-of-hours emergency presentations create staffing issues as ward staff are required to manage the emergency, calling for an ambulance/doctor and ensuring the care of other patients. Medical support is provided by the local GP, but this is neither consistent (allowing for weekend time-off) and is intermittent (if there is no GP in Edenhope).

Plastering services are not routinely provided either by the GP or nursing staff.

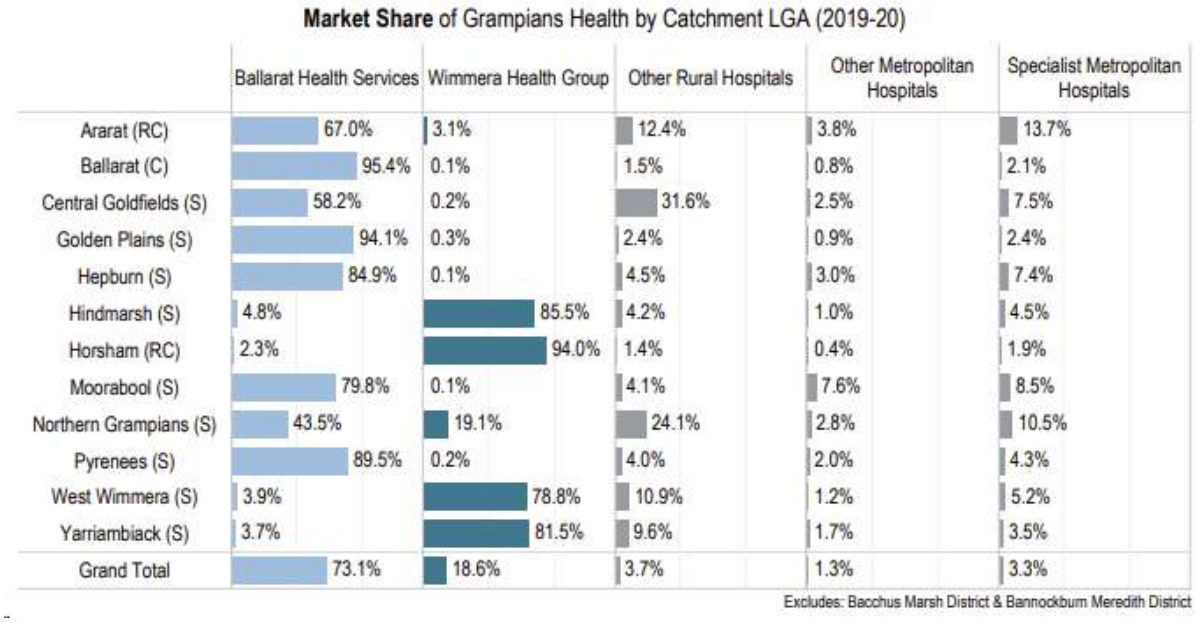
Edenhope campus UCC staff rely on the range of treatment guidelines available for urgent care on the PROMPT ICT platform.

4.2. CURRENT ACTIVITY, MARKET SHARE AND PROJECTED DEMAND

Ballarat Hospital ED is expecting 66,000 presentations and Horsham Hospital ED around 16,000 presentations in 2021-22.

The historical trend activity at Ballarat campus and Horsham campus indicates a relatively high market share of around 92% for the Grampians Region. This high rate is not expected to change over the coming 5 to 10-year period, unless there is a change to state-wide policy on trauma and retrieval.

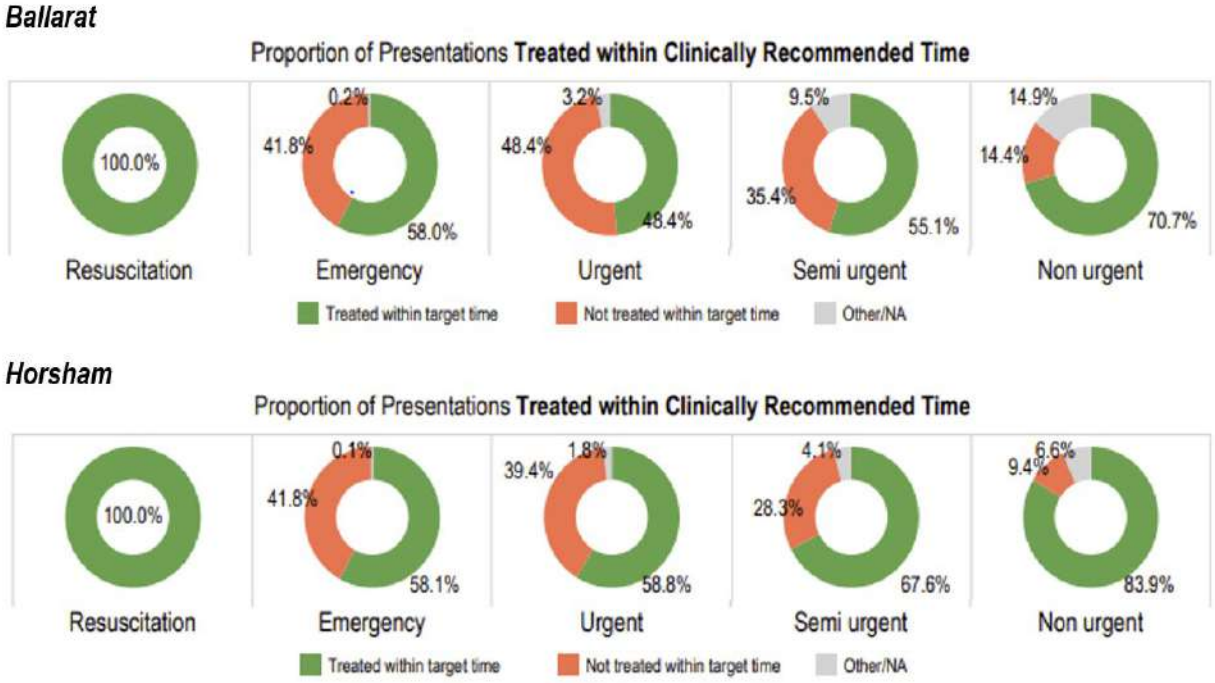
Figure 4-1: Grampians Health Market Share ED



Capacity restrictions and ED clearance issues have had a negative impact upon performance data at both EDs within Grampians Health (Figure 4-2), where treatment time performance has been below expectations for all triage categories. Category 1 to 5 patients are not reaching the state-wide benchmark of 80%. Specifically:

- 100% of Category 1 patients are treated within target time;
- Only **58% of Category 2 patients** are seen within the 10-minute target from initial triage; and
- Time to treatment of Category 3 patients is also problematic, particularly at the Ballarat Campus where less than half are seen within the target time of 30 minutes (and only 59% are seen within these targets at Horsham).

Figure 4-2: Current ED performance at Ballarat & Horsham campuses



4.3. PROJECTED DEMAND

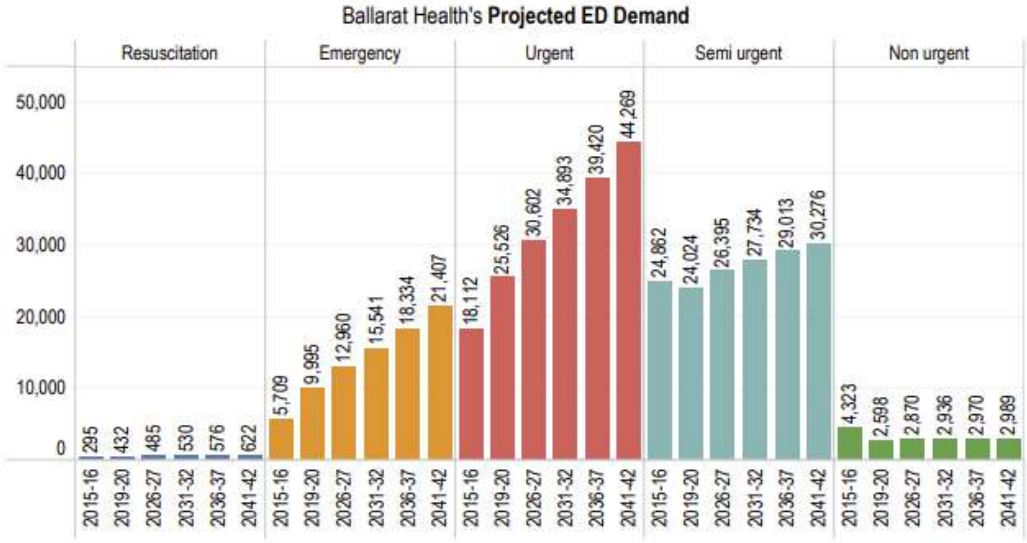
4.3.1. Projected demand for the EDs

Projected demand trends by triage category for Ballarat Campus are presented in Figure 4-3 (upper panel) and indicate an overall increase in ED presentations by around 52% from 66,000 in 2021-22 to 99,563 presentations in 2041-42. The increased number of presentations comprises:

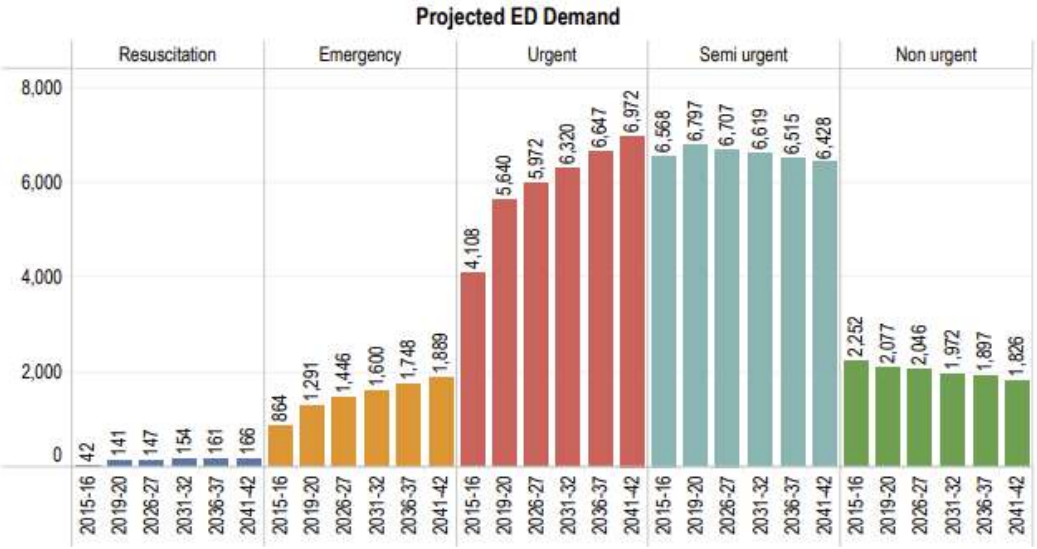
- A proportionally significant increase in the number of Category 2, which will double from 9,995 to around 21,407 presentations by 2041;
- A larger increase in the net number of Category 3 patients, which will grow from around 26,000 presentations in 2021 to around 44,269 by 2041;
- A slight increase in the number of Category 4 patients over the next 20 years to around 30,276 patients in 2041; and
- A modest increase in the number of Category 5 patients each year to around 2,989 in 2041.

Figure 4-3: Historical and Project Triage Categories

Ballarat



Horsham



Presentations at Horsham campus (Figure 4-3 lower panel) are projected to increase more modestly by around 8% from 16,000 in 2021-22 to 17,281 presentations in 2041-42. The increased number of presentations comprises:

- A slight increase in Category 2 presentations of 598 patients over the next 20 years to around 1,889 in 2041;
- A modest increase in Category 3 presentations of 1332 patients to around 6,972 by 2041;
- A slight decrease in the number of Category 4 presentations by around 369 patients by 2041; and
- A slight decrease in the number of Category 5 presentations by around 251 patients by 2041.

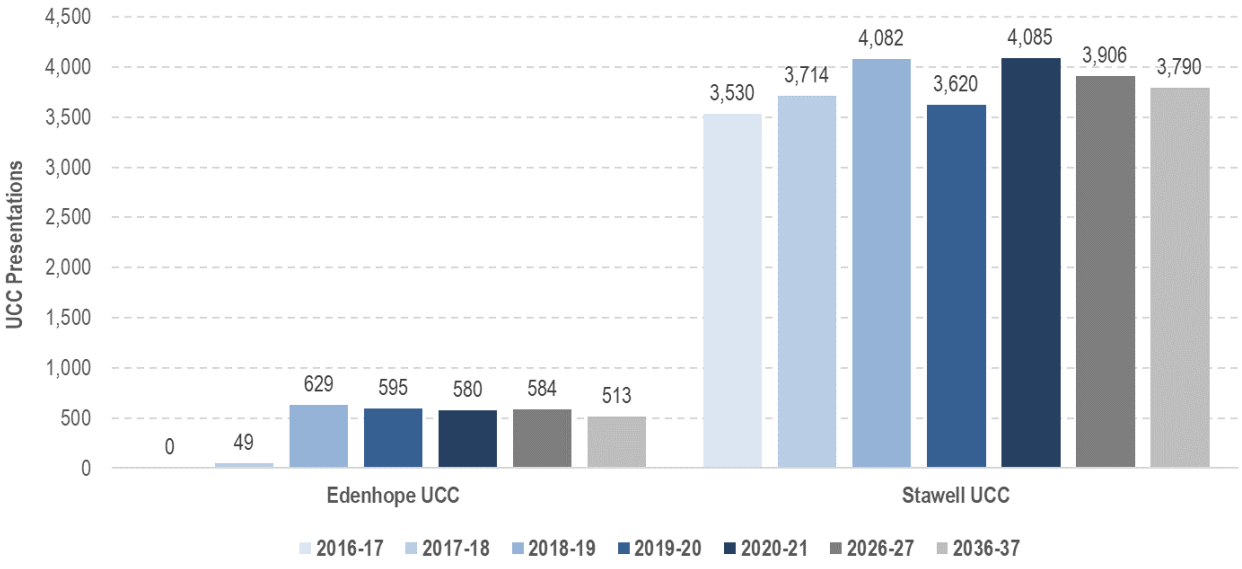
The impact of an ageing population as the main driver of demand in the Wimmera sub-region only marginally offsets the declining population.

Historical and projected demand for the UCC services is presented in Figure 4-4 which indicates that:

- Demand at Stawell campus has been variable from a low of 3,500 presentations (in 2016-17) to 4,100 presentations (in 2018-19 and 2020-21). The level of presentation activity has varied by about 17% and is likely to be due to COVID-19, which included consumer hesitancy in presenting at health services. Nevertheless, it is noteworthy that the age/sex adjusted projections to 2026-27 and 2036-37 sees a declining trend but remaining above the 2019-20 volumes. Presentations represent an average of 11 patients per day.

  It is important to note for Stawell is planning to remove the current out-of-pocket' cost to patients attending the UCC. This is likely to increase presentations from 1 July 2022.
- There has been incremental but steady decline in presentations at Edenhope from a small base of 629 in 2017-18 to a projected low of 513 in 2036-37. The decline is in part due to a declining catchment population as well as the availability of services.

Figure 4-4: Age/Sex Adjusted Historical UCC Services and Projected Demand



4.4. CURRENT AND EMERGING ISSUES

4.4.1. Common issues across Grampians Health EDs and UCCs

Although there is significant variation in size and complexity across the EDs and UCCs at the four Grampians Health campuses, there are common issues.

- **Responsiveness and waiting times** – Current waiting times for emergency and urgent presentations are below minimum benchmark performance levels established for Grampians Health by the Department of Health. Strategies to improve timely access to care for these cohorts is a high priority issue for the CSP. Specifically, a very high rate of Category 2 patients is reported to be outside the recommended treatment times, and poses a potential risk of clinical deterioration if the reported data is accurate.

- **Workforce** – which involve several aspects including workforce shortages, difficulties in recruitment and retention of registrars, senior HMO/VMO medical staff, and nursing staff. All sites except Ballarat also have costs associated with using My Emergency Doctor for after-hours cover. Interestingly, workforce comparisons indicate that Ballarat Campus is well served by ED physicians compared with other rural areas of Victoria. Similar analysis indicates that the Grampians Health catchment is relatively underserved by general practitioners. Taken together these findings suggest that new service models would improve access and result in a 're-distribution' of workload via tele/video conferencing facilities between campuses may be a viable option.

  A further aspect of ED workforce relates to the limited use/availability of allied health staff in Grampians Health ED settings. There is considerable literature to support the benefits of a team approach to delivering health care, including within the ED setting, resulting in improved patient outcomes and increased job satisfaction for staff. As noted in section 15.3, the demonstration of the value to patients, and to operational efficiency, of allied health in ED has been proposed.

- **Infrastructure including ICT** – inadequate physical infrastructure at most sites is inhibiting best practice care. In some instances, such as at Horsham, the physical area and design is inhibiting basic expected standards for ED. Specific issues at both Ballarat and Horsham include:
  - Inadequate ambulance bay access;
  - Inadequate waiting space/areas including a lack of separation of paediatric and vulnerable patients in both waiting and treatment areas (at all EDs and UCCs);
  - Insufficient number of triage desks, resuscitation cubicles and negative pressure rooms; and/or
  - Insufficient storage including for PPE equipment.

  This is compounded by outdated and fragmented ICT platforms and applications which further hinder efficient and real time patient information flow, communication and therefore timely patient care. In particular, there are important opportunities for enhanced access to telehealth support between campuses, and (potentially) access to treatment guidelines and protocols.

- **Clinical support services** – all sites except for Ballarat experience inefficiencies associated with access to after-hours imaging services.

4.4.2. Emerging issues

The emerging issues for ED and UCC services across Grampians Health relate to increasing demand with the ageing population, together with the increased complexity and acuity of presentations, including an increase in presentation of an older cohort that need specialist geriatric input as well as the growing presentations that involve psychosocial and mental health issues related to home environments, carer issues, family violence, sexual assault, amongst other factors.

This has recently been compounded by the pressures created on the primary and secondary health systems due to the COVID-19 pandemic. Stresses on the system have been created due to the demand generated by COVID-19 related presentations, as well as admissions caused by delayed presentation for routine health services which have exacerbated pre-existing health issues.

Unless carefully planned for and managed, there is also potential for a range of issues associated with the amalgamated entity. The majority of these will relate to inconsistent practices, policies and procedures across the different campuses which is a known issue and requires proactive management.

Issues at Ballarat Campus

There are specific emerging issues identified at the Ballarat Campus, several of which are likely to be addressed following the redevelopment of Ballarat hospital. Currently these issues include:

- Difficulties in meeting timelines for treatment of category 2 patients relating to difficulties in accessing cubicles for assessment within 10 minutes which is contributed to by factors including limited physical space, inefficient patient flow to ward areas, and workforce issues managing existing patients within the ED; and
- Discharge blockages across the broader campus, which have a significant impact on ED.

Issues at Horsham Campus

There are core inter-related issues at Horsham, including:

- Workforce recruitment including specialist medical staff, a director of emergency and ED trained nurses;
- The consequential issues of medical training and registrar placements;
- Suitable emergency/critical care nursing workforce;
- Poor and inadequate infrastructure. There is general acknowledgement that the current Horsham ED has outgrown its physical space and has challenges created due to cramped facilities, and poor design/layout; and
- Limited effective integration of patients, including no service navigation or care coordination of patients presenting at ED.

In addition to these issues, Horsham has identified the lack of an SSU, poor mental health capacity and capability, a need for 'pull models' for medical and surgical admission, diversion and substitution capability in ED, and no pharmacy or allied health service coverage.

Issues at Stawell

Specific issues at Stawell include access and accuracy of clinical information, and the interface between the health service's paper-based medical record system, and the GP eMR system. There are reported frustrations relating to inefficiencies and poor continuity in patient care.

There are similar issues that will be particularly important for Grampians Health with poor clinical information and alerts for patients returning from Ballarat or Horsham and not being able to seamlessly access discharge notes, imaging, pathology and POC tests.

UCC infrastructure is functional but requires modernisation to ensure requisite standards for airflow and ventilation including negative pressure room, optimisation of bench space and storage to improve workflow.

Workforce issues at Stawell relate to an ongoing need to be flexible about the rostering/staffing for UCC. This includes the mix of staff as well as the coverage of UCC across high pressure events.

Stawell would also benefit from upskilling of the nursing workforce to increase capacity and capability to include nurse-initiated analgesia and simple out-of-hours x-rays, with potential to specifically recruit nurse practitioners, credentialled ambulance officers, or Rural and Isolated Practice Registered Nurses (RIPRNs).

Issues at Edenhope

The most critical workforce issue at Edenhope is the reliance on the single GP in the community, which leaves the health service including the UCC vulnerable during holidays and afterhours if the GP is out of town. There is a history of single local GPs that result in occupational burnout.

Similar to Stawell, Edenhope would benefit from upskilling the nursing workforce that increases capability, with the potential to include nurse practitioners, credentialled ambulance officers, or RIPRNs.

4.5. PROPOSED KEY DEVELOPMENTS AND FUTURE DIRECTIONS

4.5.1. Additional capacity at Ballarat

Additional ED capacity has already been factored into a new build at Ballarat campus. The new ED will have 68 points of care (POCs) across the ED and Short Stay unit, as follows:

- ED triage – 3 POCs and an additional 3 ambulance triage bays
- Resuscitation – 6 POCs (includes one mental health resuscitation bay)
- High Acuity Unit – 12 POCs
- Medium Acuity Unit – 8 POCs
- Paediatric Unit – 6 POCs
- Sexual Assault Unit – 1 POC
- Fast Track Unit – 8 POCs
- Mental Health and AOD Crisis Hub – 5 POCs as a short-term measure. The longer-term capacity will be 12 POCs
- Additional negative pressure rooms – 4 POCs (located in the short stay unit area)

- Short Stay Unit – 12 POCs

This represents a 62% increase in capacity compared with the existing 42 POCs comprising 30 cubicles and 12 SSU beds.

The new ED build will also accommodate 8 ambulance bays, a satellite medical imaging service embedded in ED, and separate waiting areas for adults (15 chairs) and paediatric presentations (5 chairs a play area and a parenting room). Sub-waiting areas will also be available in the Resuscitation (4 chairs), Crisis Hub (2 chairs), Fast Track Unit (6 chairs), and Paediatric Unit (2 chairs).

Proposed key developments

The proposed strategies for ED and UCC are grouped into three categories.

- **Changes to service models** to improve performance and operational efficiency, as well as improve access to care;
- **Infrastructure and digital transformation** developments; and
- **Workforce** changes.

Changes to service models

The following is proposed:

- ***Development of a virtual regional emergency model***. This is a three stepped strategy where:
  - Step 1 is a reliably available consultation advisory service by an emergency physician at Ballarat campus ED who will be rostered with the primary role of being available to clinicians at the other campuses. This extends the service that is currently available as it prioritises the rostered function as being the virtual FACEM;
  - Step 2 extends this model to all health services (not only Grampians Health campuses) in the region; and
  - Step 3 is the direct real time clinical management by Ballarat physicians of remote patients at Horsham ED and Stawell and Edenhope UCCs. Again, implicit is the physician's primary (rostered) role to support other health providers/clinicians and is not managing this role as an ancillary function.

  This virtual emergency/urgent care outreach is more than a telehealth support or secondary consultation model by the time it gets to stage 3. It becomes a virtual ED of Grampians Health that will be staffed accordingly and will require the technology and the intimate understanding of clinical capability of the site and the clinicians present at both ends.

- ***Standardisation of the emergency presentation service model.*** This would include standardisation of clinical governance, policies, procedures, treatment guidelines, staff development, and equipment. All of these elements vary across Grampians Health campuses. Outside of the Ballarat campus, treatment guidelines are sourced using the PROMPT document sharing platform (between participating health services). Ballarat campus uses a different platform. This results in potentially different standards of care being delivered at separate campuses.

Immediate attention should be focused upon standardisation of clinical governance, policies, procedures, treatment guidelines, staff development and essential equipment across Grampians Health. This should commence with a site-specific audit of current equipment and practices. ICT platforms and access would appear to be one of the most significant obstacles impeding standardisation. Accordingly, updating of ICT across all ED and UCC units will also need to be prioritised.

- ***Times to treatment***: Given the disparity of Category 2 patients time to treatment against benchmark at Ballarat ED, and the attendant clinical risks, consideration may be needed to alternative strategies such as re-allocating some of the physical capacity in the Fast Track area, developing a MAPU/AMU in existing ward spaces (Section 9.8), extending the current Acute Admission Plan to other acute and subacute wards, criteria led discharge to HITH and subacute, amongst other approaches outlined below.

- ***Multidisciplinary teams in ED:*** The increasing complexity of ED presentations internationally has seen a shift to strengthen and broaden the workforce to increase its resilience and effectiveness. Utilisation of a broader multidisciplinary team approach that includes allied and mental health staff, as well as access to geriatricians in the ED, would enable Grampians Health ED to embrace current best practice. In particular, allied health professionals offer a range of skills that are well suited to supporting ED teams to manage their increasingly complex casemix by using their expertise and skills to improve patient care and flow. Their ability to intervene early in the care pathway ensures a focus on restoring function and supporting independence which in turn enables timely discharge and avoidable admissions.

- **Complex patient care coordination (care navigation)**: Care navigation would extend and leverage the multidisciplinary team approach. EDs would benefit from a designated role for complex patient care co-ordination, particularly for patients likely to be discharged home from the ED but require immediate (re)integration into existing community services. This would form part of the Complex Discharge Referral Team's role. (Section 7.1.4 Access and Flow)

- **Daily campus-wide huddles at Horsham**: Factoring in *ED clearance as a specific agenda* item on daily executive/hospital wide huddles (Daily Operating Systems meetings) at Horsham. This would address blockages in the ED, with patients allocated to a specific ward/destination and patient flow prioritised and monitored.

- **More active in-reach from mental health and AOD specialists**: Prior to and certainly following the implementation of the Mental Health and AOD crisis hub at Ballarat campus, further work is required to improve access to mental health consultation-liaison and treatment services provided within the ED environment (including the Short Stay Unit).

Infrastructure and Digital Transformation

- **Ballarat infrastructure**: The new ED is responding to identified service gaps and over-crowding. The proposed 48 POCs is expected to meet demand to 2041-42.

- **Horsham Infrastructure.** The capacity and functionality of the ED at Horsham is not fit for purpose and warrants replacement (as part of a broader master plan). The capacity is projected to double POCs, there is a requirement to separate waiting areas, facilities to better manage mental health and AOD presentations, infectious diseases patient isolation, and a triage area that provides patient privacy. This would include ED being contiguous with medical imaging.

- **ICT Enhancement and Digital Transformation:** Fundamental to development of a regional ED is providing virtual clinical support across all campuses, and other Grampians UCCs. This requires significant investment to upgrade the ICT capability at Ballarat and across the campuses. This should include access to a single eMR system, consistent and interoperable digital imaging and pathology reporting, and electronic referral/discharge capability.

Workforce

- **Support for a virtual regional ED model** would require the progressive enhancement of the clinical team at Ballarat, and an operational plan to manage the virtual ED model from a central location, especially when there are competing priorities.
- **Clinical capability at Horsham**: The clinical capability of ED medical staff at Horsham is a priority area for consideration. This might occur via one of several approaches, including:
  - A FACEM permanently situated at Horsham; or
  - The rotation of a FACEM and/or senior registrars operating out of Ballarat campus.
- **Allied health and multidisciplinary team approach** to care together with care navigators within EDs to improve patient flow and responsiveness to the increasing numbers of complex presentations including those related to aging, substance misuse and family/sexual violence incidents.

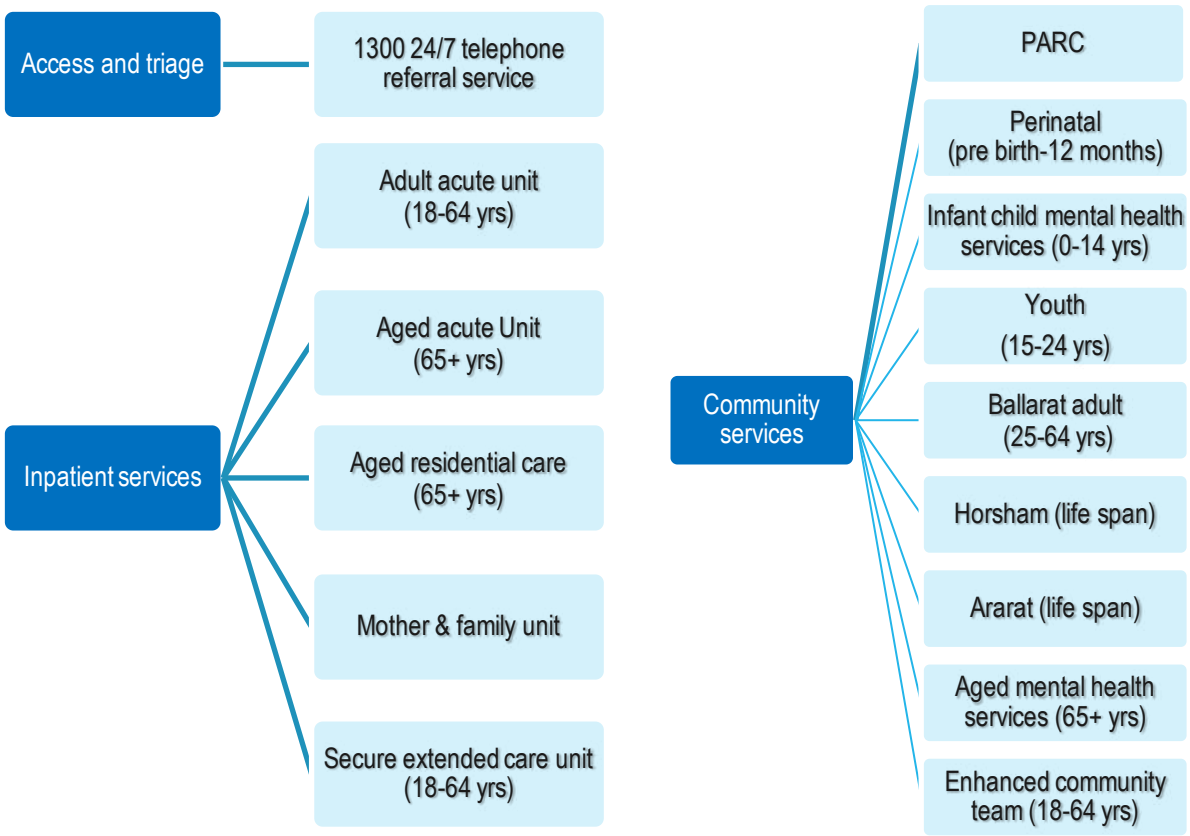
5. Mental Health

5.1. SERVICE DESCRIPTION

An overview of mental health services across the Grampians Region is outlined in Figure 5-1 which covers a wide range of services across the lifespan relating to:

- Access and triage;
- Inpatient services; and
- Community services.

Figure 5-1: Mental health services across the Grampians Region



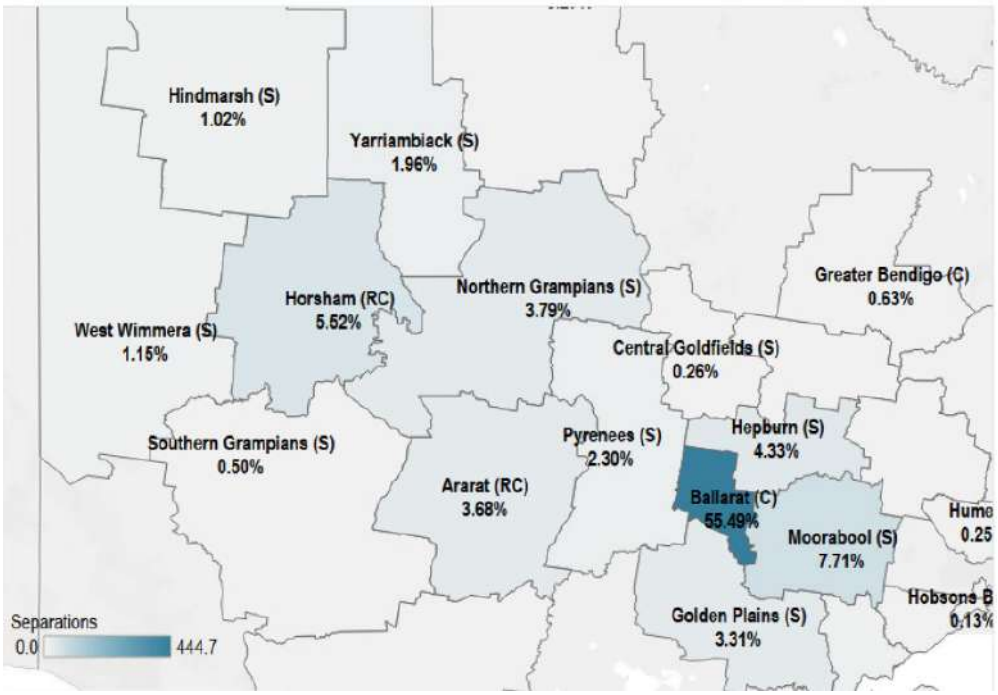
Note: "The Mental Health Team at Ballarat Health Services includes a base of consultants, who have a lived experience of mental illness and are available for patients as supports on their journey to recovery. A secondary function of the consultants is to listen to peoples' experiences and opinions regarding receiving services and make recommendations to enable improved service delivery"[17].

17. See https://www.bhs.org.au/services-and-clinics/mental-health-services/lived-experience-workforce-peer-support/

5.2. CURRENT ACTIVITY, MARKET SHARE AND PROJECTED DEMAND

It is important to note that the mental health services are provided on a regional basis according to current Area Mental Health Service (AMHS) boundaries and this includes hospitals beyond the Grampians Health catchment, extending from Central Highlands Rural Health through to West Wimmera Health Service, as outlined in Figure 5-2. It does not include Central Goldfields or parts of Golden Plains.

Figure 5-2: Grampians Health Market Reach – Mental Health (2019-20 activity)



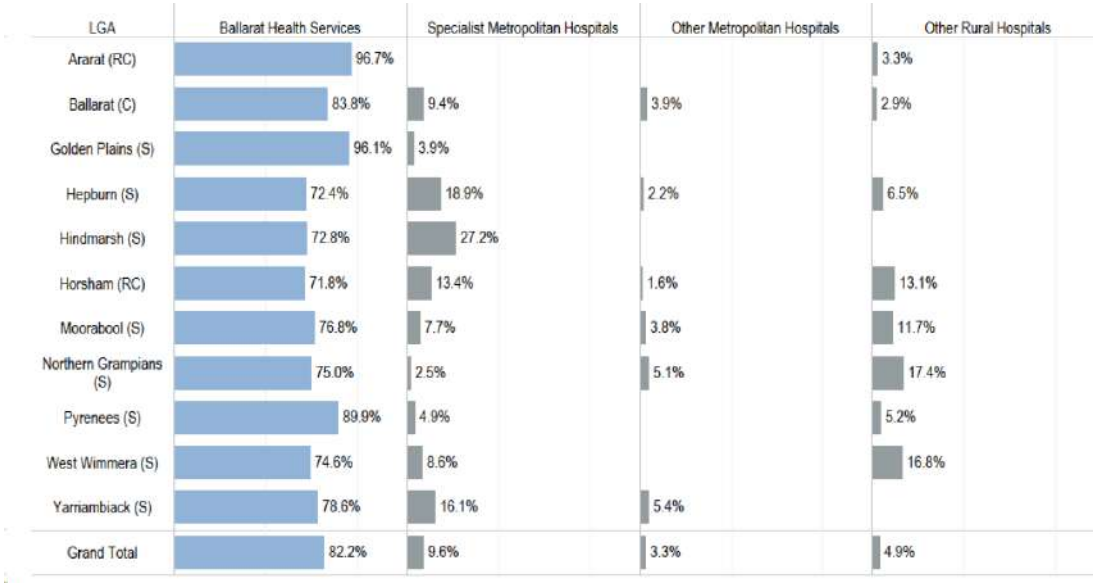
5.2.1. Inpatient mental health services

The AMHS has 82.2% of regional market share, excluding inpatient child and adolescent services (Figure 5-3). Market share may shift marginally as AMHS boundaries are re-defined in accordance with the recommendations of the Royal Commission into Victoria's Mental Health Service System which aims to:

- "Realign existing boundaries and organise mental health and wellbeing services across eight regions to improve planning and governance;
- Remove rigid boundaries (or catchments) for service delivery based on where people live; [and]
- Establish the requirements for each service and the links between them through a 'service capability framework'"[18].

18. See: https://www.health.vic.gov.au/mental-health-reform/recommendation-3

Figure 5-3: Grampians Region Market Share for AMHS catchment (2019-20)



There are currently 40 inpatient points of care for acute mental health services across Grampians Health which includes acute adult, acute aged and mother and baby services. These POCs are anticipated to grow to around 63 inpatient POCs in accordance with population prevalence demand by 2036-37. In addition, there are 10 SECU and 10 PARC beds in the region, all situated at Ballarat.

Historically (2014-15 to 2019-20), adult mental health services have seen the highest levels of annual growth, followed by mental health specialist services, and mental health aged care (Figure 5-4). The total number of inpatient separations has grown from 562 (in 2014-15) to 784 (in 2019-20). The total number of adult acute bed-days has increased over time, whereas the acute length of stay has decreased from a high of 13.07 days in 2017-18 to 12.84 days in 2019-20. A similar trend in number of bed-days and acute LOS was also observed for aged mental health patients. The current (2020) relative bed utilisation rate for mental health services is 0.79, which indicates an underutilisation of available resources compared with other mental health services across the state.

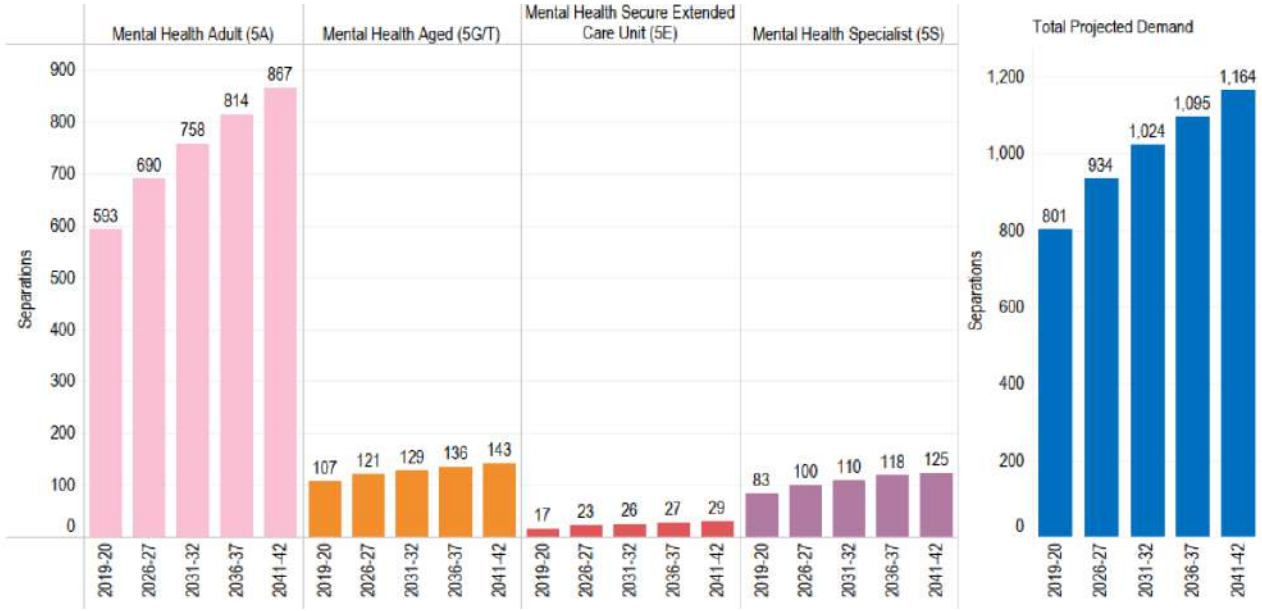
Figure 5-4: Mental Health - Historical Demand by Clinical Related Group (CRG)

		Financial Year					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Mental Health Adult (5A)	Separations	481	459	559	538	571	593
	Bed-Days	5,612	6,394	6,534	7,029	7,250	7,598
	ALOS	11.67	13.93	11.69	13.07	12.70	12.84
Mental Health Aged (5G/T)	Separations	81	72	86	101	111	107
	Bed-Days	2,430	1,926	2,397	2,745	2,862	2,892
	ALOS	30.00	26.75	27.87	27.18	25.78	26.98
Mental Health Secure Extended Care Unit (5E)	Separations	21	16	16	21	13	17
	Bed-Days	5,040	1,805	1,732	7,442	2,957	5,928
	ALOS	240.00	112.81	108.25	354.38	227.46	339.71
Mental Health Specialist (5S)	Separations		17	61	72	63	83
	Bed-Days		122	446	558	504	640
	ALOS		7.18	7.31	7.75	8.00	7.65

The highest growth in projected separations is anticipated to occur for adult mental health compared with other streams of care. Total separations are anticipated to grow from 784 (in 2019-20) to 1,134 in 2041-42 (Figure 5-5). The baseline projections use known Royal Commission findings regarding the prevalence based on the National Mental Health Service Planning Framework benchmarks, and current service usage for inpatients, applying an 85% occupancy. These projections are likely to be changed by the Department if there is a change in planning policy regarding service intensity and minimum LOS.

This baseline projected growth is nevertheless problematic as the future relative utilisation to 2037 on which the projections are based, remains at the same level of relative utilisation – that is, relative utilisation of 0.79. This means that consumers in the *Grampians AMHS are projected to not increase the level of access to mental health inpatient services compared with consumers in other regions of the state*.

Figure 5-5: Mental Health – Projected Demand by CRG



There are also six funded aged mental health care beds located at the Stawell Campus and a further six aged mental health care beds at West Wimmera Health Service (Nhill). These beds are not included in the above analysis.

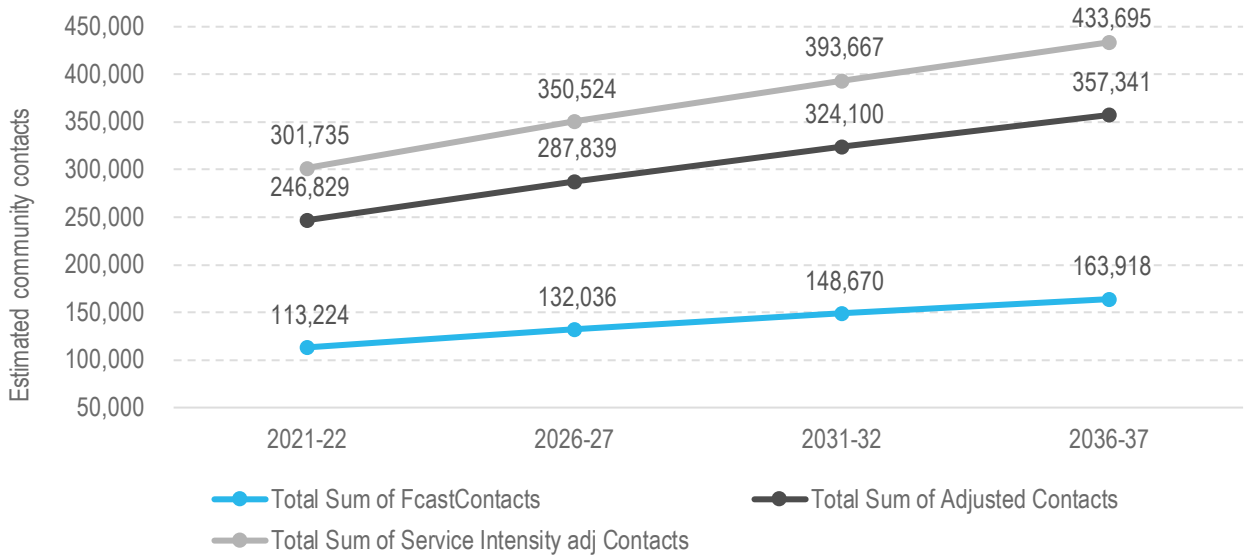
5.2.2. Community mental health services

An estimate of the range of projected community contacts is presented in Figure 5-6. Using the mental health forecasting data, there are approximately 113,000 community contacts occurring across the Grampians AMHS in the current financial year (2021-22), increasing to around 164,000 by 2036-37 (blue line Figure 5-6). Nevertheless, it is noted that whilst the community projections model indicates that there is current *demand* for 113,000 occasions in 2021-22, current *funding* provides for approximately 70,000 occasions, or 62% of current projected demand.

Estimating future demand for community mental health service contacts will remain challenging until operational decisions regarding the recommendations of the Royal Commission are finalised. In the interim, several assumptions can be mapped to provide a range estimate of the likely increase in community mental health services up to 2036-37. If the likely population **prevalence** of mental health concerns is used to adjust these baseline estimates, then up to 357,000 community contacts may be occurring at the end of the forecast period (black line Figure 5-6).

If further recommendations to increase the **intensity** of community contacts per client, as recommended by the Royal Commission, are factored into consideration, then up to 350,000 contacts may be occurring as soon as 2026-27, increasing to more than 433,000 by 2036-37 (grey line Figure 5-6).

Figure 5-6: Estimated range of potential community contacts for mental health services



Taking a 'mid-point' of these estimates, it seems sensible to estimate a doubling of current contacts to around 230,000 by 2026-27 and a further increase to around 300,000 by 2036-37.

This will equate to an additional 65 outpatient clinic consultation rooms at Ballarat, and four additional clinical consultation rooms each at Ararat, and Horsham. This represents a substantial increase in the physical infrastructure required to support the level of community services that are indicated by population prevalence models for the Grampians region.

5.3. CURRENT ISSUES

Overarching areas of concern

The consultation process undertaken to inform development of the CSP highlighted a range of issues associated with the *availability and delivery* of mental health services across the region. These issues were broadly acknowledged by mental health professionals, other health services and community members. The issues can be broadly categorised as:

- **Access/Availability** – there are significant difficulties in accessing available/appropriate service.
  - **Limited access to Community Mental Health services** - this includes limited availability of after-hours services in the region, including weekends and public holidays. The type of clients that may need this support are unable to access telehealth which is also unsuitable for older people and there are no services available for moderate care.

    "The middle is not missing, it's just too skinny."

    Given the anticipated increase in community demand, the availability of community mental health clinicians is going to be a high priority area for Grampians AMHS to address.

- **Limited access to acute inpatient (or other bed-based) services** – this is universal but is especially relevant to the Wimmera where there are no bed-based services, and the transfer of patients to Ballarat is both problematic from the client perspective at over two hours travel time, the local clinical management of patients if they are not transported and the difficulties associated with transportation from Ambulance Victoria's perspective.
- **Poor understanding of how to navigate and gatekeeping process that may not lead to timely or effective responses** – including a poor understanding of how to navigate the service system and lack of clarity as to the nexus with community health and community mental health services and reportedly poor outreach services from Ballarat to other areas of the catchment.

"Access to psychiatrists and psychologists in the Wimmera is hopeless - we use telehealth from Brisbane"

"There is no proper referral service, so they go in a never ending circle."

"Currently there is no equitable access across the Wimmera."

"GPs are also struggling to connect people."

"No Wrong Door policy is what is needed. If it's not your service, then have guided referrals until the client is picked up"

- **Service Gaps** – related to the above point on access, there are identified service gaps for:
  - Children and adolescents, including an adolescent unit, and eating disorder service;
  - Deficiencies in the role of a regional mental health service to support EDs and UCCs for mental health and AOD services. This gap may be closing over more recent times with resourcing included in ED rostering at Ballarat. Issues are also expected to be ameliorated under the planned Mental Health Crisis hubs that are in the planning stage.
  - The recently introduced minimum Consultation-Liaison service will need to be enhanced over the next several years
  - Support and education to upskill staff to better manage disturbed clients (mental health first aid training, de-escalation techniques, immediate crisis interventions).
- **Referral Pathways**: There are limited referral pathways beyond the inpatient and community mental health service streams. It recognised that opportunities exist to integrate services with other community providers, but this has not yet occurred. Ongoing community referral streams are particularly important to address the needs of the "missing middle" and other patients who do not meet the eligibility criteria for the state-funded mental health service system.
- **Workforce** issues across the region – there was a consistent message that,

"The main issue from my perspective is recruitment and retention"

  - At the core of access and service gaps are two issues. The first is the service model and the second is workforce.
  - Analysis of psychiatrist FTE workforce (excluding registrars) indicates that the Grampians AMHS is 67% lower than expected when compared with the national per capita rates by specialty, which includes private psychiatrists. This is consistent with the findings of the Royal Commission with regard to the relative underinvestment in public mental health services, including workforce. The Victorian Government is seeking to address workforce issues through its *Mental health and wellbeing workforce strategy 2021–2024*, released in

December 2021, which acknowledges that "Victoria's mental health and wellbeing workforce needs to grow significantly to deliver the treatment, care and support that Victorians need."[19]

- Similarly, and most starkly, there have been no accredited *registrar places* in Grampians mental health service. 2022 is the first year that there is approval by the Royal Australian and New Zealand College of Psychiatrists to recommence *accredited* registrar positions in the Grampians. There are plans to significantly increase the accredited and non-accredited registrar positions to 14 in 2022-23.
- The paucity of *psychologists* was highlighted as a key factor in better supporting triage.
- The number of *mental health nurses* is below levels of current and future demand.

It is generally recognised that there needs to be a multidisciplinary approach to mental health service delivery, including within the ED, together with a recognition of a non-clinical workforce including a peer workforce to do home visits and prevent escalation of clients.

5.4. AREAS FOR DEVELOPMENT AND FUTURE DIRECTIONS

The final report of the Royal Commission into Victoria's Mental Health System was tabled in the Victorian Parliament (March 2021). As the regional provider of mental health services, Grampians Health is committed to align with the findings of the Royal Commission, as is the Victorian Government. As part of a coherent government response, the Department has developed a guide to assist AMHSs to identify their respective areas of priority reform for their Transformation Plans. Significantly, the guide is explicit that delivery of mental health services needs to change, not merely "expand or reconfigure." There is clear direction that requires AHMSs to engage in meaningful restructure of their approach to service delivery, model of care and culture that involves "consumers and carers, based on their needs and preferences."

The Transformation Plan highlights eight priority areas:

1. Embedding lived experience in the leadership, design and delivery of Area Mental Health and Wellbeing Services.
2. Establishing two area mental health and wellbeing services streams, namely:
   a. Infant, Child and Youth for Victorians aged 0-25 years; and
   b. Adult and Older Adult for Victorians aged 26 years and older.
3. Expanding core clinical services to ensure that more people that need tertiary level treatment, care and support are able to access it, as well as ensuring that treatment, care and support is of the right type, intensity and duration to achieve good clinical and wellbeing outcomes.
4. Delivering more clinical activity outside of standard business hours to improve access.
5. Extending primary and secondary consultation across the system and developing models of shared care to give effect to the recommendations relating to integrated and responsive care.
6. Forming a partnership with an NGO provider of wellbeing services which recognise the holistic nature of mental health services and the critical relationship between social factors and mental health and wellbeing.
7. Integrated mental health and alcohol and other drugs treatment, care and support for people living with mental illness and substance use or addiction.
8. Supporting the new Local Adult and Older Adult Mental Health and Wellbeing Services that seeks to smooth the transition between different tiers of the system in order to optimes outcomes.

19. Department of Health, Victoria's mental health and wellbeing workforce strategy 2021–2024 December 2021 (https://www.health.vic.gov.au/strategy-and-planning/mental-health-workforce-strategy)

In this context, the CSP focuses on 10 of the 65 recommendations of Royal Commission as **priority areas that respond to the immediate local gaps and service directions** revealed through the extensive consultation process both internally across Grampians Health campuses, and externally with organisations and other service providers that intersect with the Grampians AHMS.

Importantly, accepting that Priority 1, embedding lived experience, is implicit across all work relating to all work required to implement the Royal Commission's recommendations, the areas of focus identified for the CSP also align well with the priority areas required by the Department's Transition Plan.

Specifically, these relate to:

- Helping people find and access treatment, care and support (R6)
- Establishing a responsive & integrated mental health & wellbeing system (R3)
- Supporting mental health consultation liaison (C-L) services (R14)
- Responding to mental health crises (R8)
- Improving outcomes for people living with mental illness & substance use or addiction (R35)
- Core functions of community mental health & wellbeing services (R5)
- Additional and alternative bed-based services (R11)
- Integrated regional governance (R4)
- Supporting the mental health and wellbeing of people in rural & regional Victoria (R39).

- A responsive and integrated system, where people receive most services locally close to families/carers/supporters
- Establish requirements for each service and the links between them through a 'service capability framework'.
- Deliver in-hospital mental health consultation liaison services as part of routine care including to people admitted for physical health reasons

Details of how service design and change are implemented, including development of the two Area Mental Health and Wellbeing streams need to be undertaken as part of a detailed Operational Plan for Grampians Health mental health services. The following areas focus on highlighting the recommendations that provide the best means for addressing the current gaps and issues identified as high-level themes, together with a rationale for the proposed areas for action.

5.4.1. Service & system navigation

The intention of the Royal Commission is to make it easier for people to get support when they need it, have clear and accessible information about the service system, and experience a service system that is coordinated between acute and a range of other community providers through streamlined access to information and referral options. Grampians AMHS acknowledges the need to undertake significant developments to achieve the Royal Commission's goals in several key areas including:

- **Common, co-produced and up to date service information**: The Grampians AMHS does not have an integrated directory of services for people experiencing mental illness. Accordingly, navigation of the service system remains unique to the knowledge of individual health services. There has been limited outreach and education to primary care providers about the range of mental health services and how to access them across the region.

- **Common referral forms and pathways**: Grampians has a common point of referral for all patients needing care, via the 1300 telephone triage service. It has been a conscious decision to allow a wide variety of different referral types, to suit the needs of different practitioners and information is standardised through the triage process. However, the current triage service remains difficult to access, and it is difficult to generate an appropriate and timely response if it accessed. The lack of responsiveness of the Grampians mental health service is a common theme of stakeholder consultations.

- **Creating a regional website**: Information about the range of mental health services and what to expect is available on the Ballarat campus website. Unless consumers are directed to this source of information and understand the structure of current services, it is difficult to find local services and understand how to access them.[20]

Developing a regional website that targets consumers, family/carers/supports, together with a common, integrated service directory that can be used to enhance referral pathways, will improve transparency about service availability and responsiveness across the region.

5.4.2. Integration & Consultation-Liaison

A future service system expects integration and seamless service delivery within and between health care providers, to act quickly to provide support, and provide C-L to enable people to get the right care and support.

Ongoing issues in relation to service integration and C-L include:

- **Provision of local services**: Currently, residents of the Grampians AMHS are unable to receive bed-based or specialist community services close to home unless they reside in Ballarat. This results in potentially preventable ED/UCC presentations for some individuals who are in crisis or experiencing the compounding effects of mental health and AOD issues. For others, significant travel is required to receive basic mental health care beyond any treatment that can be provided by their local community health centre or general practitioner. There are specific cultural issues faced by First Nations People who have to travel 'off country' to receive services.

- **Developing service networks**: Historically, most mental health services have operated in silos with limited integration of local mental health networks. This can include silos even within the same health service, including Ballarat Health Services. These issues are compounded as individuals transition the artificial, age-delineated service boundaries (e.g., from child and adolescent to younger person, to adult, to aged) leaving them at risk of 'falling between the cracks' in a fragmented service system.

- **Expansion of C-L**: Grampians AMHS already operates a fledgling C-L service at Ballarat. This service is expected to grow over the coming year as more staff are employed across multiple disciplines. A remaining challenge is how this service can be expanded to support other health providers across the region, including staff in the EDs/UCCs, specialist clinical areas, general practitioners and other community service providers.

Reducing service fragmentation and improving local service access, including through capacity uplift across regional health services, and improved networking with primary and community providers, through expansion of consultation and liaison services must be addressed as a matter of priority.

20. Examples of the nature of the difficulty were provided by stakeholders, including, for example, the current website does not list mental health services under information 'for patients, family and friends'. Moreover, if a consumer, carer, or health professional resides outside of the Ballarat service area they are unable to readily obtain information about how to access mental health services. Assuming an informed individual does access the Ballarat Health Services website, there is a paucity of primary care and other community referral sources to provide more immediate care or to facilitate a referral into the service (other than presenting at the hospital ED)

5.4.3. Responding to mental health crises

There are specific recommendations from the Royal Commission that require services to respond to people in mental health crisis and for improving outcomes for people living with mental illness and substance abuse.

- **Telephone crisis assessment and immediate support**: The Grampians AMHS currently has limited capacity to provide a responsive telephone crisis assessment and support service. The 1300 telephone line provides the requisite infrastructure to receive calls from people in distress but has limited capacity to provide services beyond triage and referral. Understaffing is reported to be the main issue limiting the capacity of the telephone assessment service. Workforce re-allocation is required to address the need for more appropriate levels of immediate support via telephone to consumers, carers, support people and other professionals.

- **Crisis outreach teams**: There is a new acute response team operating in the Ballarat region, but this has limited staffing at present and will need to be expanded, particularly in relation to the provision of after-hours services in Ararat and Horsham. Outreach teams also need to expand their capacity to check in with consumers who are referred to other services following presentation at the ED/UCC and following discharge from state funded mental health services.

  "HARP at WHCG has been amazing at supporting psychology services in the community with technological support for HARP clients"

- **ED/UCC capability to respond to mental health needs**: In addition to an increase in C-L services within the ED (more regular rounding by multidisciplinary mental health teams), the Grampians AMHS would be expected to complement these direct care services with training and support packages for ED and UCC staff to help them independently manage mental health presentations. Virtual C-L services will be an increasingly viable alternative to reach across the region.

- **Future mental health and AOD crisis hub/s**: The recent Victorian Budget committed funding for additional ED mental health and AOD crisis hubs including at Ballart.[21] Grampians AMHS will deliver – in the short-term – 6 new points of care as part of a mental health and AOD crisis hub, to be built in the new ED.

  Remaining consistent with the recommendations of the Royal Commission it is also likely that a mental health Short Stay Unit of between 6 and 12 points of care will be required and collocated with the new crisis hub. Staffing these hubs with mental health and addiction medicine, nursing and other allied health will be a priority development for the AMHS.

Initiatives required to better respond to mental health crises are inevitably linked to issues discussed in section 5.4.2 above, as availability of appropriate C-L, robust service networks, and the planned crisis hubs are expected to provide the foundation for effective responsiveness to mental health crises at the local level.

5.4.4. Community Mental Health

The Royal Commission has specified that community mental health services work in an integrated manner with other mental health and support services, are available 24/7 and accessible to everyone in the community. Achieving this vision will require significant further service development at Grampians AMHS.

21. Refer - https://www.dtf.vic.gov.au/2022-23-state-budget/2022-23-rural-and-regional

- **Availability of services 24/7**: Historically there has been a gap in availability of community mental health services after-hours, including weekends and public holidays across the region. The Royal Commission's recommendations anticipate extended hours services that can respond to crisis calls in the community 24 hours a day, seven days a week. Community mental health service provision in regional areas is inexorably linked with the changes noted in section 5.4.3, where this may be the only service available and thus needs to be well integrated with the network of services. Grampians AMHS will need to *increase its capacity and capability to provide assertive community treatment, including an outreach program*, to cater to the needs of people living with mental illness who need ongoing intensive treatment, care and support within their local communities.

- **Service access for everyone**: Workforce shortages within both the public and private mental health systems has increased the pressure on service access.

  "There's a need for access to public or private services without the ring around; nearly every private psychologist I'm aware of has 'not taking patients' on their webpage"

  Access to community mental health services is further exacerbated by the nature of the consumer cohort, which is often unable to access telehealth services due to their constrained ability to access or manage the requisite technology and/or appropriate levels of connectivity. There is a clear role for the Grampians AHMS **to better engage with non-government service providers in the wider catchment to support and streamline access to services**.

  This engagement is expected to be characterised by genuine partnerships and service collaboration at a patient, clinician and system level. Specific care will need to be taken to ensure that traditional service silos are broken down between Grampians Health and other community providers.

- **Level of community service provision**: The Royal Commission recognised that current levels of state-funded community mental health service delivery were too low to promote effective therapeutic interventions. Accordingly, it was recommended that there will need to be an increase in intensity of community sessions according to the patient's level of need (as outlined in the National Mental Health Planning Tool). This will present significant additional challenges to Grampians AMHS, by **potentially doubling the level of required community mental health sessions** over the next few years.

  Consideration should be given to developing a significant mental health footprint in a community-based service hub for the range of services that is being considered as part of the reinvigoration of community-based services to be delivered by Grampians Health in Ballarat. In addition, there will also be a requirement to provide a higher level of community mental health services delivered from a broader range of locations including Stawell, Edenhope, Ararat, Horsham and Nhill.

- **Services for the 'missing middle'**: The Royal Commission also paid specific attention to the group of people whose needs are too "complex, or severe, or enduring" to be supported through primary care alone, but not "severe" enough to meet the strict criteria for entry into specialist mental health services. This cohort is particularly problematic in regional communities where there is already a shortage of primary care providers, let alone those with the skills and expertise to support people with complex needs. It is proposed that the specialist mental health team within Grampians AHMS is the most appropriate entity *to develop and facilitate innovative models of care to provide greater access to appropriate services for this cohort,* that recognises the (potential) need for ongoing treatment, care and support**.** *Grampians Health will be a cornerstone service that can facilitate services to the 'missing middle'.*

In summary, Grampians AMHS can be expected to increase its capacity and capability to provide assertive community treatment, engage with non-government providers to support and streamline access to services, increase intensity of community mental health sessions and collaboratively develop innovative models of care to address the services to the 'missing middle' patient cohort.

For Ballarat and Horsham, it will be necessary to establish new infrastrucuture that is an integrated community health hub where the significantly expanded community mental health service is collocated with HITH, Better@Home, community health, community aged care and NDIS.

5.4.5. Additional and alternative bed-based service

The Royal Commission proposed funding of additional bed-based services whilst recognising a need for models of care as alternatives to acute hospital-based services including HITH for mental health where appropriate, time-limited, and flexible residential respite services informed by local priorities that include peer-led residential respite services and bed-based rehabilitation services.

- **Additional beds**: All mental health inpatient beds are currently located in Ballarat (53 points of care). The recent Victorian Budget announcement included significant funding for additional mental health bed-based services across the state including in Ballarat together with a 10 bed Youth Prevention and Recovery Care Unit (YPARC).

  It is proposed that Grampians Health develop a new 4-6 bed acute service in Horsham, which would support definitive services closer to home, reduce added stresses and complexity in transport to Ballarat as well as improve relative utilisation rates for acute mental health.

- **Improved use of multidisciplinary approaches**: A multidisciplinary workforce that includes people with lived experience and peer-support workers recognises the diversity in the way people experience mental health and wellbeing. To this end, it is proposed that Grampians Health *foster a more collaborative and multidisciplinary approach to care across the spectrum of settings including bed-based services of all types* – acute inpatient, hospital in the home, bed-based rehabilitation, and PARC services amongst others.

- **Hospital in the home (HITH) for mental health consumers**: HITH services were specifically identified by the Royal Commission as a new model of bed-based service for mental health care. The recommendations specifically identified availability of HITH for young people as an alternative model where appropriate. Given the lack of inpatient services for young people in the Grampians region, consideration of *innovative models for supporting young people with HITH services and video/telehealth links* should be considered by Grampians Health to address this service deficit.

- **The availability of regional residential respite services**: There has been longstanding demand for greater availability of mental health respite services. The Royal Commission specifically recommended investment *in a wide range of time-limited and flexible residential respite services informed by local priorities, including establishing a peer-led residential respite*.

It is proposed that Grampians Health should develop acute mental health beds at Horsham campus, develop innovative HITH models that support young people at home via real-time video services, and invest in a wide range of time-limited residential respite services in partnership with a non-government organisation. Additionally, services need to foster a collaborative and multidisciplinary approach to care across all bed-based and community-based services.

5.4.6. Supporting rural and regional mental health and supporting regional governance

Despite the prevalence of mental illness being comparable between metropolitan and regional areas, and suicide rates being higher, there is a recognised differential in access to services for people in rural and regional areas. The Royal Commission comments on the range of challenges people in regional areas face when accessing treatment, care, and support. This included a lack of local service and pronounced workforce shortages. A revitalised service system as envisioned by the Commission proposes services that engage with rural and remote communities, identifies gaps, and establishes services away from cities and towns and includes new ways of utilising digital modalities.

A roll-out of *Regional Mental Health and Wellbeing Boards* is underway. This governance framework would nevertheless require Grampians Health to ensure effective (clinical and operational) governance of mental services. The role of the new Boards in planning and stewardship still requires operational governance. Grampians Health's mental health governance systems and structures will need to support the following characteristics:

- Clear directions and measurable goals;
- A responsive and client-centred focus of the service;
- A well-integrated service system across a patient journey;
- Service models (models of care) that are malleable to the client's particular and holistic needs;
- A well-trained workforce;
- Contemporary and well-designed infrastructure that suits the model of care; and
- Supportive ICT systems.

Proposed Developments and Future Directions

The over-arching theme for future mental health services is revitalisation and innovation in the strategic positioning, how services are delivered and greater connectivity between mental health and the broader health and social support system. What is clear is that Grampians Health will embark on some fundamental reforms in mental health.

Some of the more important strategies/initiatives for Mental Health include:

- **Regional Governance**. Within the role set by the Regional Mental Health Board, Grampians Health would develop an *operational and clinical governance framework* that would:
  - Articulate the Royal Commission principles;
  - Establish role and service expectations of Grampians Health and other health providers;
  - Articulate the service model (model of care). This includes how seamless service provision is expected to occur;
  - Describe the operational structure that would support the service model, including;
    - Programs that support holistic services for patients;
    - Programs that support carers and self-support groups; and
    - Establish performance measures and service targets. This is an ambitious and potentially onerous strategy for Grampians Health but one that will ensure that there is ongoing focus of performance across all of its measures.

- **Access and support**. A common theme of the mental health focused consultations was the relatively poor access to services provided by Grampians Health, and the inadequate level of response following access to services. This is a critical factor that drives a range of service strategies. Initiatives include:
  - Increasing the relative utilisation rate of mental health services in the Grampians Region from the current 0.79 to state average utilisation. This is a relative increase of 21%.
  - Increasing responsiveness to calls to the Grampians Health services that would *prioritise 24/7 telephone assessment and support*, whilst maintaining 24/7 telephone triage services (which could implement call back approaches when there is a large volume of referrals).
  - *Progressively develop service navigation coordinators*
  - *Boost and expand community mental health outreach teams* at key hubs across the catchment area from Ballarat to Ararat, Stawell and Horsham to fulfil its role as the regional mental health service, and then either smaller teams or a dedicated virtual team to service outer lying districts working into and around Rural Northwest Health, Warracknabeal and West Wimmera Health Service, Nhill.
  - *Increasing crisis response capacity* of between 6 and 8 beds;
  - *Increasing acute beds* by 10-12, including improved access closer to where people live, suggesting 4-6 acute mental health beds at Horsham;
  - The *doubling of community based mental health* service capacity and enhancing capability to deliver effective treatment and therapy at home; and
  - Capacity at Horsham ED to better manage mental health presentations.
- Improved utilisation of the aged mental health care beds located at the Stawell Campus and at West Wimmera Health Service (Nhill).
- Developing an *effective crisis response* in the Grampians Region consistent with the Royal Commission findings.
- Significantly expanding the burgeoning *Consultation-Liaison* services to enable virtual support from Ballarat to the western campuses of Grampians Health, the non-Grampians Health services, and GPs.
- Establish specialist *Child and Adolescent and Young Adult service streams* to align with new mental health population cohorts.
- Developing *proactive community treatment capacity and capability* that:
  - Expands capacity and capability. Whilst the department is currently determining the level of support and expansion for community mental health services it is expected that Grampians Health would be looking to double community-based services over the next five to 10 years, which would be consistent with the Royal Commission findings of the National Mental Health Planning Tool. This doubling includes an increase in intensity of community mental health sessions.
  - Better engages with non-government providers to support and streamline access to community services. This is as much a cultural as a service model shift. It is to ensure that whilst there is clear role delineation between Grampians Health and other providers, there are also clear interface and client transfer protocols that make service delivery seamless and not siloed as is presently the case. This particularly relates to lived experience services and services to the 'missing middle'.

- *Expanding formal mental health Multi-Disciplinary Teams* (MDTs) and extend their operations from mental health units (including ED crisis hub) and community mental health services to other non-mental health units across the region. Consideration should also be given to a regional travelling MDT across health and community services to provide ongoing upskilling, training, and support to staff across Grampians AMHS.
- *Boosting and expanding community mental health outreach teams* at key hubs at Ballarat, Ararat and Horsham, and subsequently to either smaller teams or a dedicated virtual team to service smaller communities working into and around Warracknabeal and Nhill in particular.
- For Ballarat and Horsham, it will be necessary to establish a new facility that is an integrated community health hub where the significantly expanded community mental health service is collocated with HITH, Better@Home, community health, community aged care and NDIS.

- Develop **client-facing service navigation and support tools**, including:
  - *An integrated service directory and a regional mental health website* to enhance referral pathways and includes regional resources for consumers, carers and other supports and health professionals.
  - Developing and implementing *support programs for upskilling staff working in the ED and UCC environments* and then expanding to other inpatient and outpatient settings;
  - Developing and implementing *volunteer worker and peer training and support programs*, starting with staff working in the community setting and then extending to more acute service environments.
  - Consumer and carer representatives to undertake peer support roles (including those individuals interested in upskilling);
  - Other volunteer organisations and individuals interested in receiving upskilling to work with people who experience mental illness;
  - First Nations People who are qualified or interested in becoming qualified to provide liaison officer roles or peer support roles;
  - Representatives from other high needs groups in the community (e.g., refugees and new arrivals, CALD groups, LGBTQI community representatives, and people living with a range of different abilities).

- **Building workforce capacity and capability** across regional health services, and improve networking with primary and community providers, through increased on-site local presence of mental health workers, outreach specialist services (in situ and virtual). This would include the enhanced availability of C-L services to other Grampians Health campuses. The system is currently unable to recruit sufficient mental health workforce. Increased capacity will exacerbate the already limitation of workforce.

  In the short-term, implement program that upskills Grampians Health staff working in emergency, acute and subacute wards. In the medium to longer-term there is a need to expand the workforce through recruitment, training and development. Therefore, Grampians Health would:

  - Establish specific training programs with TAFE and universities;
  - Develop bursary training places for nursing and allied health professional training;
  - Collaborate with metropolitan health services for joint recruitment and support opportunities;
  - ‘Recruit’ GPs that have a particular interest in mental health services; and
  - Specific state sponsored training programs that may arise.

6. Public Health

> *"The failure to invest in pandemic preparedness, response and, more generally, in the health of all people has been the most glaring symptom of the world's ailing approach to investing in global public health, and universal health coverage, for decades."*[22]

Public health, as envisioned in the 21st century is no longer limited to sanitary conditions but has evolved to become the science of protecting and improving the health of people and communities. Good public health is achieved by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing, and responding to infectious diseases. Overall, public health is concerned with protecting the health of entire populations.

Although the importance and relevance of public health as a foundation of the health system as it relates to infectious diseases was recently brought into prominence with the COVID-19 pandemic, increasingly there is a broader role for public health in chronic diseases. Public health has always recognised the correlation between social determinants and health outcomes and therefore has an important role in influencing and informing its community on behavioural risk factors that are common across the most prevalent non-communicable diseases that impact population health outcomes.

A public (population) health approach describes a shift in the healthcare system from a narrow model of acute care targeted at the individual patient, to one that focuses on the health and overall wellness of the broader population it serves

6.1. SERVICE DESCRIPTION

The Victorian Government has established a new system of devolved Local Public Health Units (LPHUs) to strengthen the public health response to communicable diseases and other health issues that are tailored for local needs. The Grampians Public Health Unit (GPHU), hosted by Grampians Health, is part of this network of LPHUs that will strengthen public health delivery and oversight across Victoria.

Additionally, the Victorian Primary Care Partnership (PCP), established in 2000, began transitioning into LPHUs from 1 April 2022. The transition of PCP resources to LPHUs is designed to consolidate and improve public health outcomes through collaborative efforts of local partners including local government, community health, women's health, and Aboriginal health organisations.

22. WHO Commentary, January 2022: https://www.who.int/news-room/commentaries/detail/covid-19-has-shown-sustainable-financing-of-who-is-needed-to-deliver-health-for-all

6.2. CURRENT ACTIVITY AND PROPOSED DEVELOPMENTS

6.2.1. Current Activity

Initially, it is intended that the GPHU will be responsible for COVID-19 related activities including case contract outbreak management, rapid response testing, the COVID-19 vaccination and Ballarat for Kids program.

However, as COVID-19 demands decline, it is envisaged that the GPHU will assume a key role in activities regarding the prevention and population management of a range of communicable diseases and non-communicable diseases and conditions in the cluster, lead a regional approach to health protection, strengthen population health strategy and outcomes (including regarding social and structural determinants of health and health inequalities), and undertake population health research.

6.2.2. Emerging Trends for Public Health

The COVID-19 pandemic highlighted weaknesses of public health and acute medical services in most countries. Indeed, the pandemic shone a light on the need for better governance and stronger, more resilient and capable health systems that have a greater depth in capacity and capability. Additionally, it emphasised the importance of coordination and collaboration amongst a diversity of stakeholders within and beyond the health system, including the importance and power of clear and consistent communication to a fearful public.

Importantly, it has demonstrated a level of complacency in the health system, and amongst governments responsible for funding, around some essential functions of public health, - surveillance, and data management/modelling. Disease surveillance is said to be the “backbone of any epidemic response”, providing vital information about “at-risk” populations and targeted interventions – our national systems were found lacking. The pandemic has also highlighted the vital linkages with other areas of the health system, including mental health and workforce development, that again have often been neglected areas of the system in relation to funding. The priorities for public health post pandemic include greater investment in public health education and training and ensuring that local public health units remain integrally involved in emergency preparedness and response planning to ensure that local health services are not overwhelmed by future emergencies.

Proposed Developments

The paradigm for the “new public health” encompasses nearly every aspect of human lives and surrounding environment making it difficult to define it in terms broad enough to illustrate its complexity. The World Health Organisation (WHO) defines public health as,

“The art and science of preventing disease, prolonging life and promoting health through the organized efforts of society”. [23]

23. https://www.euro.who.int/en/health-topics/Health-systems/public-health-services/public-health-services

Health in this context includes physical, mental and social well-being and is not merely the absence of disease or infirmity. As such, public health efforts that integrate health prevention activities and lead to improved and population health outcomes need to encompass all aspects of health care provided by Grampians Health, across all clinical streams. A public health approach also serves to address some of the growing pressures on the acute health system by shifting from the traditional biomedical model of healthcare to one that prioritises wellness of the whole population and places emphasis on intersectoral collaboration.

Through the formation of the GPHU, the new Grampians Health will broaden its perspective, as well as its remit, to embrace the entirety of the patient journey to ensure equitable health outcomes for its whole catchment. In effect, the service mindset needs to move from episodic care to comprehensive care, and from only "the pointy end of health care delivery" to include broader population health.

Illustratively, this could include:

- Broader access to dental health and care, especially for children.
- Public health programs that focus on the modifiable risk factors which impact on chronic disease and coordination of integrated care.[24]
- Community-based mental health services that target primary prevention of mental health conditions with a focus on developing community resilience.[25]
- Programs that target women's health recognising that economic, social and cultural disadvantage can worsen women's health and that certain cohorts are at particular risk. These groups include First Nations women, women living in rural and remote areas, those who live with socioeconomic disadvantage, are victims of violence, or have a severe mental illness.
- Ensuring effective collaborative structures and processes with all health services in the Grampians Region, local governments, and other specialised providers of health services including ACCHOs.
- A focus on prevention programs including screening and immunisation across the catchment.

The Grampians Health public health strategy outlines priorities relevant to the region's population, aligns with state-wide policy directions and complements local 'early years' planning and municipal health and wellbeing plans. It supports an integrated, coordinated public health response across campuses that consolidates and strengthens Grampians Health public health workforce, enhances the reach of health promotion strategies, addresses social determinants of health and supports synergies with Grampians Health's clinical service models to promote integrated care for the community.

24. PwC Health & Wellbeing – Grampians Health Strategic Planning: Current State Analysis, Supplementary Report February 2022 (Source ABS)
25. VicHealth, Evidence Review: The primary prevention of mental health conditions, Prepared for VicHealth by Prevention United Author: Dr Stephen Carbone July 2020 - https://www.vichealth.vic.gov.au/media-and-resources/publications/primary-prevention-of-mental-health-conditions

7. Access and Flow

This section has a focus on access and flow; 'access' to services by patients, and the 'flow' of patients through their care/treatment journey.

The emphasis on *Access and Flow* recognises that it is a core element of the future Grampians Health service delivery system. It can be the driver of safe, efficient, and effective care if it is appropriately developed and implemented, or conversely, it can be a millstone that inhibits or undermines the success of other proposed strategies.

The CSP does not propose to cover all aspects of the many ways patients engage with, or disengage with, Grampians Health. It proposes to focus on seven elements:

- **Integration of services between Grampians Health campuses.**
- **Enhanced integration of services between Grampians Health and other 'external' service providers including community health, GPs, and social service providers.**
- **Operational efficiency and timely care within hospital.**
- **Consistent clinical capability across 7-days, principally at Ballarat.**
- **A Discharge Referral Team for complex patients.**
- **Enhanced capacity and capability of community-based services including HITH (Section 8) and Better@Home (Section 10.5).**
- **Additional specialist (outpatient) clinics, that can reduce waiting times for clinic appointments and alter the mix of new and review patients attending clinics – in person or virtually. This is described in Section 13.**

7.1.1. Enhance Patient Access through Integration of Grampians Health services

This strategy effectively integrates the services of the five campuses. As a new entity, an early focus will be to integrate services to realise opportunities that **enhance access** to health services – particularly for communities in the Wimmera – as one of the principal goals of amalgamation.

Within Grampians Health, integration would typically include:

- *Overarching system design and management*, such as clinical governance and risk, recruitment, and staff development, amongst others;
- *Developing combined unit management across clinical streams*; and
- *Establishing entity-wide service development opportunities that would not otherwise be possible as four separate entities, including priority service initiatives*, such as specialist clinics by telehealth, staff rotations, consultation support by Ballarat, amongst others identified in this CSP.

It is acknowledged that there is limited awareness at the Ballarat campus of the capacity and capability at the other campuses, which would dissipate over time by implementing the above strategy. Having better visibility and understanding of local capability should enable, for example, a single elective waiting list and regional bed and theatre management system. The proposed virtual ED will also facilitate better access at the local level and provide greater visibility of the most appropriate place/responsibility for care.

Integration with external parties would typically include structures, processes and agreements that are capable of *seamless care delivery.* It is understood that current management of access and flow across Grampians Health and across the region is not well integrated and coordinated. As one stakeholder noted,

Good care integration occurs more by accident than design.

Grampians Health staff across all campuses acknowledge the long-standing difficulties associated with patient discharge back to GPs and to other health providers. They are the same issues that plague all health services, large and small. Some of the main issues for attention identified by stakeholders include:

- Improvement of the referral process by GPs to Grampians Health for specialist acute and subacute clinic appointments;
- More effective and efficient discharge planning back to GPs and other primary care providers that provide a basis for improved continuity of care and patient experience; and
- Better service linkages on discharge, especially for the more complex patients, involving several agencies and carers.

It is unsurprising that the many 'patient hand-off' points, and the different demand pressures across the many units in a hospital result in patient flow inefficiencies. Initiatives of Grampians Health to overcome these operational problems include:

- Patient Journey Boards.
- Electronic discharge planning.
- Regional Bed meetings.
- Service navigators.
- Ballarat Campus Patient Flow Unit, which consists of 24/7 Bed Managers and Night Coordinators supported by the Director Access and Operations who manage access and flow in to and out of the Ballarat campus. This Patient Flow Unit team also assumes the role of Incident Commander.
  - The After-Hours Team at the Ballarat Campus is responsible for ED to on site Mental Health Service flow and assumes responsibility for working with the Casual Allocations Unit on workforce issues.
  - The Subacute After-Hours Coordinators assume the role of after-hours Incident Commander.
  - There is also a Mental Health Services Bed Manager available Monday to Friday.
- Horsham campus has 24/7 Patient Flow Coordinators.
- The Stawell, Edenhope and Dimboola campuses usually designate responsibility for access and flow to Nurse Unit Managers.

Effective management of patient access and flow is a balancing act which requires matching demand to capacity, both in terms of beds and workforce.

7.1.2. Operational Efficiency and Timely Care

Poorly managed patient flow in hospitals can lead to adverse outcomes, including delays in treatment timeliness due to extended ED waiting times and ambulance ramping, longer LOS and increased re-admission rates. A theme of the internal stakeholder consultations was that operational efficiency and timely care is regularly compromised due to fragmentation of care of one type or another.

It is proposed that Grampians Health take efficient flow and timely care to a new level; challenging the existing paradigm to achieve *right care, in the right place at the right time*. It is an important factor for safety and quality patient outcomes. By their very nature, the *friction points* occur as there is no or limited awareness of their importance to the organisation as a whole, and no way that they can be effectively monitored. **A sustained focus on improving inefficient patient flow** could be basis for Grampians Health becoming an exemplar health service for patient access, flow and safe practice.

It is expected that there will be many challenges in developing a truly efficient patient access and flow 'system'. It is also likely that there will be many internal discussions as to how best to achieve exemplar access and flow. This CSP does not prescribe a 'best method' but does identify the characteristics to would constitute best practice, including:

- *'Fail safe' handoffs* – between referring physicians and hospitals, between health services, between departments within the hospital, and between clinicians across shifts.
- *Diversion and substitution* – of patients to suitable alternative care from ED and from wards. This includes primary care diversions, HITH, and Better@Home service models.
- *Reduced Bed-blockage* – resulting in no waits from ED admission of patients to beds (or other definitive care destinations).
- *Efficient operating suites* – including efficient scheduling and time to procedure starts, arrival and discharge of patients undergoing elective procedures, among other peri-operative work flow and work practice initiatives.
- *Timely and standardised discharge* from hospital – delays in discharge to late mornings and later in the day create inconvenience to patients/families and contribute to bed shortages and access block.
- *Eliminating competing staff priorities.*
- *More services available out of business hours.*
- *Coordination and accountability for efficient practices. This means eliminating siloed mentality of staff.*
- *'Certain and timely' communication flows* including discharge information to external providers.
- *Active and integrated engagement between acute health services and primary/community care* – leading to reliable continuity of care and reduced risk of readmissions.

All of these changes could be established to measure outcomes and assign accountabilities.

From international examples, Grampians Health can tackle this challenge by multi-staged models that provide incremental (and measurable) gains, or a 'single solution' approach such as the *electronic 'control tower' (Section 22 and Appendix 1),* or a combination of planned incremental changes and a single solution digital transformation platform.

7.1.3. Developing consistent Clinical Capability across 7-Days

This strategy is to have usual Monday – Friday business hours operations extend to the weekend and an expanded after-hours operation that enables referral, transfer, clinical assessments, and treatments to be 'normalised' as if they were in business hours for 365 days a year. The strategy is slightly different to 24/7 clinical capability which assumes the same clinical capability for 24 hours a day and 365 days a year.

This strategy is principally focused on Ballarat in the first instance. However, the concept applies equally to Horsham.

It is a strategy that will need to be planned and progressively developed, commencing in areas of highest priority, which will be where there are patient flow bottlenecks.

The rationale for enhanced access is clear. Over the last decade there has been increasing evidence that contemporary hospitals cannot afford to operate mainly on a 'business hours only' basis. Nights and weekends are the times when a substantial proportion of the sickest people are admitted to hospital, and yet these are also the times when health services are minimally staffed and staffed with lesser clinical experience. Additionally, there is limited access to diagnostic and procedural services, a lack of multidisciplinary care for an increasing cohort of ageing patients with multiple comorbidities who benefit from a team approach, significant limitations to many of the clinical support services such as pharmacy and medical imaging, and most crucially, a paucity of medical consultant input. This is especially important as there is now a large body of evidence associating *timely consultant input* to patient care with improved outcomes.

In a Department of Health (UK) report, '*Implementing 7 Day working in Imaging Departments: Good Practice Guidance',* makes the powerful and pointed statement that:

> *"The weekend as protected time has been accepted in anglophile western countries since the 1940s. In the UK challenges from the large retailers resulted in a change to the law in 1994. Since then, social behaviour has changed profoundly and public expectation that services should be designed for customer convenience has grown."*[26]

This is particularly relevant to health care in Australia where the clinical practices and service availability differs considerably depending on the day of the week and the time of the day. Ironically, this is in a sector where, as the Australian Centre for Health Research notes, *"the distress of uncontrolled pain and symptoms cannot wait for 'opening hours'*[27]

As with many extended service availability models, affordability and workforce are the key hurdles.

Nevertheless, as the regional health service, Grampians Health needs to lead the way to transforming to at least a 7 day a week, 365 days a year health care provider (even if not fully a 24-hours service). To achieve this, Grampians Health would progressively plan for, and develop, a more consistent clinical capability.

It is proposed that Grampians Health develop a medium to long-term implementation plan for a genuine 7-day service at Ballarat.

7.1.4. Development of a Complex Discharge Referral Team

Feedback from consultations for this CSP identified that patient flow can be substantially compromised by difficulties confronted by patients with complex discharge planning needs. These challenges include patients with complex social needs that encompass housing, legal and carer needs as well as patients and who are awaiting determinations relevant to NDIS eligibility and VCAT guardianship arrangements. Aside from limiting patient flow, such delays are distressing for patients, detrimental to their recovery and independence.

26. Department of Health (UK), Implementing 7 Day working in Imaging Departments: Good Practice Guidance, A Report from the National Imaging Clinical Advisory Group (2011)
27. Australian Centre for Health Research, Conversations – Creating Choice in End of Life Care, 2016, p11

It is proposed to develop a Discharge Referral Team for complex patients – at Ballarat in the first instance – to streamline planning for patients identified through risk screens as having complex social, health or other needs and who have a high risk of delayed discharge. The Complex Discharge Referral Team would assist with discharge planning by collaborating with medical, nursing and allied health teams. It would comprise experienced clinicians and would work across the hospital including ED, acute wards and subacute wards to support streamlined and proactive planning.

The Team would facilitate allied health assessments, provide education and resources to patients and families about accessing assistance in the community to assist with situational crises and would support those patients and families who are facing difficulty in returning to their previous home environment. It would also proactively engage with complex discharge planning decisions relevant to patients who are awaiting determinations relevant to NDIS eligibility and VCAT guardianship arrangements.

The Complex Discharge Referral Team would be operational at Ballarat campus in the first instance. After review of the Team's operations, its suitability for other campuses would be determined – either through development of a team presence physically or virtually.

8. Hospital in the Home

Hospital-in-the-Home (HITH) is a program that has been in Victoria since the mid-90s. HITH provides admitted care in the patient's home or other suitable location. HITH is an alternative to a hospital stay and can be offered to patients as an option.

HITH is widely considered as a necessary service to support efficient patient flow, manage ED demand, reduce hospital-based ACSCs (Ambulatory Care Sensitive Conditions), and to provide best practice care in the least restrictive environment. Studies have found that HITH reduces mortality, readmission rates and cost compared with inpatient care. There is evidence that HITH can reduce hospital-acquired infections, reduce disorientation and delirium, and hasten recovery for certain patient cohorts. More importantly from a patient focused perspective the results also indicate that HITH increases patient and carer satisfaction but does not impact carer burden.[28]

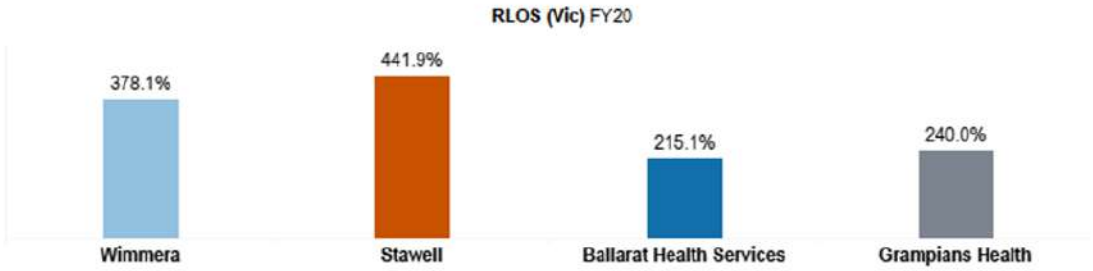
8.1.1. Current activity and market share

In 2019-20 there were 599 HITH separations at Grampians Health. The total HITH separations represent 0.97% of all separations at Grampians Health. The percentage of HITH separations relative to the total separations at the Ballarat campus is 1.03%. The proportion at the Horsham campus is similar, 1.06%, however it is notably less at the Stawell campus (0.03%). The Ballarat campus accounted for the majority of HITH separations (80.5%).

The HITH separations also had a significantly higher ALOS than might be expected for the casemix. Overall, Grampians Health RLOS was 2.4 times higher than the state for the same casemix. This includes Ballarat which was 2.15 times higher.

Hospital in The Home (HITH)

Separations	2014-15	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	397	599	8.59%	781	1.57%
Wimmera Base Hospital	34	116	27.81%	655	1.81%
Stawell Regional Health	9	<5	-35.56%	1	-1.95%
Ballarat Health Services	354	482	6.39%	125	0.45%



28. Caplan G, Sulaiman N, et al, *A meta-analysis of "hospital in the home"*, MJA 197 (9) 2012

8.1.2. Current and emerging issues and future directions

Notwithstanding the advantages of HITH, it has been an under-developed service at Grampians Health. The stakeholder consultations have provided valuable insights as to the limitations of the current program, as well as benefits derived from an enhanced HITH service.

Grampians Health operates a largely nurse-led HITH program, and Grampians Health@Home, which is the traditional rural model, and is still the model used by most rural health services.

The HITH program at Grampians Health has been modestly used, and only then for patients at the low end of the acuity spectrum and for a relatively narrow range of clinical conditions. More recently, the highest use of HITH was in infectious diseases (109), general surgery (96), orthopaedics (46), breast surgery (47) and vascular surgery (44). Even these disciplines are relatively sparing in their use of HITH.

Lack of integration and coordination of the HITH program was noted as contributing to the relatively low referrals; as was the perception of the 'risk-laden' nature of some clinical conditions and/or conservative clinical managements, and/or sub-optimal clinical supervision of patients, and/or clinical skill sets of the workforce. HITH will need to address these perceptions as part of the ongoing development of the program.

Consistent with the Victorian Government's broader policy and commitment to the Better@Home initiatives, a future revitalised HITH service is integral to the future service delivery models across all campuses of Grampians Health and essential to improve service delivery that affords better local access across the catchment. Benefits to accrue to Grampians Health and the community it serves, include:

- A more patient-centric service response;
- Ameliorating elements of patient flow challenges whilst providing a patient focused solution;
- Reducing pressure on hospital beds;
- Providing a further diversion/substitution alternative for ED/UCC; and
- Providing the cornerstone for increasing clinical capability for community-based services.

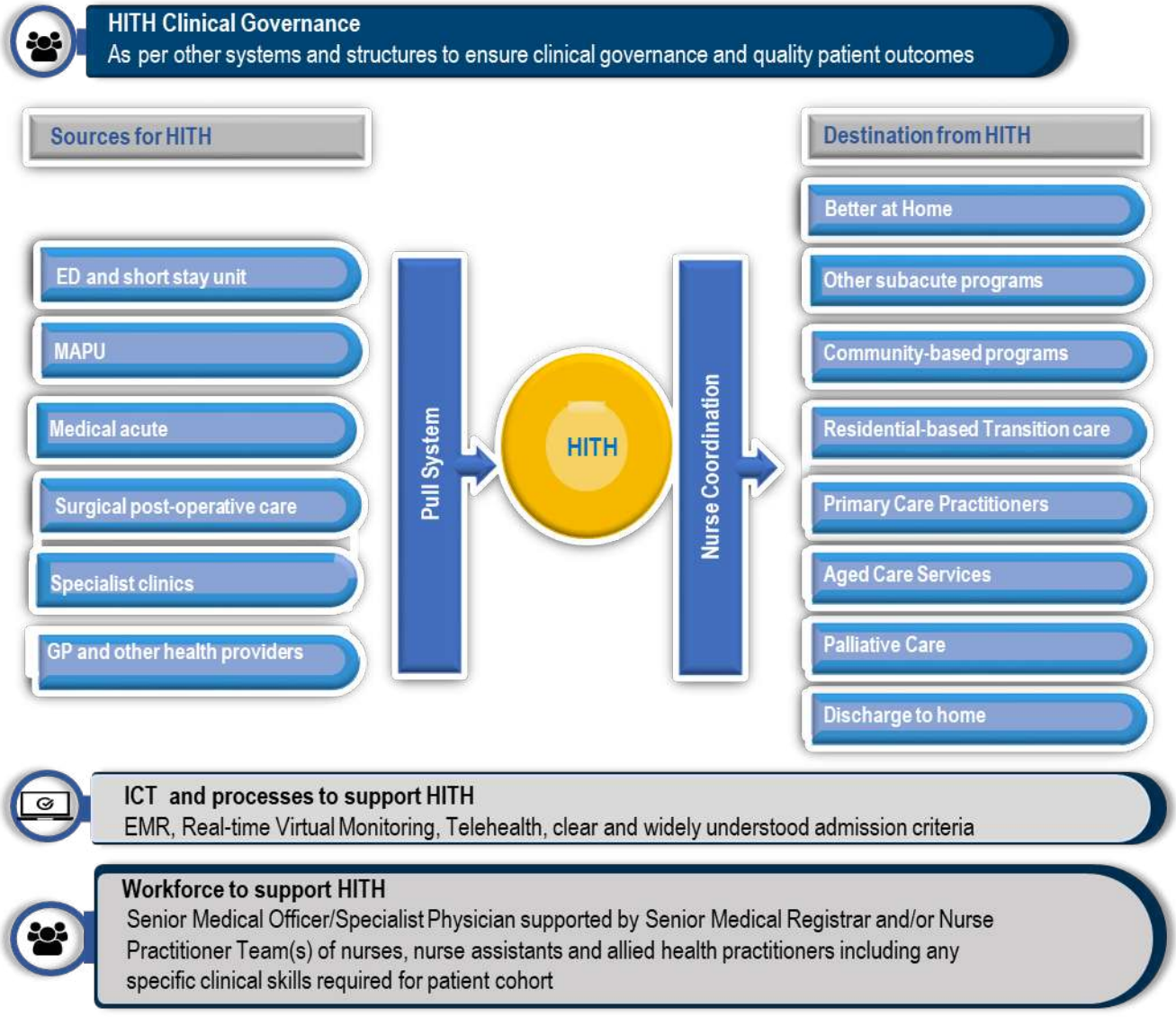
It is proposed to significantly develop HITH at Grampians Health by strengthening the HITH service model as detailed in Figure 8-1. Ideally, a revitalised HITH service should aim to achieve grow activity to 6% of total separations (which is the Department's target) over the next 3 years, and 10% within 5-7 years. This would mean that by 2036-37 between 18 and 22 fewer general acute beds that otherwise projected from the demand forecasts.

Based on the experience of non-quaternary metropolitan hospitals with enhanced HITH programs, areas of further growth could include, but not be limited to:

- Paediatrics;
- Respiratory and sleep apnoea;
- Chronic pain management;
- Uncomplicated post-delivery obstetrics;
- Chemotherapy/medical oncology;
- Uncomplicated cardiology;
- Post-surgery recovery such as colorectal surgery, non-subspecialty surgery, urological surgery, gynaecological surgery, orthopaedic surgery, and vascular surgery etc;
- Post operative infections and sequelae;
- GEM and rehabilitation;

- Urinary tract infections;
- Red blood cell disorders;
- Septicaemia;
- Skin grafts;
- Rheumatology; and
- Skin Ulcers, amongst others

Figure 8-1: Proposed HITH service model



Proposed key developments

It is proposed that there is potential for a further and significant development of HITH as an important strategy that aligns with enhanced patient-centric care. The roll out of the reinvigorated HITH program should adopt a staged approach piloting two clinical specialties and two surgical streams. The HITH program needs to broaden access enabled by increased clinical capability and integration supported by ICT systems and processes. Clear admission criteria for the Grampians Health HITH program would further enable community-based providers such as GPs and community health services to refer eligible patients. The expansion of the HITH program could improve operational efficiency and enhanced patient experience.

A re-invigorated HITH program would have the following characteristics:

- Consistent with Departmental guidelines, HITH would target 6% of all acute separations by 2025, and then 10% by around 2028. This should apply to all campuses with an initial focus on Ballarat and Horsham. Areas for initial growth include paediatrics, pain management, respiratory and sleep apnoea, post-surgery recovery, medical oncology/chemotherapy, infections, uncomplicated post-delivery maternity, post-surgery recovery, uncomplicated cardiology, skin grafts, skin ulcers, amongst others.

- A scale of operation at Ballarat sufficient for a dedicated community-based medical, nursing and allied HITH team (working collaboratively with other community-based teams).

- Close clinical connection between HITH and ED, MAPU, acute medical and surgical wards, subacute wards and specialist clinics which would be supported by robust clinical protocols and referral pathways to link with GP and other providers. This should be designed around a 'pull system' to HITH.

- Strong clinical governance that ensures clinician buy-in and strict (agreed) clinical protocols to ensure quality patient outcomes, together with active patient management of patient stay whilst on HITH.

- Extending HITH hours to be more consistent with a 7-day service through improved capacity to enable access 7-days a week and extended hours per day. Appropriate resourcing allocated to support HITH according to site and patient cohort-specific needs including a team(s) of nurses that have the technical skills to manage acute conditions in a community/home setting and allied health practitioners.

- Integrated and seamless ICT for interactive patient monitoring patients in home in real time including mobile and hand-held devices. This is likely to require a virtual care hub (collocated with other community-based hub services).

- Protocols for managing a wider range of clinical conditions than is currently the case, and be supported by an ICT system that was able to interact with the patient, and monitor patient status in real-time.

It is recommended that an evaluation framework be designed and implemented to monitor activity as well as evaluated patient outcomes as part of the renewed HITH program at Grampians Health.

9. Acute Internal Medicine

For the purposes of this CSP, internal medicine includes the clinical disciplines listed in Table 9-1.

Table 9-1: Acute Medicine Specialties

CLINICAL STREAM	
▪ Chemotherapy & Radiotherapy	▪ General Sub-Specialty Medicine
▪ Clinical Cardiology	▪ Haematology
▪ Dermatology	▪ Immunology & Infections
▪ Dialysis	▪ Neurology
▪ Drug and Alcohol	▪ Oncology
▪ Endocrinology	▪ Renal Medicine
▪ Extensive Burns	▪ Rheumatology
▪ Gastroenterology	▪ Respiratory Medicine

**Note. Emergency Department Short-Stay is a new acute medicine category that is analysed as part of the ED in section 4.*

9.1. ACUTE MEDICINE AGGREGATION

The historical trend for acute medicine between 2015 and 2019-20 indicates an increase of 4.17% separations per annum. The rates of growth across the campuses varied from a reduction of -5.2% at Stawell to increases of 6.19% at Ballarat. Overall, there were 34,114 acute medicine separations across Grampians Health in 2019-20, including separations for chemotherapy and dialysis. There were 17,418 acute medicine separations *excluding* dialysis and chemotherapy. This indicates that the high volumes dialysis and chemotherapy services accounted for half (51.1%) of all acute medicine admissions.

The aggregated market share for each of the respective primary catchments for acute medicine has increased marginally from 84.34% in 2015-16 to 85.58% in 2019-20. The primary catchment market share is at an acceptable level. However, it could potentially increase to around 90% with the right targeted strategies.

The acceptable market share rate is being 'maintained' due to the even higher rates for chemotherapy and dialysis. If chemotherapy and dialysis are excluded from the analysis, then the market share for the respective primary catchment reduces to 81%. There is a reasonable expectation that acute medicine should be able to achieve 85% primary catchment market share in the future, excluding chemotherapy and dialysis.

The **RLOS** for Grampians Health is 90%, which means that length of stay is 10% lower than might be expected for the same statewide casemix. Ballarat (87.8%), Horsham (94.6%) and Stawell (88.1%) campuses are operating at even better rates of at least 15% below statewide rates for the same casemix. Edenhope (at 209.5%) is the anomaly with LOS at more than double the expected rate.

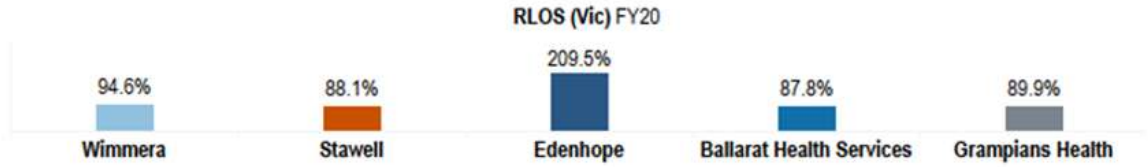
While ALOS and RLOS are discussed under each clinical speciality throughout the report a summary of both ALOS and RLOS by MCRG is provided in ***Appendix 2 – Consolidated ALOS and RLOS.***

Regional self-sufficiency - Acute Medicine

- 2019-20 Current: 89.0%, which is very acceptable
- 2036-37 Baseline Projection: 90.0%
- 2036-37 Proposed: 92.9%

Acute Internal Medicine Summary – Including Chemo & Dialysis

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	28,973	34,114	4.17%	50,236	2.30%
Wimmera Health Care Group	6,284	6,419	0.53%	7,576	0.98%
Stawell Regional Health	2,224	1,796	-5.20%	2,160	1.09%
Edenhope & District Hospital	204	135	-9.82%	132	-0.14%
Ballarat Health Services	20,261	25,764	6.19%	40,369	2.68%
Market Share - GH Primary Catchment	84.34%	85.58%		87.18%	



The **baseline projected demand** for acute medicine is 50,236 separations of which 25,917 are chemotherapy and dialysis as noted below. The projections take dialysis and chemotherapy to 51.6% of all acute medicine.

The increase in projected demand represents 2.3% per annum, which is significantly lower than the historical trend of 4.17% per annum. The baseline primary catchment projections would represent 87.2% market share, which is getting closer to a reasonably expected 90% primary catchment market share. The most significant growth is at Ballarat (2.68%) annual growth and is 40,369 of the 50,236 total separations. There is expected annual growth of around 1% at Horsham and Stawell, with Edenhope having a small percentage reduction.

Scenario growth strategies above baseline projections to achieve an overall primary catchment market share of 90% would require 3% growth per annum. The types of specialties that would increase under a growth scenario are outlined in the sub-specialty sections.

9.2. CANCER SERVICES

This section considers inpatient oncology, chemotherapy, haematology and radiotherapy services.

Overview of cancer services context

The Ballarat Regional Integrated Cancer Centre (BRICC) is the major cancer centre for the Grampians Region, providing cancer care, treatment and research across the catchment.

BRICC supports the region through a visiting service model, with BRICC oncologists supporting public hospital providers to enable locally accessible chemotherapy services and oncologist specialist clinics. Additionally, private oncology services are provided through, Ballarat Oncology and Haematology Services (BOHS) and St John of God Ballarat. BOHS provides visiting oncology services to some public hospitals in the region.

Chemotherapy services are provided across the region as follows:

- **Ballarat:** Public chemotherapy services are provided by BRICC. Private chemotherapy services are provided by St John of God Ballarat and the BOHS;
- **Central Grampians:** East Grampians Health Service has a chemotherapy service in Ararat which is provided by St John of God. The Stawell Campus has a service provided by both BOHS, BRICC and Austin Health (SXRT); and
- **Western Grampians:** Grampians – Horsham Campus has a chemotherapy service provided by both BOHS and BRICC, and other oncology services are provided by BRICC at Horsham.

Public oncology consultation clinics are provided at Stawell, Ararat, Horsham, Maryborough and Ballarat, with private consultation clinics also available at Stawell, Ararat, Horsham, Ballarat and Ballan. Additionally, BRICC provides outreach oncology clinical support on a visiting basis to Hamilton, outside the Grampians region.

Radiotherapy services are provided at the Ballarat Austin Radiation Oncology Centre (BAROC) to the whole Grampians region. BAROC is a partnership between Austin Health and Grampians Health - Ballarat.

The current cancer service context at each Grampians Health site is summarised below.

Horsham

- BRICC provides an outreach service to Horsham with a visiting medical oncologist attending once per week and a registrar once every 2 weeks (outpatient consulting). There is timely access with less than a 2 week wait list for a clinic appointment;
- A chemotherapy service operates 5 days a week with 13 POCs but is not fully utilised at 200% occupancy;
- Cancer supportive care is available through a nurse practitioner role; and
- In addition to public oncology services, Horsham has access to visiting private oncology services from BOHS with monthly visits supported by telehealth consults.

Edenhope

- Edenhope has a cancer resource nurse onsite.
- Local demand is insufficient to meet the critical mass required to operate a chemotherapy service in Edenhope.

Stawell

- Stawell operates 11 chemotherapy chairs three days per week, with consideration being given to extending to five days per week at 200% occupancy.

- There are currently 2 public and 3 private oncologists visiting Stawell. There is a diverse inflow of patients from both the local primary catchment of Northern Grampians as well as patient inflow from around the region. For public chemotherapy services at Stawell, 60.2% of patients are from the primary catchment (Northern Grampians), 16.5% of patients are from Ararat, 12.4% from Horsham, and 4.9% from Yarriambiack.

Ballarat

- Ballarat Campus chemotherapy service operates (up to) 20 POCs, with typical capacity for 16 chairs. The service runs half-day sessions, five days per week, which is full capacity for the chairs. There is scope to operate at higher utilisation of the POCs to 200% occupancy if 20 POCs are consistently operational.
- Ballarat has 40 home-based chemotherapy patients receiving multi-modality infusion therapy.
- The haematology service operates within the 16 chemotherapy chairs with 360 infusions per month and runs 3 clinics per week.
- Ballarat has 3 treatment rooms for clinical trials and bone marrow biopsy patients. It averages 20 clinical trials at any one time.
- BAROC provides radiotherapy services 5 days per week and treats around 750-800 patients per year with two linear accelerators. The service operates in partnership with Austin Health, the hub site. Complex cases are transferred to Austin Health although BRICC offers shared care for some complex cancer treatments. For example, women undergoing gynaecology cancer treatment can often receive most of their cancer treatment in Ballarat, travelling to the Austin for the brachytherapy component.
- Ballarat operates a Symptom and Urgent Review Clinic. Patients (or their support person) are supported from an experienced oncology nurse if they have concerns or are feeling unwell. This clinic is available for any BRICC Oncology/Haematology patients currently having cancer treatment and up to 12 weeks from their last treatment including chemotherapy, immunotherapy and targeted treatment.
- The integrated cancer service has a well-established allied health outpatient service.
- Ballarat also operates a Wellness Centre which includes provision for complementary therapies alongside conventional cancer treatment to help manage the symptoms and side effects.
- Ballarat currently provides significant chemotherapy services to Hamilton and Maryborough.

9.2.1. Current activity, market share and projected demand – Oncology

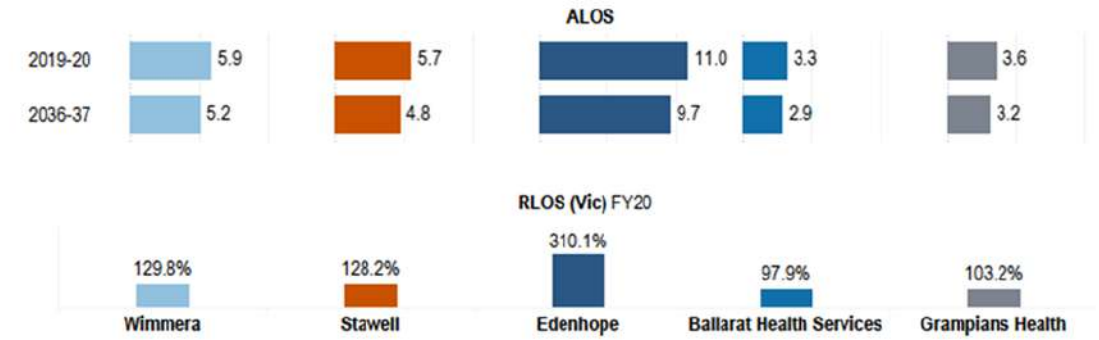
Trend analysis for oncology (excluding chemotherapy) shows substantial growth of 3.45% per annum from 2015-16 to 2019-20. The volume of Grampians Health separations has increased from 781 to 894 over the five-year period. This growth is largely driven by Ballarat Campus, with 5.96% per annum growth. At the three other health services, services have reduced in volume, with Horsham reducing from 103 to 83 separations.

ALOS is 3.6 days for Grampians Health overall in 2019-20 and is expected to reduce to 3.2 days by 2036-37. ALOS at Ballarat is 3.3 days and projected to reduce to 2.9 days by 2036-37. Both Horsham (5.9 days) and Stawell (5.7 days) have a relative long ALOS in 2019-20.

RLOS for Grampians Health is 103%. The slightly higher than expected ALOS reflects the substantially longer relative ALOS for Horsham/Dimboola (130%) and for Stawell (128% higher), whereas Ballarat is relatively aligned with expected ALOS (2% lower).

Acute Internal Medicine - Oncology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	781	894	3.45%	1,021	0.78%
Wimmera Health Care Group	103	83	-5.33%	69	-1.04%
Stawell Regional Health	45	22	-16.70%	18	-1.21%
Edenhope & District Hospital	8	<5	-28.71%	2	-1.38%
Ballarat Health Services	625	788	5.96%	933	1.00%
Market Share - GH Primary Catchment	81.11%	81.09%		82.96%	



Based on baseline projections, current demand of 894 separations in 2019-20 is projected to increase to 1,021 separations by 2036-37, an increase of 0.78% per annum. For each campus, projected baseline demand from 2019-20 to 2036-37 indicates:

- Ballarat – a 1.0% per annum increase from 788 to 933 separations;
- Horsham – a -1.0% per annum decrease from 83 to 69 separations; and
- Stawell – a -1.2% per annum decrease from 22 to 18 separations.

Primary catchment market share for Grampians Health is 81.09% in 2019-20 and projected to increase under baseline demand projections to 82.96%.

RUR for oncology of 1.01 in 2019-20 indicates utilisation consistent with the state-wide average.

Regional self-sufficiency - oncology

- Current regional self-sufficiency: 85.2%
- Baseline projected self-sufficiency: 86.2%
- Proposed regional self-sufficiency: 86.2%

The projected baseline regional self-sufficiency of 86.2% by 2036-37 is considered suitable and no further change proposed.

9.2.2. Current activity, market share and projected demand – Chemotherapy

The trend analysis for chemotherapy indicates steady growth of 1.61% per annum for Grampians Health between 2015-16 to 2019-20, increasing from 6,337 to 6,755 separations.

As would be expected for a day-only service, ALOS is 1.0 and is RLOS aligned with the expected stay of one day.

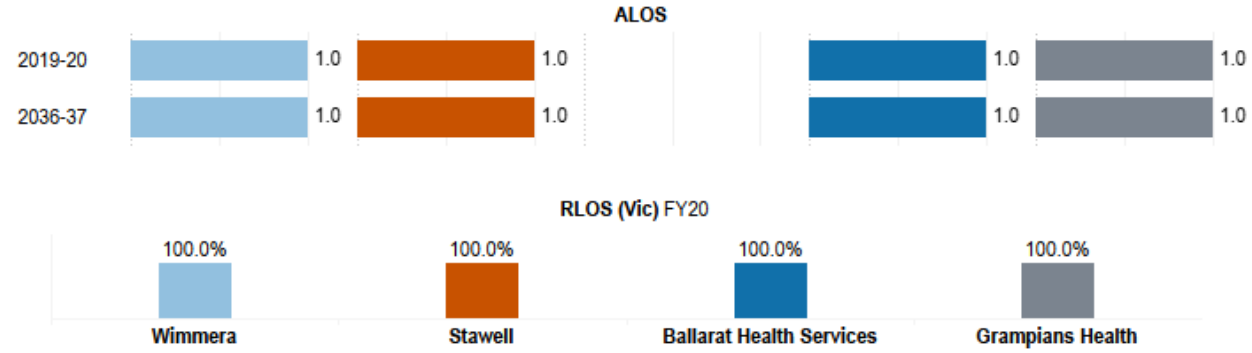
The current demand of 6,755 separations for Grampians Health under baseline projections is expected to increase to 9,821 separations by 2036-37, an annual growth rate of 2.23%. For each campus, projected baseline demand indicates:

- Ballarat – a 2.69% per annum increase from 4,070 to 6,388 separations;
- Horsham – a 1.47% per annum increase from 1,985 to 2,542 separations; and
- Stawell – a 1.43% per annum increase from 700 to 891 separations.

Primary catchment market share for chemotherapy for Grampians Health is 88.3% in 2019-20 and under baseline projections is expected to increase slightly to 89.0%. The service consolidation and development strategies are anticipated to increase primary catchment market share to 95%.

Acute Internal Medicine - Chemotherapy

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	6,337	6,755	1.61%	9,821	2.23%
Wimmera Health Care Group	2,249	1,985	-3.08%	2,542	1.47%
Stawell Regional Health	929	700	-6.82%	891	1.43%
Edenhope & District Hospital					
Ballarat Health Services	3,159	4,070	6.54%	6,388	2.69%
Market Share - GH Primary Catchment	91.03%	88.26%		88.98%	



RUR for chemotherapy of 1.30 indicates utilisation above the state-wide average in 2019-20.

Regional self-sufficiency - chemotherapy

- Current regional self-sufficiency: 88.2%
- Baseline projected self-sufficiency: 88.0%
- Proposed regional self-sufficiency: 90.0%

A self-sufficiency of 90% is appropriate and no further change is proposed. Whilst there is technical competence in the region to come close to 100%, many patients receive their chemotherapy in Melbourne as part of combination therapies including more complex radiotherapy and/or surgery.

9.2.3. Current activity, market share and projected demand – Haematology

The historical trend analysis for haematology indicates steady growth of 6.16% per annum for Grampians Health, increasing from 1,451 to 1,843 separations between 2015-16 to 2019-20.

Current ALOS is 1.5 for Grampians Health and is 40% lower than expected (RLOS of 0.60). This suggests that the acuity or case complexity for haematology is lower within the relevant DRGs. At a campus level:

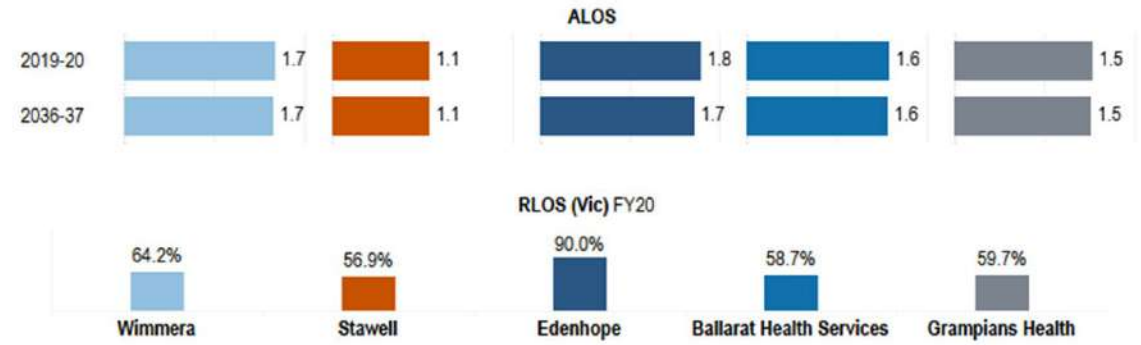
- Horsham – ALOS of 1.7 days, 36% lower than expected;
- Stawell – ALOS of 1.1 days, 43% lower than expected; and
- Ballarat – ALOS of 1.6 days, 41% lower than expected.

The current demand for Grampians Health of 1,843 separations under baseline projections is expected to increase to 2,860 separations by 2036-37, an annual growth rate of 2.62%. For each campus, projected baseline demand indicates:

- Horsham – a 1.82% per annum increase from 365 to 495 separations;
- Stawell – a 1.41% per annum increase from 250 to 317 separations; and
- Ballarat – a 3.06% per annum increase from 1,224 to 2,043 separations.

Acute Internal Medicine - Haematology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,451	1,843	6.16%	2,860	2.62%
Wimmera Health Care Group	317	365	3.57%	495	1.82%
Stawell Regional Health	305	250	-4.89%	317	1.41%
Edenhope & District Hospital	8	5	-10.50%	5	0.29%
Ballarat Health Services	821	1,224	10.49%	2,043	3.06%
Market Share - GH Primary Catchment	78.37%	81.04%		83.75%	



RUR of 1.17 indicates utilisation above the state-wide average.

Regional self-sufficiency - haematology

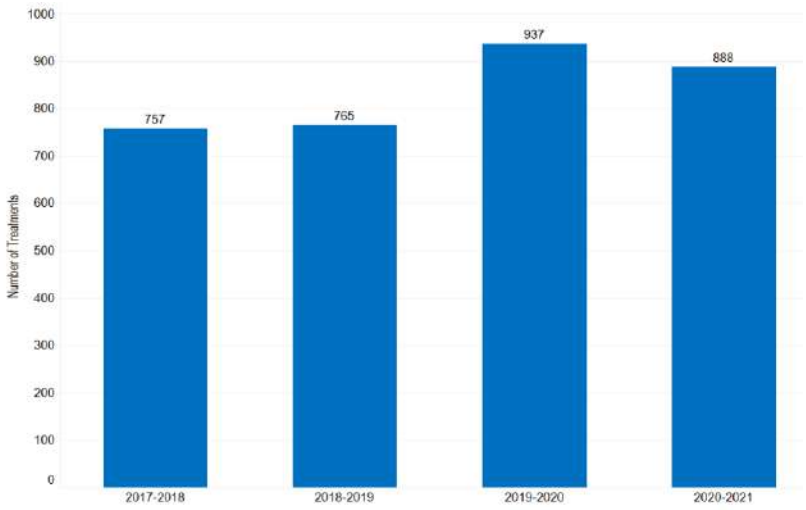
- Current regional self-sufficiency: 86.3%
- Baseline projected self-sufficiency: 88.9%
- Proposed regional self-sufficiency: 90.0%

The projected baseline regional self-sufficiency of 88.9% by 2036-37. Through further service consolidation to enhance local service access, the proposed regional self-sufficiency is 90.0%.

9.2.4. Current activity, market share and projected demand – Radiotherapy

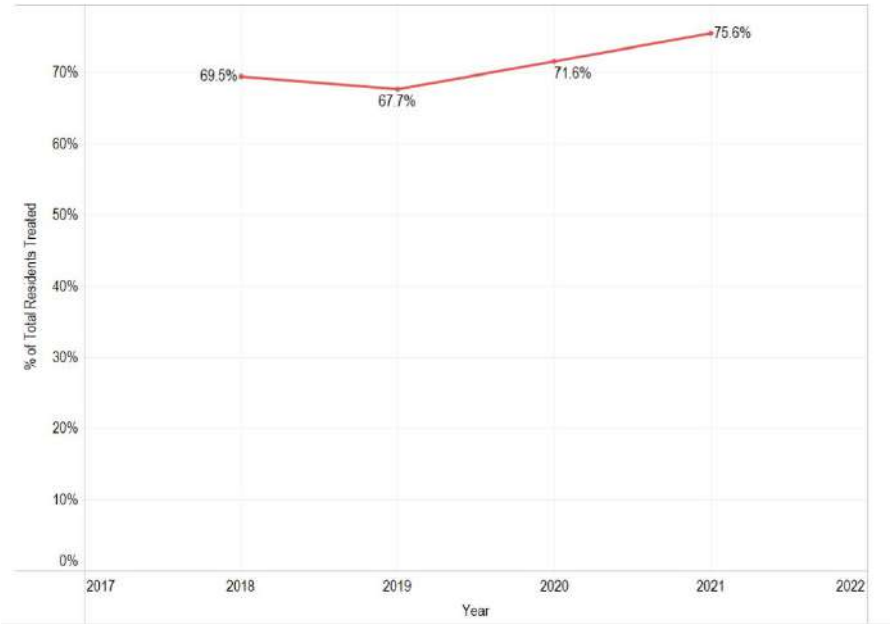
Figure 9-1 shows the trends in courses of radiotherapy treatment received by residents of the Grampians ICS catchment over the last four years. There has been strong growth of 5.5% per annum between 2017-18 to 2020-21.

Figure 9-1: Courses of radiotherapy treatment Grampians region residents, 2017-18 to 2020-21



Reflecting the increased volume of radiotherapy service utilisation, regional self-sufficiency has increased over the same time period from 69% to 76%.

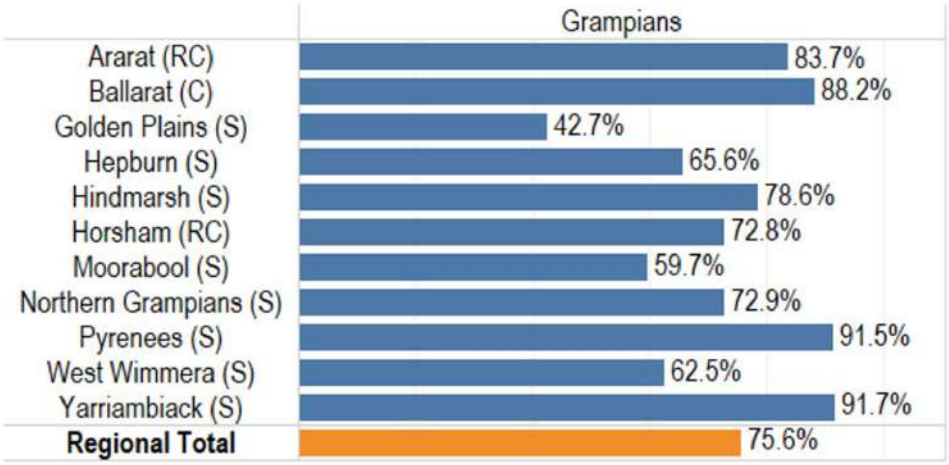
Figure 9-2: Regional self-sufficiency radiotherapy treatment, Grampians region, 2017-18 to 2020-21



In 2020-21, market share analysis by LGA shows that three LGAs had very high market share, with around 92% of residents from Pyrenees and Yarriambiack being treated within the Grampians ICS and 88% of Ballarat residents.

At the lower end of market share, only 43% of residents from the Golden Plains LGA attended Grampians ICS, 63% of residents from West Wimmera and 66% of Hepburn residents. Around 73% of Horsham residents attended Grampians ICS for radiotherapy treatment. Market share seems strong linked to referral patterns within LGAs.

Figure 9-3: Market share by LGA, radiotherapy treatment, 2019-20



Patient outflow from Grampians ICS to other ICS providers is summarised in the market share analysis for each LGA in Table 9-2 below.

- As expected, there was a large outflow (50.7%) from Golden Plains to Barwon South-Western ICS. This ICS also accounted for 12.5% of patients from West Wimmera;
- Loddon Mallee ICS accounted for 7% of Hindmarsh and Horsham residents and 12.5% of West Wimmera patients;
- Southern Melbourne ICS accounted for an unexpectedly high (9.4%) proportion of Hepburn patients;
- Western and Central Melbourne ICS (WCMICS) had the highest outflow of patients from the Grampians region at 13.7%, reflecting referrals to Peter MacCallum. Some LGAs had higher referrals rates to WCMICS: 34.7% of Moorabool patients; 21.9% of Hepburn patients; 17.3% of Horsham residents; and 12.5% of West Wimmera residents.

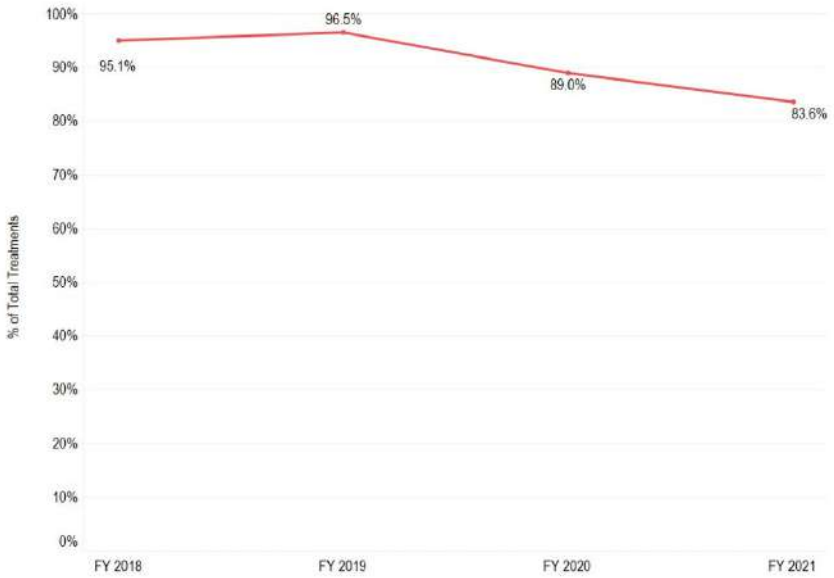
With the exception of Moorabool and Golden Plains which have close geographic proximity to other ICS, the relatively high rates of patient outflow from Hepburn, Horsham, Northern Grampians and West Wimmera would be expected to be reduced over time. That is, Grampians ICS is anticipated to increase capacity and clinical capability to retain a higher proportion of residents requiring radiotherapy. This will have positive flow on implications for other cancer therapies.

Table 9-2: Market share by ICS for radiotherapy by LGA, 2019-20

LGA of residence	BSWICS	Grampians	Loddon-Mallee	NEMICS	SMICS	WCMICS	Total
Ararat (RC)	4.7%	83.7%	0.0%	2.3%	2.3%	7.0%	100.0%
Ballarat (C)	0.9%	88.2%	0.3%	0.6%	0.6%	9.3%	100.0%
Golden Plains (S)	**50.7%**	42.7%	0.0%	1.3%	0.0%	5.3%	100.0%
Hepburn (S)	0.0%	65.6%	3.1%	0.0%	**9.4%**	**21.9%**	100.0%
Hindmarsh (S)	7.1%	78.6%	**7.1%**	0.0%	0.0%	7.1%	100.0%
Horsham (RC)	2.5%	72.8%	**7.4%**	0.0%	0.0%	**17.3%**	100.0%
Moorabool (S)	0.8%	59.7%	0.0%	2.4%	2.4%	**34.7%**	100.0%
Northern Grampians (S)	1.2%	72.9%	**12.9%**	1.2%	2.4%	9.4%	100.0%
Pyrenees (S)	0.0%	91.5%	2.1%	0.0%	0.0%	6.4%	100.0%
West Wimmera (S)	**12.5%**	62.5%	**12.5%**	0.0%	0.0%	**12.5%**	100.0%
Yarriambiack (S)	0.0%	91.7%	0.0%	0.0%	4.2%	4.2%	100.0%
Regional total	**5.5%**	**75.6%**	**2.6%**	**0.9%**	**1.7%**	**13.7%**	**100.0%**

Timeliness of radiotherapy treatment has declined over the last four years. Figure 9-4 shows that in 2017-18, 95.1% of residents had received radiotherapy treatment within the maximum waiting time, declining to 83.6% in 2020-21. The COVID-19 pandemic will have contributed to timeliness of treatment due to access restrictions over the last two years.

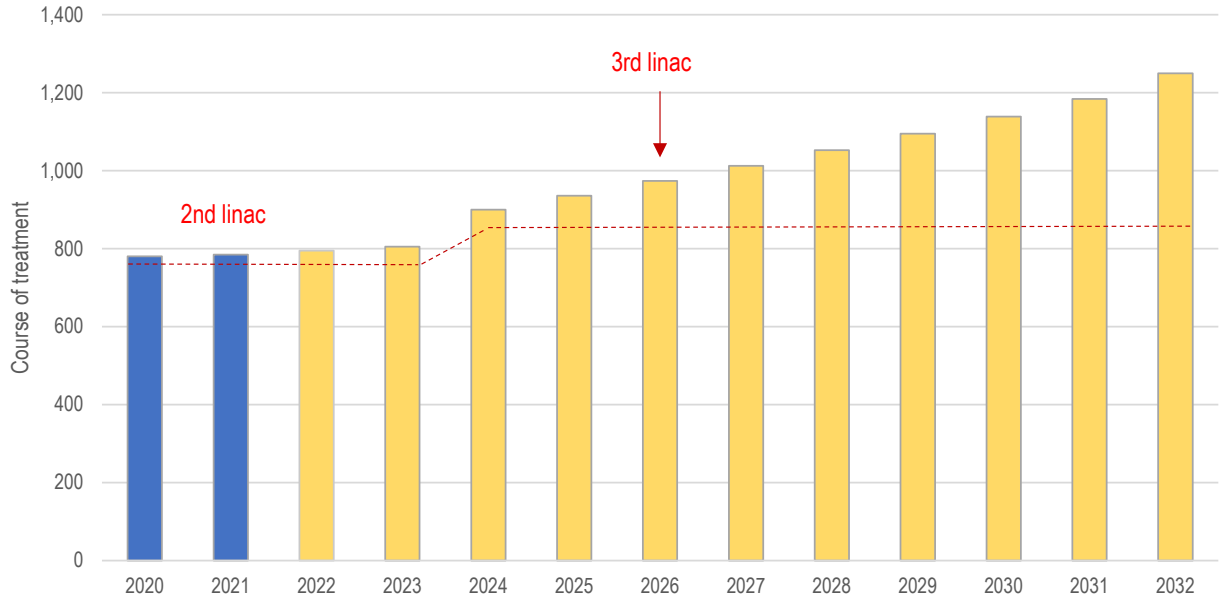
Figure 9-4: Timeliness of radiotherapy, Grampians region residents, 2017-18 to 2020-21



The benchmark volume for linear accelerator capacity is typically 425 courses of treatment per annum. Based on projected radiotherapy of 5% per annum, radiotherapy treatments are expected to increase from just below 800 in 2019-20 to around 850 courses of treatments by 2023-24. This would represent the stage at which both existing linear accelerators will reach capacity utilisation.

Current planning assumptions[29] would indicate an additional linear accelerator is required when current linear accelerator benchmark capacity is exceeded by 30% – that is, when growth in demand exceeds an additional 142 patients per year. This would indicate a third linear accelerators would be required by 2025-26 (Figure 9-5).

Figure 9-5: Projected radiotherapy demand, 2019-20 to 2031-32



Current and emerging issues and future directions

- As a multi-site cancer centre, there are opportunities for Grampians Health to further enhance integration across disciplines and across sites.
- The significant projected demand for cancer services across Grampians Health is expected to further build on the scope and acuity oof cancer services available locally. This is likely to mean that Grampians Health will be in a position, over the next decade to look to independently operate its Comprehensive Cancer Centre, including radiotherapy.
- There is scope to expand chemotherapy at home services at Ballarat, at Horsham and Stawell. The current 13 chairs at Horsham for example is 5.2 chairs against the benchmark rate, and 12 chairs against the benchmark for Ballarat's 16 chairs. This suggests that some chair capacity is used for same day medicine. However, it also suggests that some expansion of chemotherapy and haematology may be able to occur within current infrastructure, especially at Horsham by increasing the number of operational days per week. Alternatively, there will some haematology treatments that require chairs for more than the standard session per day. The service benchmark is 200% occupancy per chair per day for 5 days a week.
- People who live remotely have limited access to chemotherapy at home model and have to travel long distances to access treatment. Whilst there are logistical and IT challenges to be addressed, home chemotherapy is likely to be a viable option for many patients.

[29] Based on a nominal value for machine capacity, estimated at 425 courses per machine/year when replaced, incorporating a ~10% increase in workload per machine due to anticipated efficiency gains inherent in updated hardware / software. Historical growth remains consistent (5% per year). Increases in technical capability, after machine replacement, facilitating introduction of new techniques conservatively estimated to be 5%, once off at 23/24.

- A proportion of patients are currently bypassing Grampians Health to go to metropolitan hospitals, for perceived "higher level" care – a proportion of these patients could be treated locally.

- Demand for radiation-oncology treatment services is approaching the available supply from current infrastructure, with full utilisation of current capacity expected anticipated by 2023-24 and an additional linear accelerator required by 2024-25. There is currently provision for a third linear accelerator 'bunker', which means that capital infrastructure investment would be reduced to the costs of the machines and supporting equipment.

Proposed key developments

It is proposed that oncology services will need to be enhanced consistent with the increased prevalence of cancer and improved cancer treatment therapies. Specifically, this will mean:

- **Increasing access to chemotherapy, equivalent to 90% self-sufficiency** for Grampians Region, with a minimum 88% of this target to be delivered by Grampians Health. This will require increased chemotherapy at all existing service sites, especially in the western campuses of Grampians Health, provision of chemotherapy as a HITH service, and telehealth oncology support services. Much of the expansion can be meet by existing chemotherapy chairs at Horsham and Stawell that are used more efficiently (that is, over more days of the week).

- Ensure that the Grampians Health oncology plan aligns with the Grampians Integrated Cancer Service regional oncology plan.

- Plan for the enhancement of the current comprehensive cancer centre at Ballarat to be **managed as a single service by Grampians Health**, including radiotherapy.

- **Develop oncology as an integrated public service** delivered by Grampians Health across all service sites. This is expected to mean:
  - Standardised models of care and referral and care pathways across Grampians oncology service providers;
  - An integrated workforce plan that:
    - Has a regional approach to workforce training and development;
    - Recognises the complementary roles of public and private oncologists;
    - Develops and expands the roles of cancer nurse specialists including nurse practitioners; and
    - Expands the role of multi-disciplinary care, including allied health services for prehabilitation and for survivorship support;
  - Promoting shared care between oncologists and GPs and/or cancer coordination nurses;
  - Ensuring that there is a progressive implementation of holistic social and support services for cancer patient and cancer survivors;
  - Facilitating telehealth service models (and infrastructure) to enable patients to have access to remote consultations with the support of their local GP and/or local physicians;
  - Reviewing the provision of visiting oncology clinics to Hamilton and by 2023, transfer responsibility for these visiting services from Grampians Health to South-West Healthcare (SWH), or contract public oncology services to SWH.

  - Working collaboratively with Edenhope to further consolidate its referral and support role.

- **Haematology**. Increase the number of shared appointments of specialist haematologists between Grampians Health and Austin Health to provide more care locally.

- **Clinical trials**. Examine the potential to broaden the participation of Grampians Health sites in clinical trials for cancer treatment through streamlined research governance processes, including credentialing and operational planning, and options for therapeutic drug transport issues. Clinical trials infrastructure requirements will need separate master planning consideration.

- **Radiation Oncology**.
  - Plan for the implementation of a third linear accelerator. Based on the actual demand for radiotherapy courses of care over recent years. There is a case for a third linear accelerator by 2024-25. Expanded capacity is expected to meet increased demand to 2034-35.
  - Plan to replace the two existing linear accelerators as part of an asset renewal strategy. This would enable more advanced radiotherapy including stereotactic radiotherapy. It would also enhance radiotherapy technology that could deliver more effective treatments with fewer treatment-related side effects.
  - Based on a successful review of feasibility, consolidate the superficial radiotherapy (SXRT) service by Austin Health at Stawell campus, and implement a SXRT service in Ballarat in 2022-23.

9.3. CARDIOLOGY

This section includes acute clinical cardiology, interventional cardiology, coronary care, and diagnostic cardiology. It excludes interventional cardiac rehabilitation which is discussed in subacute care (Section 10).

9.3.1. Overview of service delivery context

An overview of the current service delivery context is given below for each Grampians Health campus.

- **Horsham** – currently offers acute admitted clinical cardiology including echocardiography and some cardiology outpatient clinics including a pacemaker clinic. General physicians oversee the provision of most cardiology services with some telehealth consultation from Ballarat. A visiting private cardiologist from Ballarat supports the pacemaker clinic.
- **Edenhope** – Edenhope offers acute admitted clinical cardiology under the clinical management of GPs. There is telehealth consultation with cardiologists at Ballarat.
- **Stawell** – Stawell has acute admitted clinical cardiology, principally under the clinical management of GPs.
- **Ballarat** – the Ballarat campus cardiology service covers clinical cardiology, diagnostic cardiology, interventional cardiology, a coronary care unit (collocated with Intensive Care Unit (ICU), specialist cardiology clinics and cardiac rehabilitation. Ballarat cardiology provides 24/7 telehealth consultation support to Horsham, Stawell and Edenhope as well as to Ararat.

  Ballarat's interventional cardiology services includes provision of urgent/emergency STEMI (ST-elevation myocardial infarction) response capacity as well as pacemaker, DCR (Direct Current Reversion) cardioversion, and TOE (transthoracic echocardiography) services.

Grampians Health currently has a cardiology workforce of 3.01 FTE, all located at Ballarat campus. The benchmark level of cardiology workforce for the region, including private hospitals and in the community, would suggest 10.1 FTE is required.

It is apparent that there is a case for an increase in the cardiology workforce by at least 1 FTE in the short term to support workforce and roster sustainability and by 3 FTE in the medium term to support increased self-sufficiency and networked/outreach support to other Grampians Health campuses.

9.3.2. Current activity, market share and projected demand

The historical trend analysis for clinical cardiology shows modest growth for Grampians Health of 1.12% per annum from 2015-16 to 2019-20. The volume of separations has increased from 1,419 to 1,611 over the five-year period. This growth is largely driven by Ballarat campus, with 1.56% per annum growth. Horsham has been stable at around 378 separations and Stawell and Edenhope have both declined by over 8% per annum to 70 and 26 separations respectively.

ALOS for Grampians Health is 3.4 days in 2019-20 and is projected to decline to 3.1 days. Ballarat is similar to the Grampians Health average, 3.3 days in 2019-20 and 3.0 days in 2036-37. Horsham's ALOS is higher at 4.0 days in 2019-20 and expected to decline to 3.5 days in 2036-37.

Ballarat's RLOS (86%) results indicate that ALOS is 14% lower than expected ALOS compared to the state average. Horsham's RLOS at 107% indicates 6% higher ALOS – prima facie these RLOS results indicate that there is scope for shorter episodes of care at Horsham.

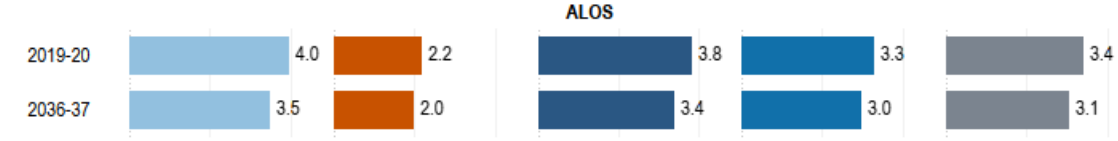
Edenhope has 55% higher than expected ALOS indicating opportunities for focused attention on shorter episodes of care. With an RLOS of 80%, Stawell has 20% lower ALOS than expected.

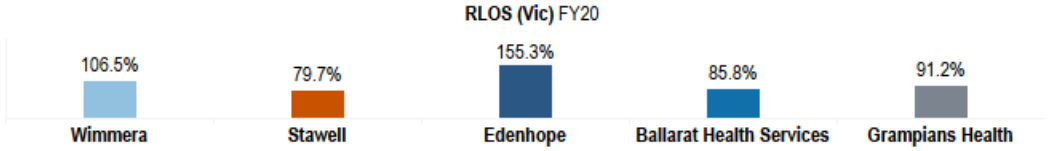
Primary catchment market share is high at 86% in 2019-20 and is anticipated to remain at this level in 2036-37.

RUR of 1.29 indicates utilisation above the state-wide average. This may reflect the categorisation of patients admitted to Stawell and Edenhope being of lower complexity *within* the respective DRGs.

Acute Internal Medicine - Clinical Cardiology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,419	1,611	3.22%	1,945	1.12%
Wimmera Health Care Group	379	378	-0.04%	377	-0.02%
Stawell Regional Health	99	70	-8.23%	69	-0.06%
Edenhope & District Hospital	37	26	-8.38%	20	-1.62%
Ballarat Health Services	904	1,136	5.87%	1,479	1.56%
Market Share - GH Primary Catchment	84.30%	86.12%		86.23%	





Baseline *demand projections* indicate continued growth at Ballarat, increasing by 1.56% per annum to 1,479 separations by 2036-37; continued stability at Horsham and Stawell; and further decline at Edenhope of 1.62% per annum to 20 separations.

9.3.3. Regional self-sufficiency – clinical cardiology

- Current regional self-sufficiency: 90.2%
- Baseline projected self-sufficiency: 90.7%
- Proposed regional self-sufficiency: 90.7%

The baseline projected self-sufficiency of 90.7% by 2036/37 is considered suitable.

9.4. INTERVENTIONAL CARDIOLOGY

Interventional cardiology separations are only planned within the clinical capability framework for Ballarat, which has the cardiac catheter laboratory (CCL). Nevertheless, there are a small number of emergency interventions that occurred in the general theatres at Horsham. Trend analysis shows strong growth of 3.97% over the five-year period from 883 to 1,042 separations between 2015-16 to 2019-20.

Future growth is projected to be more modest at 1.56% per annum, yielding an increase in throughput from 1,042 to 1,365 separations.

Ballarat's ALOS was 3.0 days in 2019-20, slightly (4%) below state-wide ALOS expectations (RLOS 96%). ALOS is expected to decline slightly to 2.7 days in 2036-37.

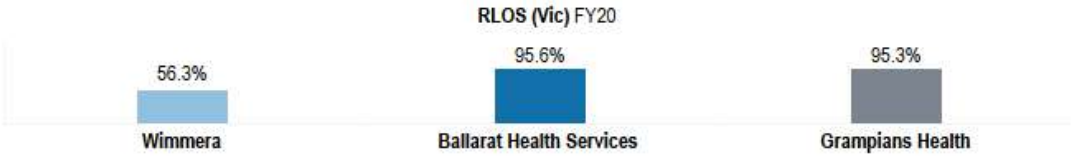
Primary catchment market share for the LGA of Ballarat in 2019-20 was 75.28% and projected 2036-37 market share is anticipated to increase slightly to 76.01%.

9.4.1. Current activity, market share and projected demand

Surgery and Procedural Services - Interventional Cardiology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	899	1,050	3.97%	1,365	1.55%
Wimmera Health Care Group	16	8	-15.39%	10	0.92%
Ballarat Health Services	883	1,042	4.23%	1,355	1.56%

Market Share - GH Primary Catchment	75.28%	75.47%		76.01%	



RUR of 1.12 indicates utilisation above the state-wide average. There is no explanation for the higher utilisation rate, which appears to be for (diagnostic) angiographies.

Regional self-sufficiency – interventional cardiology

- Current regional self-sufficiency: 72.2%
- Baseline projected self-sufficiency: 73.3%
- Proposed regional self-sufficiency: 85.0%

9.4.1. 9.4.2. Current and emerging issues and future directions

Clinical Cardiology

- Horsham's cardiology service is fragile. The lack of dedicated visiting cardiologist at Horsham limits the capability of the service and reduces local access for higher acuity cardiac services. For example, echocardiology services are not able to be performed on a routine basis due to lack of a formal cardiology service. These echocardiograms are undertaken under the supervision of general physicians. The longstanding pacemaker clinic is supported by a private visiting cardiologist.

- There is escalating demand for cardiology services at Ballarat. There has been strong service utilisation growth and yet wait times for cardiology outpatient clinics are now increasing beyond reasonable levels, limiting the timeliness of access for patients.

- Ballarat has relatively limited availability of advanced medical trainees in cardiology. Instead, for after-hours coverage there is a reliance by generalist registrars covering clinical cardiology wards. This increases the likelihood for after-hours call-outs from the cardiologist workforce, contributing to already high workforce pressures for this group.

Interventional Cardiology

- The interventional cardiology service has well developed capacity with two CCLs. Only one CCL is in operation at this time where the CCL is used for interventional cardiology for three days a week (Monday, Tuesday, and Friday) and for interventional radiology for two days (Wednesday and Thursday). The CCL is also available at other times for emergency STEMIs.

  There are now reported 'road-blocks' that constrain the service model, including the scheduling of cases after hours on days allocated to radiology, workforce fatigue associated with out of hours work, and extended LOS for patients waiting for interventional cardiology across Wednesdays and Thursdays as the allocated radiology days.

  The shared interventional cardiology and interventional radiology model is a constraint on patient flow and meeting service demand. However, at this stage in the development of the service these operational constraints may be due to the transition to a dedicated CCL as the second lab becomes operationally efficient to bring on stream.

- Workforce constraints are limiting service growth and effectiveness. Current workforce availability is problematic leading to disproportionately high requirements for after-hours and weekend coverage. Three of the five cardiologists have very high rostering pressures, more frequent than optimal on-call requirements and unsustainable leave balances.

- Shared nurse training in interventional cardiology and interventional radiology is also problematic. Very few other interventional cardiology labs in Victoria work with such a hybrid model. Nurse training for interventional cardiology has a six-month lead time and interventional radiology a three-month lead time. The pressures in filling rosters leads to a very high burden on current workforce with the challenge of filling shifts across the week and on-call rosters. Consequently, retention of the interventional cardiology trained nurse workforce is challenging.

- Workforce retention and rostering issues are also problematic for radiographers and cardiac technicians.

Coronary Care Unit

- The shared ICU and Coronary Care Unit (CCU) is a further factor exacerbating day to day management and allocation of beds between service types. It is also reported to impact workforce recruitment and retention.

- Access to CCU beds can be constrained due to intensive care bed pressures, especially in a relatively small unit, which leads to challenges in expanding interventional cardiology capacity and managing emergency clinical cardiology. Further, there is a requirement for the ICU/CCU nurse workforce to be double certificated across critical care and coronary care. This creates difficulties in recruitment of a specialist workforce that has dual qualifications. As a consequence, there is a high workload on the current workforce. Nevertheless, there are appreciable increased costs associated with 'splitting' the unit. These issues are discussed in the ICU section (section 11.20).

Proposed key developments

It is proposed that:

- **Self-sufficiency** of clinical cardiology be maintained at 91%, and that interventional cardiology be increased from 73% to 85% over the next five years. This is expected to be achieved through changing referral patterns and increased levels of specialisation and case complexity.

- **Complexity and specialisation** – Increased complexity and specialisation of cardiology services will be achieved through continued clinical development of all modalities, participation in clinical trials and innovative service models such as the rapid access atrial fibrillation clinic. This forms part of the clinical leadership role for Grampians Health and is consistent with the improved self-sufficiency and training programs.

- There is expected to be an increase in **specialist cardiology services at Horsham**. This will include a combination of service models such as more frequent visiting by Ballarat-based specialists with local echocardiograph services, and increased virtual specialist clinics.

- Increased access to **specialist cardiologist services at Stawell and Edenhope** by virtual specialist clinics.

- Cardiology services at Ballarat need to be **consolidated as an integrated cardiology department** that combines clinical cardiology, interventional cardiology, diagnostic cardiology, CCU, specialist clinics, on-call roster, telehealth, cardiology at home and cardiac rehabilitation.

- **Specialist clinics** – an expanded Ballarat cardiology workforce will be required to manage the increasing demand pressures for specialist clinics with additional breadth of clinics to include; Rapid access chest pain clinic; rapid access atrial-fibrillation clinic; intracardiac EPS (electrophysiology study) clinic; and pacemaker clinic.

- **Telehealth** – Ballarat cardiologists will provide telehealth support to Horsham, Stawell, Edenhope and Ararat.

- Whole of Grampians Health **cardiology service planning** will:
  - Enable integrated workforce planning including organisation-wide approaches to workforce training and development;
  - Standardise models of care and referral and care pathways across Grampians clinical cardiology services including for high volume conditions such as cardiac heart failure; and
  - Facilitate telehealth service models to enable patients to have access to remote cardiology consultations with the support of their local GP and/or local physicians.
  - Integration of cardiac services into a broader risk detection, prevention and management approach with the Public Health Unit.

- **Partnerships** – Strengthened partnerships with quaternary service providers will include consolidation and development of links to cardio-thoracic surgery teams at Melbourne Health and/or Barwon Health.

- **Cardiac rehabilitation** – Expanded access to cardiac rehabilitation will be necessary to meet increased demand and to support patient flow and patient outcomes.

- **Interventional cardiology** – There would be annual reviews of the relative demand for an efficient five-day CCL service for interventional cardiology alone, and for the second CCL to operate for two days a week or interventional radiology. Both propositions would need to demonstrate that they are sustainable financially and would improve access. For after-hours operations, shared rosters of interventional cardiology and interventional radiology trained nurses will be available.

- **Coronary care unit** – over the next three years, or as infrastructure opportunities present, consideration be given to the formation of a dedicated CCU, separate from the ICU. The projected demand is for 4-6 CCU beds. The CCU would be 'embedded' into a cardiology ward. The service would be staffed by cardiologists and coronary care trained nurses and allied health clinicians as part of an acute cardiology ward. This model is proposed on the basis that the residual ICU (proposed as a 15 bed unit) is operationally efficient (see also section 11.20).

  A CCU embedded within a larger acute cardiology ward is likely to be the most efficient and improves access to CCU beds, enabling the continued increase in capacity and capability consistent with the increase in Ballarat's clinical complexity and specialisation in interventional and clinical cardiology; improved workforce recruitment and retention through a dedicated coronary care trained nurse model; and increased scope to attract and retain cardiologists.

9.5. ENDOCRINOLOGY

Endocrinology includes treatment of people with a range of conditions that are caused by problems with hormones, such as diabetes, menopause, and thyroid problems.

9.5.1. Current activity, market share and projected demand

Demand for admitted endocrinology services has been very high over the last five years at Grampians Health, increasing by 10.93% per annum from 604 to 914 separations. This growth has been apparent at Ballarat (10.64% per annum), Horsham (8.79% per annum) and Stawell (22.60% per annum) campuses.

Despite this strong growth, Grampians Health primary catchment market share has declined from 86.06% in 2015-16 to 78.13% in 2019-20.

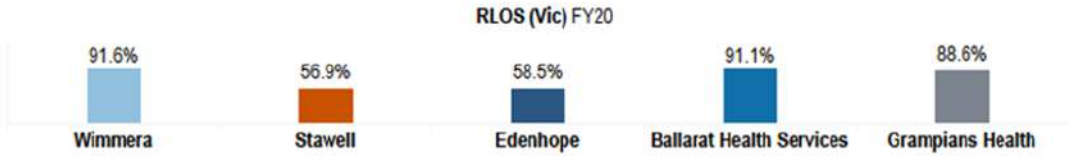
By 2036-37, continued moderate growth is projected of 2.77% per annum for Grampians Health, with separations increasing from 914 to 1,456 separations. Growth of just over 2% per annum is projected for Horsham and Stawell, with growth close to 3% at Ballarat by 2036-37.

The increase in endocrinology patient throughput by 2036-37 is associated with an increase in primary catchment market share to 79.8%.

At all campuses, current ALOS is below the state-wide ALOS in 2019-20, with Ballarat 9% below, Horsham 8% below and Stawell 43% below.

Acute Internal Medicine - Endocrinology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	604	914	10.93%	1,456	2.77%
Wimmera Health Care Group	108	151	8.79%	219	2.19%
Stawell Regional Health	36	81	22.60%	117	2.14%
Edenhope & District Hospital	7	<5	-18.20%	4	1.38%
Ballarat Health Services	453	679	10.64%	1,116	2.97%
Market Share - GH Primary Catchment	86.06%	78.13%		79.83%	



RUR of 1.83 indicates utilisation well-above the state-wide average. This potentially suggests that models other than admission could be considered for Grampians Health campuses. However, the relatively high admission rate would appear to be driven by admissions at other smaller health services in the region, not Grampians Health.

Regional self-sufficiency – endocrinology

- Current regional self-sufficiency: 87.7%
- Baseline projected self-sufficiency: 89.3%
- Proposed regional self-sufficiency: 90.0%

9.5.2. Current and emerging issues and future directions

- Access to endocrinology medical specialists is a key issue for the region. Ballarat is the only site with an endocrinologist specialist workforce (1.0 FTE), which is supported by an endocrinology advanced trainee registrar from Western Health. Horsham does not have access to endocrinology specialists except through telehealth access to Melbourne Health and Ballarat. Edenhope and Stawell rely on GPs for medical endocrinology services as well as telehealth specialist advice.
- Wait times for access to endocrinology specialist clinics at Ballarat are excessive at nine months.
- Diabetes services at Ballarat are not sufficiently integrated across inpatient, ambulatory and home-based settings contributing to gaps in patient care pathways.
- There is insufficient capability of primary care services across the region in preventing and managing patients with endocrinology health issues. Furthermore, there is insufficient coordination between Grampians Health diabetes educators with community-based services providing diabetes education.
- There is scope to expand diabetes education to include patients with co-morbidities including: perioperative services, oncology and HITH.

Proposed key developments

It is proposed that:

- **Self-sufficiency**. Baseline inpatient services would be largely maintained at current rates of 90% self-sufficiency. This would allow for some expansion of the more complex cases admitted to Ballarat and Horsham.
- **Specialist Workforce**. Notwithstanding limited growth in inpatients, there is a strong case for increasing capacity in endocrinology based on a lower than expected specialist workforce. Benchmark workforce requirements for the Grampians Health catchment population – public and private – is 4.6 FTE. Allowing for some increase in specialisation, it is expected that Grampians Health would have demand for 4.0 FTE endocrinologists; representing an increase of about 3 FTE.
- **Clinical Pathways**.
  - Develop organisation-wide **clinical pathways** for high-risk patient conditions covering multi-disciplinary care teams of endocrinologist, nurses, podiatrist and diabetes educators, to improve service integration and patient outcomes.
  - Ensure that the management of paediatric patient cohorts are included within diabetes care pathways. This includes coordination and support for follow-up care by community services, primary care and education services.
  - Where some care pathways are identified with Ballarat campus, these can be improved and clarified between acute and subacute community-based services.
  - Develop telehealth and endocrinology outreach from Ballarat to Horsham, Stawell and Edenhope to support the medical management of endocrinology patients.

- Develop partnerships with community providers that delineate role based on the complexity of endocrinology need, with the more advanced and complex patients referred to Grampians Health. This enhances timely access to diabetes education, support and treatment across the region. To this end, there is also a role for the newly created GPHU (Section 6) in relation to regionally focussed public health programs for modifiable behavioural factors that target diabetes and other chronic diseases.

- Expand diabetes education organisation-wide to cover at-risk patient cohorts including, maternity, perioperative services, oncology and HITH.

9.6. GASTROENTEROLOGY INCLUDING ENDOSCOPY

Gastroenterology is a speciality that is concerned with the digestive system and diseases that affect the gut. This section focuses on the medical gastroenterology service. Endoscopies are covered in Section 9.7.

9.6.1. Current activity, market share and projected demand

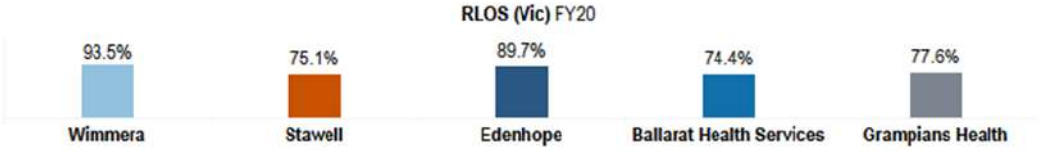
There has been a trend of strong demand for gastroenterology admitted patient services over the last five years, with 4.94% per annum growth for Grampians Health. Separations have increased from 981 to 1,190 over this period, with primary catchment market share increasing from 83.68% to 84.89%.

Demand growth has been strongest at Ballarat (5.67% per annum growth) and Stawell (5.48% per annum growth) with half this rate of growth in Horsham (2.26%) and minimal volumes at Edenhope.

Projected demand is anticipated to be modest at 2.42% per annum for Grampians Health, leading to an increase from 1,190 to 1,788 separation between 2019-20 and 2036-37. All parts of the catchment are anticipated to increase, but with strongest growth projected in Ballarat (2.77% per annum) and least in Stawell (0.57%) and Edenhope (0.52%). Horsham is anticipated to have modest growth of 1.15% per annum.

Acute Internal Medicine - Gastroenterology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	981	1,190	4.94%	1,788	2.42%
Wimmera Health Care Group	182	199	2.26%	242	1.15%
Stawell Regional Health	39	48	5.48%	53	0.57%
Edenhope & District Hospital	13	11	-3.66%	12	0.52%
Ballarat Health Services	747	931	5.67%	1,481	2.77%
Market Share - GH Primary Catchment	83.68%	84.89%		85.60%	



All campuses have lower ALOS than the state-wide average, with 26% lower at Ballarat, 25% lower at Stawell, 10% lower at Edenhope and 6% lower at Horsham.

RUR of 0.98 indicates that Gastroenterology is closely aligned with state-wide utilisation rates.

Regional self-sufficiency – Gastroenterology

- Current regional self-sufficiency: 84.3%
- Baseline projected self-sufficiency: 84.8%
- Proposed regional self-sufficiency: 90.0%

9.7. DIAGNOSTIC INTERVENTIONAL GI ENDOSCOPY

9.7.1. Current activity, market share and projected demand

Diagnostic Interventional GI Endoscopy has had flat service volumes over the last five years at around 3,500 separations for the organisation as a whole. Despite that, there has been a moderate volume increase at Ballarat (2.1% per annum growth) offset by a substantial reduction at Stawell (-10.04% per annum), with low growth at Horsham (0.70% per annum).

This relatively flat growth historically has caused a reduction in the primary catchment market share from 83.46% to 76.00% over the last five years. This is not expected to increase under baseline projections by 2036-37. Projected volumes are moderate for Grampians Health out to 2036-37, with per annum growth of 1.42%, with higher growth for Ballarat (1.88% per annum) expected as compared to around 0.5% per annum growth for Horsham and Stawell. The modest growth appears to be continuing the trend of the recent historical trends.

All campuses have lower ALOS than the state-wide average: 42% lower for Stawell; 38% lower for Horsham; and 27% lower for Ballarat.

Surgery and Procedural Services - Diagnostic GI Endoscopy

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	3,535	3,547	0.09%	4,511	1.42%
Wimmera Health Care Group	841	865	0.70%	935	0.46%
Stawell Regional Health	568	372	-10.04%	403	0.47%
Edenhope & District Hospital					
Ballarat Health Services	2,126	2,310	2.10%	3,173	1.88%
Market Share - GH Primary Catchment	83.46%	76.00%		76.19%	

RUR of 0.86 in 2019-20 indicates that the region is below the state-wide utilisation level. This is anticipated to increase to 0.93 by 2036-37. This would be an unusual utilisation pattern for gastroenterology.

Regional self-sufficiency – Diagnostic Interventional GI Endoscopy

- Current regional self-sufficiency: 88.1%
- Baseline projected self-sufficiency: 88.6%
- Proposed regional self-sufficiency: 95%

9.7.2. Current and emerging issues and future directions

- **Access**. There would appear to be constraints of delivering services at the expected level as evidenced by relatively low self-sufficiency and long wait times for endoscopies. The extended wait times for interventional endoscopy is a key challenge. A risk management approach needs to be taken in relation to those people on the waiting list.

- The gastroenterologist **workforce** at Ballart includes four gastroenterologists (3.01 FTE) and another undertaking peer review who will be a recognised specialist in the near future. Horsham requires reliable access to a gastroenterologist on a visiting basis as does Stawell. Overall, the region requires six to seven gastroenterologists to align with expected workforce benchmarks inclusive of private sector supply.

- Approaches to review and streaming of patients referred for endoscopy is considered a critical area of focus to manage demand and reduce wait times.

Proposed key developments

- **Self-sufficiency**. Increase from 85% to 90% for general gastroenterology and from 89% to 95% for interventional endoscopy.

- **Timely access**. Implement demand management strategies for endoscopies include:
  - Reviewing criteria to ensure targeting of procedures for patients who meet criteria;
  - Implementing risk management of patients on wait lists;
  - Implementing streaming of specialist clinics by risk and patient cohort;
  - Increasing capacity through workforce development and expansion across medical, nursing and allied health; and
  - Increasing capacity by roving interventionists teams to Stawell and Horsham.

- Expand **specialist clinic capability**, across all campuses, particularly through telehealth.

- Expand the **gastroenterology workforce** to support the increased self-sufficiency. Over time, this will mean:
  - The specialist workforce would double from two to four specialists, with three at Ballarat and 1.0 FTE visiting gastroenterologist capacity covering Horsham and Stawell;

  - Enhanced nursing capacity and capability through gastroenterology nurse advanced practice roles transitioning to nurse practitioner models in the longer-term. This may include an increase in nursing support (up to 1.0 FTE NP) dedicated to the Liver Service to coordinate/navigate care of patients with complex liver disease and support an increase in access to Liver Disease clinics (including a NP-led clinic) to address increasing demand for chronic liver disease management.
  - As the service consolidates and then grows, maintaining self-sufficiency through the specialist allied health advanced practice roles in coeliac disease; irritable bowel syndrome; PEG tube replacement and management. This focus on enhanced scope of practice will improve patient flow with more patients able to be treated within clinic settings rather than the day procedure unit.

- Develop an organisation-wide **model of care** to support:
  - Multi-disciplinary (medical, nursing, allied health, dietitians, psychologists and AOD services) care spanning acute, outpatients and primary and community health, to improve management of gastroenterological conditions including liver disease; and
  - Expand Grampians Health capacity to work with GPs across the catchment to increase screening and vaccination of patients with viral hepatitis with the aim of eradicating viral hepatitis by 2030, consistent with the national goal.

- Introduce **fibro scan machines** at Horsham, Stawell and Ballarat campuses to support timely liver scans.

- Integration into a broader approach encompassing bowel cancer screening, investigation and monitoring in collaboration with the PHU.

- Develop **care pathways for colonoscopies** that incorporate integral roles for general surgeons to undertake these procedures, to reduce workforce demand for gastroenterologists and enabling gastroenterologists to focus on other high demand procedures such as gastroscopies and endoscopies.

- Consolidate and further expand the endoscopy unit's capability through **advanced practice/interventions such as ERCP and endoscopic ultrasound**.

9.8. GENERAL MEDICINE

General medicine includes clinical related groups (CRGs) of Non-subspeciality medicine; Syncope and Collapse; Septicaemia, Viral and other Infection Diseases; Abdominal Pain; and Injuries (non-surgical). It is important to note that general medicine physicians are also involved in a broader range of MCRGs beyond general medicine, including respiratory medicine, Immunology and Infectious Diseases, Endocrinology, Renal Medicine, Haematology, Rheumatology, Drug and Alcohol, Cardiology and Dermatology.

Overview of service context

- **Horsham** – Admitted general medicine patients are managed on the medical ward. The medical workforce model includes a team of three general medicine physicians, registrars, and interns. HITH for general medical patients has room to grow.

- **Edenhope** – Admitted general medicine patients are managed on the general ward. The medical workforce is through the one GP VMO.

- **Stawell** – Admitted general medicine patients are managed on the medical ward. The medical workforce model is predominantly GP VMOs. HITH for general medical patients has room to grow.

- **Ballarat** – Admitted general medicine patients are predominantly managed on three medical wards (2GP, 4N and 4S) with some general medicine patients on three other wards. The medical workforce model comprises general physicians, including sub-specialty physicians, registrars, and interns. HITH for general medical patients could be expanded substantially. General medicine patients may be admitted from ED to the short-stay unit, which has an expected upper threshold of 24 hours LOS. Patients not discharged from the short-stay unit are typically admitted to a medical ward.

9.8.1. Current activity, market share and projected demand

Across Grampians Health, the last five years has seen relatively stable service demand for acute admitted general medicine patients, with a slight decline (0.33%) per annum to 2,586 separations in 2019-20.

At a campus level, the largest decline in acute general medicine separations occurred at Stawell campus, with -8.89%, from 269 to 185 separations. Horsham experienced a modest decline of 1.58% per annum as did Edenhope (-1.30% per annum). Ballarat had increased demand of 1.20%.

Consistent with the slight reduction in total demand in the last five years, Grampians Health primary catchment market share also declined over this period from 80.1% to 77.8%.

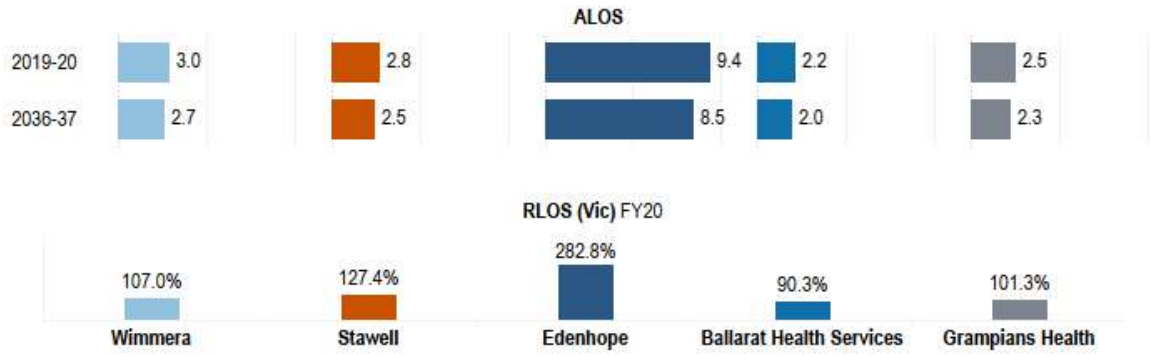
The *projected demand* increase in service volumes by 2036-37 is anticipated to increase market share to 79.7%, still below the 2015-16 level. This suggests that overall, there is scope to expand market share for acute general medicine patients.

Future projections under baseline assumptions indicate steady growth of 1.52% per annum yielding 3,343 separations by 2036-37. This demand expansion is predominantly expected at Ballarat (1.97% per annum growth) with limited growth at other campuses of less than 0.5% per annum.

In 2019-20, ALOS across campuses ranged between 2 to 3 days with the exception of Edenhope at 9.4 days was an outlier. For Grampians Health overall, ALOS largely matched state-wide ALOS expectations with RLOS of 101%. However, excluding Ballarat, other campuses had higher ALOS than expected: Horsham 7% higher; Stawell, 27% higher; and Edenhope almost three times higher. This indicates that there are substantial opportunities for reduced ALOS for admitted general medicine patients at these campuses. For Ballarat, the strong increase in future demand will also place pressure on bed day utilisation, with ALOS projected to reduce from 2.2 days to 2.0 days.

Acute Internal Medicine - General Medicine

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	2,621	2,586	-0.33%	3,343	1.52%
Wimmera Health Care Group	551	517	-1.58%	549	0.35%
Stawell Regional Health	269	185	-8.89%	188	0.07%
Edenhope & District Hospital	51	48	-1.30%	50	0.25%
Ballarat Health Services	1,750	1,836	1.20%	2,556	1.97%
Market Share - GH Primary Catchment	80.13%	77.76%		79.67%	



RUR of 0.96 indicates the General Medicine is aligned with the state-wide utilisation rate.

Regional self-sufficiency – general medicine

- Current regional self-sufficiency: 84.3%
- Baseline projected self-sufficiency: 86.6%%
- Proposed regional self-sufficiency: 95.0%

9.8.2. Current and emerging issues and future directions

- **Access.** General Medicine has an RUR of below 1.0, and that this, combined with a low market share of 78% and expect projections of 80%, means that the level of access to general medicine is relatively low for Grampians Health. It is also low self-sufficiency of 86%.

- **Outpatient demand.** There has been a strong increase in demand for general medicine specialist clinics, with long wait times.

- **Medical workforce –** There are pressures on general medicine workforce availability across all Grampians Health campuses. Whilst Horsham's workforce comprises a team of three general physicians supported by registrars and interns, there are occasions when locum medical coverage is required. Stawell and Edenhope are reliant on GP VMOs including locums. Ballarat's general physician workforce is stretched in meeting the constantly increasing demand.

- **Patient flow –** All Grampians Health campuses have challenges in relation to patient flow for general medicine patients. This is evidenced by extended LOS at Horsham, Stawell, and Edenhope. Whilst Ballarat is below the state-wide ALOS, there are identified difficulties in some patient transitions from ED, to ward and then to discharge. Patients with more complex care requirements may be transferred between medical wards and be managed by different doctors over the episode of care.

This appears to be a structural problem as well as a workforce issue. Opportunities for front-ended, assessment and care planning for more complex general medicine patients should be occurring from the earliest stage of admission. It is noted that neither Ballarat or Horsham has a Medical Assessment & Planning Unit (MAPU) or Acute Medical Unit (AMU)[30] that would significantly impact on flow and ALOS compared with the current dissipation of more complex patients across wards, across medical specialists, and across different service models. There seems to be a prima facie case for a MAPU/AMU, supported structurally by an Acute Care for the Elderly (ACE) program across all campuses.

We note that a MAPU or AMU has, at its core a model of care designed for rapid and comprehensive assessment and diversion to a definitive place of care, which may be HITH or home.[31,32] AMUs are widely implemented including at metropolitan hospitals in Melbourne,[33,34] in other Australian states[35,36,37] and in the UK where AMUs operate in more than 90% of hospitals.[38] Principal attributes of a well implemented MAPU/AMU service model are:

- Reduced ALOS for acute medical admissions;
- More timely and appropriate assessment, planning and treatment by a multi-disciplinary team, including a geriatrician where appropriate;
- Reduced waiting time in ED and/or potential reduced admission to a ward not well equipped to manage;
- More efficient use of resources; and
- Discharge/transfer to a more appropriate setting for definitive care.

- **Patients outside general medical ward –** At Ballarat, there are a number of 'outlier' general medical patients who are treated in other ward settings, mainly because of current bed capacity constraints on the three general medical wards. This leads to sub-optimal, less efficient patient management.

- **At home care –** Access to HITH services for general medicine patients is under-developed.

Proposed key developments

It is proposed that:

- ***Self-Sufficiency*** is significantly enhanced from the current 84% to 95%. All of the increase should be managed by Grampians Health, which currently has a low market share of 78%. Growth in capacity should reflect the need for both admitted and non-admitted service demand including demand for specialist clinics.

- ***Develop a MAPU or AMU*** at Ballarat (in the first instance) to deliver rapid and patient-centric assessment and care/treatment. The MAPU or AMU would have:
  - Early identification of patients suitable for rapid assessment and planning (within 4 hours for ED presentations and within 12 hours of ward presentation if the patient was an elective admission);

30 NICE guideline 94, 2018, Assessment through acute medical units, National Institute for Health and Care Excellence
31. Jones, M. 2016, The evidence for acute internal medicine and acute medical units, Future Hospital Journal 2016 Vol 3, No 1: 45–8
32. Reid, LEM et al. 2016, The effectiveness and variation of acute medical units: a systematic review, International Journal for Quality in Health Care, 28(4), 433–446
33. Acute Medical Unit, Royal Melbourne Hospital
34. Acute Assessment Unit, Monash Health
35. Acute Assessment Unit, Royal North Shore, Sydney
36. The Prince Charles Hospital, Assessment through acute medical units, Queensland Government
37. Acute Medical Unit, Flinders Medical Centre, SA
38. NICE guideline 94, 2018, Assessment through acute medical units, National Institute for Health and Care Excellence, p. 13

- Designated senior clinical leadership for consistent and comprehensive assessment and care pathways;
- Having a clear and consistent service model, including anticipatory, proactive care planning, including standardised pathways;
- Having a core common group of staff;
- Multi-disciplinary assessment and joint planning of the patient's needs, including comprehensive geriatric assessment and a model of care (and assessment tools) that consider all facets of the patient's needs;
- The 'clustering' of this cohort of patients within the same area of a medical ward;
- Using consultation-liaison with other specialists as required;
- Using senior nurse specialists to provide clinical support for transitioning between inpatient and community settings. This may include the development of a Nurse Practitioner (NP) in gerontics or similar field;
- Developing 'shared care' pathways with GPs and specialist physicians;
- A close working relationship with a 'pull system' HITH program, comprehensive clinical and non-clinical planning and 'hand-over';
- Prioritised access to investigative facilities (pathology and radiology) and pharmacy services;
- Seven day, 24 hours service with at least once daily consultant-led ward rounds; and
- Evaluation of unit effectiveness on regular basis.

It is proposed that the MAPU/AMU would have between 6-10 beds and would be located in an acute medical ward, preferably close to the ED/SSU. Length of stay in the MAPU would be for a maximum of 72 hours.

The capability of a Ballarat MAPU could also enable clinical consultation and assessment of patients at any other campus, or even in the patient's home.

Continuity of care – A guiding principle will be to seek to enable patients to remain under the care of the same general medicine team through inpatient and clinic settings.

A MAPU would also be appropriate for Horsham campus when the core medical specialties become available on a consistent basis.

- ***Acute care of the elderly (ACE)*** – In lieu of a MAPU at other sites, it is proposed to establish an ACE program for Horsham, Stawell, and Edenhope. It is expected that the different scale of acute hospital will see variations of the program at each site. An ACE service would have the same characteristics of a MAPU/AMU that is cut down to match local capability. An active ACE program is a key element to an *Ageing Well* strategy[39] for Grampians Health.
- ***Discharge planning hub*** – A multi-faceted strategy is required to optimise discharge planning including:
  - Timely ward rounds and referral of complex patient to a discharge hub;
  - Criteria-led discharge;
  - Operating on a seven-day per week service to enable effective discharge of patients on weekends;

[39] Commissioner for Senior Victorians, Ageing Well in a Changing World. 2020 <www.seniorsonline.vic.gov.au/ageing-well>

  - Coordination with subacute care services and out of home services including HITH and HIP services, as well as external third-party providers of care or other holistic support needs; and
  - Systematic and early identification of patients at risk of delayed discharge and multi-disciplinary care planning including patients with complex physical, mental health, disability and social care needs including patients with NDIS/VCAT involvement.

- *Paediatric to adult transition* - transition planning is required to ensure support for paediatric patients and their families for those patients with chronic illnesses whose care requires transition to adult general medicine.

- ***Medical workforce*** – Expand the Advanced Training program in general medicine in collaboration with Western Regional Training Hub. Augment the general medical workforce to include a physician mix with subspecialty representation.

- ***Medical ward capacity*** – Enable provision for general medicine ward capacity to recognise the additional range of sub-specialty patients that are treated under the 'bed card' of general medicine physicians.

- ***At home care*** – An expansion in the provision of HITH for general medicine patients across all Grampians Health campuses. This will include senior medical engagement (See HITH Section 8).

9.9. IMMUNOLOGY AND INFECTIOUS DISEASES

Immunology includes diagnosis and management of clinical disorders of the immune system, including HIV, allergic diseases, autoimmune diseases, immunodeficiency, immunosuppression and neuroimmunology.

Infectious Diseases includes diagnosis and management of all aspects of infectious diseases including bacterial, viral, fungal, and parasitic diseases. This includes acute and chronic infections, including those resistant to antibiotics and infections of global importance such as HIV and tuberculosis.

Infectious diseases physicians also manage complex hospital-acquired infections, which commonly include surgical site infections, pneumonia, and urinary tract infections for example.

Infectious diseases and public health physicians have been in the spotlight since the SARS/CoV-2 pandemic began in early 2020. They have been an important part of the response to keep the hospital and community safe during this time.

The previous five years have seen a very high increase in demand for hospital separations for immunology and infections at 7.82% per annum for Grampians Health, expanding form 1,145 separations in 2015-16 to 1,548 in 2019-20. This expansion has occurred at Horsham, 3.52% per annum increase and Ballarat to an even greater extent, 13.62% per annum. Reductions have occurred at Stawell (-7.07%), falling to 154 separations and at Edenhope (-19.39%), declining to fewer than 5 separations.

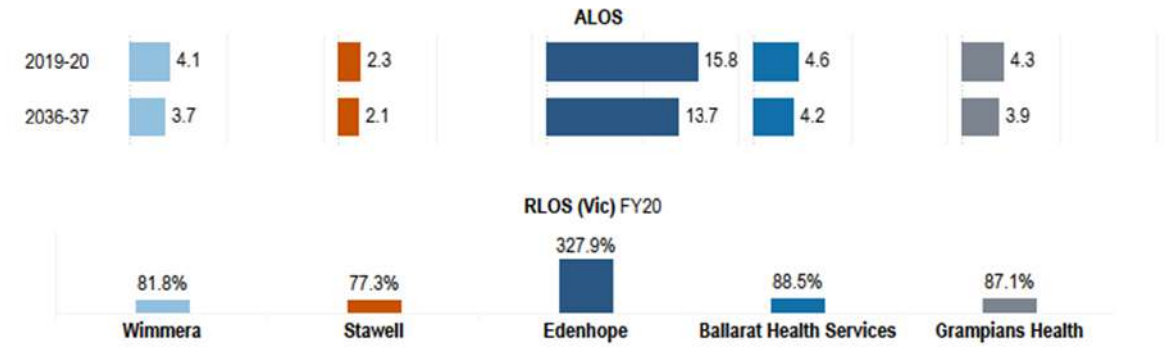
Over the next 15 years, moderately high demand growth is projected for Grampians Health at 2.62% per annum growth, with separations expected to increase from 1,548 in 2019-20 to 2,401 in 2036-37. Growth of between 1.5% to 2.0% is projected at Horsham and Stawell, yielding an expected 455 and 210 separations respectively by 2036-37. Ballarat is anticipated to increase strongly by 3.01% per annum, with separations increasing from 1,045 to 1,731.

ALOS was below expected state-wide ALOS for Horsham (18% lower), Stawell (23% lower) and Ballarat (11% lower). Edenhope had much higher ALOS (228% higher).

Consistent with the very high growth in separations over the last five years, primary catchment market share has increased from 80.04% to 84.69%. Future moderate growth in demand locally is anticipated to be matched by a further increase in primary catchment market share to 85.87%.

Acute Internal Medicine - Immunology & Infections

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,145	1,548	7.82%	2,401	2.62%
Wimmera Health Care Group	299	343	3.52%	455	1.66%
Stawell Regional Health	207	154	-7.07%	210	1.83%
Edenhope & District Hospital	12	5	-19.39%	6	0.58%
Ballarat Health Services	627	1,045	13.62%	1,731	3.01%
Market Share - GH Primary Catchment	80.04%	84.69%		85.87%	



RUR of 1.47 indicates that utilisation if well above the state-wide average. The basis for the high utilisation includes the admission practices of smaller hospitals in the region.

Regional self-sufficiency

- Current regional self-sufficiency: 87.7%
- Baseline projected regional self-sufficiency: 88.1%
- Proposed regional self-sufficiency: 90.0%

9.9.1. Current and emerging issues and future directions

The landscape for infectious diseases has changed dramatically over the last few years due to COVID-19. A focus of this CSP has been to ensure that the fundamentals are in place for a future where infectious disease management is a core role of Grampians Heath. In this context, key issues that were identified as part of the consultations include:

- Infrastructure for infection control has deficiencies in areas such as air quality/flow, capacity to isolate patients appropriately and designing patient flow to reduce unnecessary patient travel to hospital; and
- A vibrant and proactive Public Health Unit. (Section 6).

There are also important issues in relation to the amalgamation and the development of regional responses to other infectious disease issues, including:

- A need to consolidate antimicrobial stewardship across the region. Without adequate training and a consistently implemented antimicrobial stewardship program, there is a risk of divergence in antibiotic prescriptions, higher cost of antibiotics, adverse patient care outcomes, and excess bed days.
- The lack of a region-wide electronic medication prescribing system, which limits the capacity to implement proactive antimicrobial stewardship across the region.
- There are different IT infection control systems used within and across Grampians Health services.
- Pathology turnaround times are not always optimal to support local care management for complex infection control case reviews including *clostridioides difficile,* vancomycin-resistant *enterococcus* and other multi-drug resistant organisms.
- There is a lack of a consistent/tailored approach across the region around sepsis management.

Proposed key developments

It is proposed that:

- The infectious diseases clinical stream is expected to work closely with the newly formed Public Health Unit. (Section 6)
- Achieve an organisation-wide infectious disease team with defined functions around:
  - Infectious disease management;
  - Data collection and reporting;
  - Care pathways including for sepsis management, and diabetic foot management
  - Antimicrobial stewardship;
  - Staff surveillance;
  - Contact tracing; and
  - Workforce immunisation.
- Assist with implementation of Grampians Health-wide Electronic Medical Prescribing, integrated with an electronic decision support system for antimicrobial approval.
- Increase the timeliness of access to diagnostics data to support the management of more complex patients including oncology, haematology, renal and ICU patients.
- Support the expansion of HITH through collaborative care pathways with community-based GPs and other primary care providers to support patient infection control reviews including through telehealth.
- Consolidate and continue to work in partnership with the infection control team to:
  - Promote infection control across all Grampian Health campuses;
  - Enable implementation of standardised infection control IT systems within and across Grampians Health to improve patient care outcomes and timeliness of care; and
  - Support the implementation of infrastructure upgrades to achieve upgrades in priority areas around air quality/flow, patient isolation and staff break areas.

9.10. NEUROLOGY

9.10.1. Current activity, market share and projected demand

The last five years has witnessed exceptionally strong growth in neurology patient demand at Grampians Health. The 5.44% per annum growth has seen an increase from 1,950 separations in 2015-16 to 2,410 by 2019-20. There were two campuses with strong growth: Horsham with very high growth of 8.25% per annum and Ballarat at 5.25% per annum. Stawell has had low growth of 0.78% per annum and Edenhope has had minimal patient volumes in neurology.

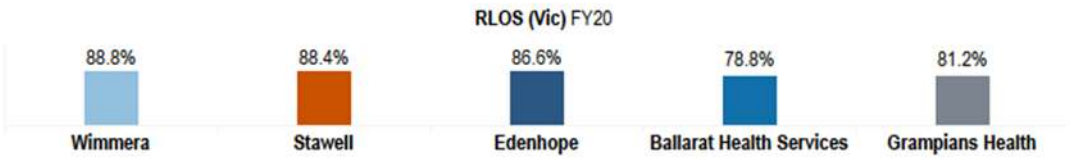
Baseline projections suggest continued strong growth in neurology demand, with projected growth for Grampians Health of 2.59% per annum, contributing to an increase from 2,410 to 3,722 separations. This is driven substantially from Ballarat, with 3.05% per annum growth followed by Horsham at 0.85% and relatively low growth at Stawell at 0.49%.

Despite the strong historical growth in service demand, primary catchment market share declined from 85.52% in 2015-16 to 83.74% in 2019-20. There is an expected reversal of this trend through to 2036-37, with primary catchment market share projected to return to 85.80% under the baseline projection scenario.

All sites have lower ALOS compared to state-wide ALOS in 2019-20, with Grampians Health 19% lower, Ballarat even lower still at 21% below the state. Both Horsham and Stawell had an ALOS that was around 11% to 12% lower.

Acute Internal Medicine - Neurology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,950	2,410	5.44%	3,722	2.59%
Wimmera Health Care Group	312	428	8.25%	495	0.85%
Stawell Regional Health	120	124	0.78%	135	0.49%
Edenhope & District Hospital	11	9	-4.54%	10	0.80%
Ballarat Health Services	1,507	1,849	5.25%	3,082	3.05%
Market Share - GH Primary Catchment	85.52%	83.74%		85.80%	



RUR of 1.34 indicates that neurology is well above the state-wide average. The higher admission rate appears to be mainly due to admission of common low risk conditions such as minor headache and disequilibrium at some health services.

Regional self-sufficiency - Neurology

- Current regional self-sufficiency: 85.9%
- Baseline projected regional self-sufficiency: 87.5%
- Proposed regional self-sufficiency: 90.0%

9.10.2. Current and emerging issues and future directions

- The very high growth in demand for neurology services is identified as a key issue across Ballarat, Horsham and Stawell. This includes patient cohorts such as stroke, TIA, movement disorder, neurodegenerative disorders, neurocognitive conditions, epilepsy, headache, and chronic pain.
- At Ballarat, the increased demand is associated with increased wait lists for specialist clinics, currently at 1,600 patients, strong demand from ED, and patient flow challenges for patients to access acute inpatient beds.
- There are three neurologists at Ballarat (1.8 FTE) together with an advanced trainee registrar – this workforce is stretched thinly to cover existing demand at Ballarat and insufficient to meet demand growth nor to provide outreach support to Stawell and Horsham.
- There is some specialisation within the neurology nursing workforce at Ballarat, but more advanced scope of practice nurses is required. Ballarat lacks a stroke nurse coordinator.
- The Victorian Stroke Telemedicine (VST) program started at Ballarat in 2015 and each year since there has been strong growth in demand for stroke outpatient and admitted patient care. The commencement of VST has also corresponded with a substantial increase in after-hours demand. Given Ballarat's limited specialist neurology workforce – with no designated stroke registrar after hours – it relies on the VST to provide after-hours stroke coverage.
- Horsham has experienced strong growth in demand for neurology, with 428 patient separations in 2019-20. This high level of patient demand would support appointment of a neurologist to cover inpatient and specialist clinic appointments. The hospital would also benefit from nurse specialisation in neurology.
- Whilst Stawell's level of patient demand at 124 patients in 2019-20 does not justify an onsite neurology service, there is a need for a visiting neurologist and more timely access to either Horsham or Ballarat.
- Edenhope had fewer than 20 neurology patients admitted in 2019-20 – the key challenge is accessing telehealth support for the management of neurology patients.

Proposed key developments

Grampians Health would pursue two objectives for neurology:

- Increase access to neurology services in the regional by improving **self-sufficiency to 90%.**
- Aim to develop a neurology service **clinical capability to a level 5 service**.

To achieve both of these objectives, it is likely that Grampians Health will put in place strategies including:

- The expansion and further specialisation of the neurology medical and nursing workforce is a priority for Ballarat. Given existing demand and the gaps in current service, an increase from 1.8 FTE neurologists to at least 3.6 FTE is warranted, including an FTE at Horsham that can service the broader Wimmera. Across the whole region, at least 4.3 FTE would be expected based on workforce benchmarks for public and private neurology.

- Further specialisation of nursing and advanced scope of practice nurse positions within Ballarat and Horsham will increase capability for admitted and ambulatory neurology clinics. There is sufficient volume for a nurse stroke coordinator at Ballarat should be appointed.

- Further sub-specialisation of stroke management will enable effective management of patient neurology cohorts – stroke, transient ischaemic attack, movement disorder, neurodegenerative disorders, neurocognitive conditions, epilepsy, headache, and chronic pain – supported by care pathways from acute, to subacute, ambulatory and home-based care.

9.11. RENAL MEDICINE (INCLUDING DIALYSIS)

This section includes renal medicine and renal dialysis services.

9.11.1. Renal Dialysis

Dialysis is provided at Ballarat, Horsham, and Edenhope. Dialysis units also operate at other regional towns including Ararat, Daylesford, Kyneton, and Nhill.

- Edenhope Dialysis is a satellite of Melbourne Health and operates three days per week.

- Horsham Dialysis is also a satellite of Melbourne Health with some operational some support from Ballarat. It operates seven dialysis chairs, 6 days a week. There is no direct renal physician inpatient support for Horsham, so any significant treatment needs are transferred to Ballarat, Hamilton or Melbourne Health;

- Ballarat Dialysis is a satellite of Melbourne Health and operates 12 chairs 3 shifts a day (morning, afternoon, and twilight).

  Ballarat has a single chair Home Dialysis training centre within the Dialysis Unit. A Regional Link Nurse from the Melbourne Health hub provides training for patients in both Home Peritoneal Dialysis and Home Haemodialysis. Around 20% of dialysis patients use home dialysis.

  Acute dialysis is available within an inpatient setting for patients with acute and more complex care requirements including for ICU patients requiring haemodialysis and two POC inpatient dialysis capacity on ward 4N.

Current activity, market share and projected demand

Overall demand for dialysis services at Grampians Health has been strong over the last five years, with 5.19% per annum growth leading to 9,941 separations by 2019-20. Growth was highest at Ballarat (5.46% per annum) with Horsham also high at 3.41% per annum.

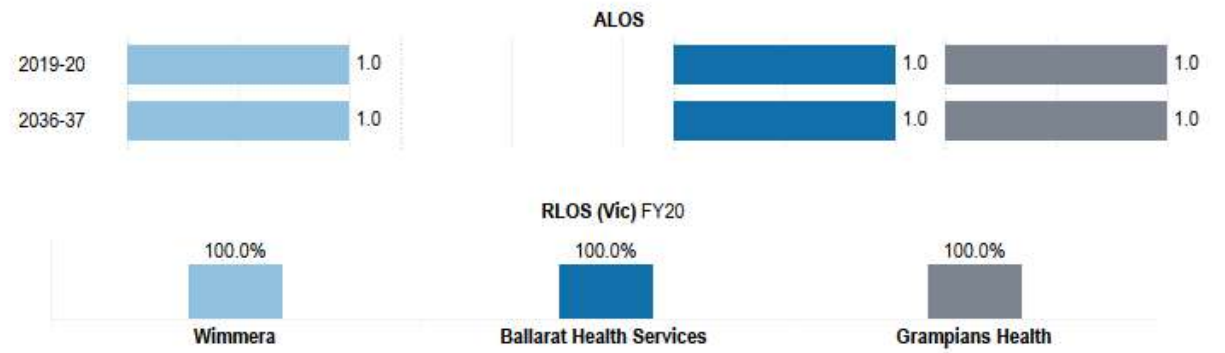
Continued moderately strong growth is projected to 2036-37 at 2.88% per annum yielding 16,095 separations. Again, growth expectations are highest at Ballarat (3.15% per annum) compared to 0.52% per annum at Horsham.

ALOS aligned with expected day stay of 1 day at both campuses.

Primary catchment market share is high at 92.28% in 2019-20 and anticipated to increase modestly to 93.78% by 2036-37. The regional self-sufficiency is even higher at 98.1%.

Acute Internal Medicine - Dialysis

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	8,118	9,941	5.19%	16,095	2.88%
Wimmera Health Care Group	1,074	1,228	3.41%	1,341	0.52%
Edenhope & District Hospital					
Ballarat Health Services	7,044	8,713	5.46%	14,754	3.15%
Market Share - GH Primary Catchment	87.04%	92.28%		93.78%	



RUR of 1.19 indicates that renal dialysis is above the state-wide average. This may reflect higher prevalence rates notwithstanding the age-sex adjusted figures.

Regional self-sufficiency – renal dialysis

- Current regional self-sufficiency: 98.1%
- Baseline projected regional self-sufficiency: 98.3%
- Proposed regional self-sufficiency: 98.1%

9.11.2. Renal Medicine

Renal medicine services are provided at Horsham and Ballarat. The principal site for renal medicine inpatients and specialist clinics is at Ballarat.

Demand for admitted renal medicine services has increased strongly (7.39% per annum) over the last five years from 382 to 508 separations. Moderate growth is projected into the future at 2.27% per annum, yielding 744 separations by 2036-37.

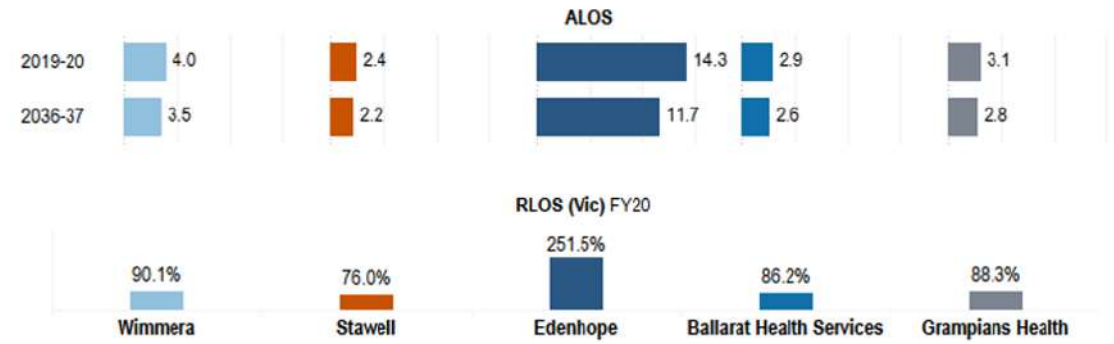
- Horsham's volume of renal medicine separations is projected to increase by 0.98% per annum, from 59 to 70 separations between 2019-20 and 2036-37; and
- Ballarat's renal medicine throughput is projected to increase at a higher rate of 2.46% per annum from 435 to 658 separations between 2019-20 and 2036-37.

Market share for the Grampians Health primary catchment for renal medicine was relatively low at 62.0% in 2015-16, but has increased to 69.2% as at 2019-20, a reflection of the strong growth in Grampians Health separations over this period. Despite future projections of moderate growth, the primary catchment market share under baseline projections is expected to increase to a limited extent to 70.9%. This is considered to be relatively low.

ALOS for renal medicine patients is below the state-wide ALOS: 10% lower at Horsham and 14% lower at Ballarat.

Acute Internal Medicine - Renal Medicine

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	382	508	7.39%	743.6	2.27%
Wimmera Health Care Group	52	59	3.21%	69.6	0.98%
Stawell Regional Health	15	10	-8.90%	12.0	0.88%
Edenhope & District Hospital	<5	<5	12.47%	3.8	1.03%
Ballarat Health Services	313	435	8.61%	658.1	2.46%
Market Share - GH Primary Catchment	61.99%	69.22%		70.91%	



RUR of 1.18 indicates that renal medicine is above the state-wide average.

Regional self-sufficiency – renal medicine

- Current regional self-sufficiency 72.7%:
- Baseline projected regional self-sufficiency 74.9%:
- Proposed regional self-sufficiency: 85.0%

9.11.3. Current and emerging issues and future directions

The data and consultations indicate several current and emerging issues, including:

- Relatively low specialist capability at Ballarat. As a spoke renal service, Ballarat has been dependent on Melbourne Health hub.
- In this context there is also no direct specialist renal support at Horsham, with more complex patients being transferred to other health services. There is the flow on impact that sustaining continuity of a trained renal dialysis nursing workforce is challenging at Horsham. It is noted that the current four dialysis chairs are not fully/effectively utilised.

- Ballarat's current dialysis unit is at capacity – intermittently, at peak demand periods, Ballarat exceeds its current capacity of 60 patients (@ 200% occupancy for six days a week). Ballarat regularly operates at three shifts per chair per day ; that is 80 patients per day in the 12 chairs. Constrained dialysis unit capacity also contributes to:
  - Risk of delays to treatment, potentially exacerbating clinical morbidities; and
  - Pressure on inpatient dialysis services including ICU.
- Operating dialysis three sessions per day at Ballarat is difficult to sustain with rostering and variable patient utilisation of twilight sessions.
- Home dialysis training facilities at Ballarat are restricted in capacity to one training chair and do not support privacy, confidentiality, and records storage. The current facilities are not fit for purpose.

Proposed key developments

- ***Self-sufficiency***.
  - Maintain the high self-sufficiency for dialysis at 98%; and
  - Develop specialist renal medicine to 85% over the medium to longer-term. Almost all increase in activity is expected to occur at Ballarat and to a lesser extent at Horsham.
- The further ***development of renal medicine as a specialty*** at Grampians Health is likely to be dependent of two inter-dependent strategies:
  - The **transition of Ballarat from a spoke service of Melbourne Health to become a hub renal service** for the region (excluding transplantation services). As part of this hub role, Ballarat would:
    - Provide nephrology support to Horsham's dialysis and inpatient renal medicine service;
    - Expand home dialysis from 20% to 25% across the region with Ballarat undertaking training and regional support role;
    - Involve Ballarat having the regional role in commencing new patients to dialysis; and
  - Develop **enhanced renal physician capability** that includes one or more renal medicine registrar at Ballarat in addition to the general medicine advanced trainee in renal.
- Undertake **capital redevelopment of the renal dialysis** services at Ballarat that is fit-for-purpose, including:
  - Development of an 18 chair dialysis unit as a satellite service, comprising flexible use of a 15-16 chair unit with an additional 2 to 3-chair Home Dialysis training and respite unit. The POCs assume operating two shifts per day (200% occupancy) for six days a week; and
  - Retention of an acute renal service on the Ballarat campus for the provision of Acute Dialysis inpatients.

9.12. RESPIRATORY MEDICINE

Respiratory conditions are one of the most common diseases leading to admission at all five Grampians Health campuses. There are a wide variety of respiratory conditions that are treated at Grampians Health, such as:

- Asthma
- Breathing-related sleep disorders
- Chronic cough
- Chronic bronchitis
- Chronic obstructive pulmonary disease
- Cystic fibrosis
- Emphysema
- Interstitial lung disease
- Pneumonia
- Pulmonary vascular disorders (affect the circulation of the blood through the lungs)
- Pulmonary hypertension
- Sleep apnoea
- Tuberculosis

9.12.1. Current activity, market share and projected demand

Growth in demand for respiratory services over the last five years has been very high for Grampians Health, increasing 5.46% per annum from 2,011 to 2,487 separations between 2015-16 to 2019-20. This growth has overwhelmingly been at Ballarat campus, with growth of 7.69% per annum and to a limited extent at Horsham, 0.23% per annum growth. Stawell has been stable at around 110 separations and there has been a reduction at Edenhope from 39 to 13 separations over this period.

Projected demand growth is moderate, at 1.88% per annum for Grampians Health over the next 17 years, with an expected increase under baseline projections from 2,487 to 3,412 between 2019-20 to 2036-37. The modelling indicates that there is an expectation of respiratory conditions being increasingly suitable for community-based treatments.

The high trend growth in the volume of separations over the last five years corresponds to an increase in the primary catchment market share from 77.82% to 78.42%, staying relatively stable by 2036-37 at 78.46%.

There is substantial variability in ALOS across the campuses. Ballarat has the lowest relative ALOS at 16% below the state-wide ALOS. Stawell is just below (3% lower) the state-wide ALOS and Horsham slightly over (3% higher) the state-wide ALOS. Although Edenhope has only a small number (n = 13) of separations in 2019-20, these patient episodes of care were 60% above the expected state-wide ALOS.

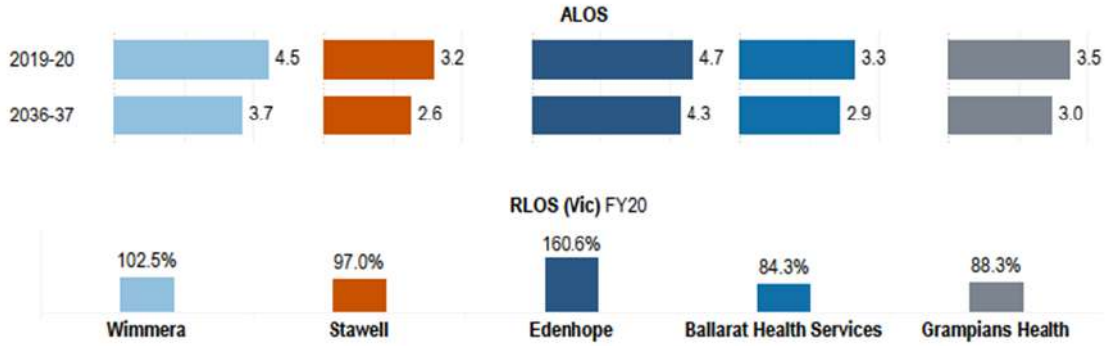
RUR of 1.24 indicates that respiratory medicine is above the state-wide average. This may be due to higher prevalence in the region as indicated by burden of disease for respiratory related conditions.

Regional self-sufficiency – respiratory

- Current regional self-sufficiency 84.0%;
- Baseline projected regional self-sufficiency 84.3%;
- Proposed regional self-sufficiency: 90.0%.

Acute Internal Medicine - Respiratory Medicine

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	2,011	2,487	5.46%	3,412	1.88%
Wimmera Health Care Group	410	414	0.23%	459	0.62%
Stawell Regional Health	111	109	-0.45%	108	-0.05%
Edenhope & District Hospital	39	13	-23.63%	12	-0.46%
Ballarat Health Services	1,451	1,951	7.69%	2,832	2.22%
Market Share - GH Primary Catchment	77.82%	78.42%		78.46%	



9.12.2. Current and emerging issues and future directions

- At Ballarat:
  - Respiratory medicine is incorporated into general medicine across inpatients (medical ward A) and outpatients. The lack of a dedicated respiratory medicine unit limits role specialisation and there are challenges in meeting patient demand for respiratory isolation.
  - Ambulatory service demand at Ballarat is meeting capacity limits, with very strong growth in respiratory specialist clinics, bronchoscopy demand and in diagnostic services including Endobronchial ultrasound (EBUS), an important component of lung cancer management.
- At Horsham:
  - There is a relatively high inpatient demand and respiratory conditions are being appropriately managed by general physicians.
  - There is no lung function laboratory and no laboratory technicians to support the diagnostic service inclusive of arterial blood gas (ABG) testing. Hence, there is limited scope to increase the capability of the respiratory medicine service, such as day bronchoscopy service. A private visiting respiratory physician offers ABG testing on an outpatient basis to reduce the need for patients to travel to Ballarat.
  - In general Horsham has capacity to increase market share for respiratory medicine and expand its pulmonary rehabilitation service.
- At Stawell:
  - The respiratory service is GP-based and offers a limited inpatient service.
  - The pulmonary rehabilitation service is well regarded and is able to effectively support patient flow from acute to subacute.
- Respiratory HITH services are under-developed at all campuses and would require the closer alignment of HITH with the supply of domiciliary oxygen.

- The existing workforce of three respiratory medicine physicians at Ballarat is not sufficient to meet growing inpatient (including HITH) and outpatient demand nor to provide networked support to Horsham and Stawell. For the whole region including the public and private sector, workforce benchmarks would require 4.7 FTE respiratory medicine physicians, in addition to the general physician complement at Horsham.

Proposed key developments

It is proposed to:

- Improve regional self-sufficiency to respiratory services from 84.0% to 90.0%. Most of the increase would be for specialist respiratory services at Ballarat and clinical outreach to Horsham.
- Enhance access to respiratory services locally, which assumes growth in the more complex respiratory conditions, and is likely to require the formation of a dedicated respiratory unit at Ballarat over time. The unit would be managed by respiratory physicians and supported by junior medical officers and a nurse coordinator. The unit would:
  - Progressively build workforce specialisation and capability and support other clinical services that have interdependencies with respiratory medicine (such as the management of complex surgical patients who need intensive oxygen therapy);
  - Enable ward-based NIV supporting improved patient flow from ICU;
  - Be equipped with negative pressure isolation and future-proofed for respiratory monitoring including NIV and pleural procedures; and
  - Develop the regional clinical leadership for respiratory services at Ballarat.
- An enhanced access service is also likely to mean a strengthening of ambulatory respiratory services including:
  - Increased day bronchoscopy capacity including augmented capability to manage more complex interventional bronchoscopy procedures over time such as cryo-biopsy/airway stents/laser in conjunction with thoracic surgery;
  - Appointment of a respiratory nurse coordinator to increase operational efficiency;
  - Smoking cessation clinic;
  - Increased specialist clinic capacity and the development of a severe and chronic lung disease clinic delivered collaboratively with palliative care physicians, complex care (HARP), services;
  - Multi-disciplinary clinics for severe chronic lung disease and palliative care, with infectious diseases, amongst others;
  - Expand home-based care capability for respiratory medicine patients coordinated by a respiratory nurse and integrated with pulmonary rehabilitation, HARP, and palliative care to:
    - Support the management of chronic obstructive pulmonary disease (COPD) patients; and
    - Enable home-based management of brittle chronic lung disease.
- Further consolidate the respiratory medical workforce through the appointment of a fourth respiratory physician at Ballarat to cover local demand and to undertake visiting respiratory medicine roles at Horsham supplemented by telehealth to Horsham, Stawell, and Edenhope.

- Undertake a demand and financial sustainability review for the development of a sleep medicine clinic at Ballarat. This may be a home-based (HITH) service or suitable in a community health hub.
- With further consolidation of Ballarat's respiratory workforce, develop stronger networked support for Grampians Health campuses:
  - At Horsham, support the development of respiratory medicine capacity and capability including:
    - Enhanced diagnostic services including a lung function lab, supported by laboratory technicians, to enable local respiratory testing inclusive of ABG;[40]
    - Increased day bronchoscopy services through a visiting respiratory physician;
    - Establishment of a satellite Rapid Access Lung Lesion Clinic;
  - Support Horsham, Stawell, and Edenhope with multidisciplinary management reviews in respiratory medicine.
  - Develop organisation-wide training of Horsham and Stawell nurses and allied health workforce in respiratory patient care including lung function testing, chest physiotherapy, oxygen therapy and patient education.

9.13. OTHER MEDICAL SPECIALITIES

9.13.1. Dermatology

Current activity, market share and projected demand

Most Grampians Health dermatology services are provided on an ambulatory basis through specialist clinics. Nevertheless, there was strong proportional growth of 4.14% per annum for inpatients over the last five years, increasing from 151 to 178 separations by 2019-20. The main admitted patient activity occurred in Horsham and Ballarat, with current patient volumes of 79 and 88 separations respectively. Horsham experienced substantial growth of 9.86% per annum over the last five years compared to largely static admitted patient volumes at Ballarat.

Future projections are relatively flat for Grampians Health at 0.19% per annum as might be expected. For Horsham, there is slight reduction anticipated (-0.81% per annum) with a low growth anticipated at Ballarat of 1.09% per annum.

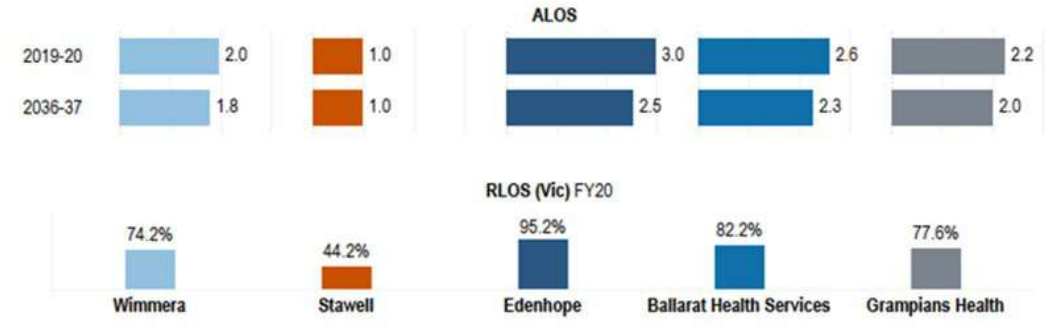
Primary catchment market share for Grampians Health is 80.40% and is projected to increased slightly to 81.09% by 2036-37.

Horsham and Ballarat have lower ALOS compared to the state-wide average: 26% lower for Horsham which had an ALOS of 2.0 days and 18% lower for Ballarat, which had an ALOS of 2.6 days in 2019-20. Both campuses are anticipated to have a reduction in ALOS of around 10% by 2036-37.

40. The future availability of ABGs for Horsham could be part of any SLA for pathology services for that campus.

Acute Internal Medicine - Dermatology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	151	178	4.14%	183.4	0.19%
Wimmera Health Care Group	54	79	9.86%	68.5	-0.81%
Stawell Regional Health	7	9	6.68%	7.3	-1.30%
Edenhope & District Hospital	<5	<5	-8.17%	2.1	-0.07%
Ballarat Health Services	87	88	0.21%	105.5	1.09%
Market Share - GH Primary Catchment	75.17%	80.40%		81.09%	



RUR of 2.89 indicates that dermatology is exceptionally higher than the state-wide average.

Regional self-sufficiency

- Current self-sufficiency, 77.6%
- Baseline projected self-sufficiency, 79.8%
- Proposed self-sufficiency, 80.0%

Current and emerging issues and future directions

- There is limited access to public specialist dermatology consultation services/clinics across Grampians Health campuses.
- Grampians Health lacks a dermatology specialist medical workforce.
- There is much higher than expected utilisation of inpatient admissions for dermatology services, indicating a potential gap in the service system for ambulatory services contributing to avoidable hospital admissions.

Proposed key developments

There is a need to strengthen public access to dermatology specialist clinics (including telehealth) at all campuses.

9.13.2. Rheumatology

Current activity, market share and projected demand

Most Grampians Health rheumatology services are provided on an ambulatory basis through specialist clinics. For admitted rheumatology services, Grampians Health experienced moderate growth for inpatient services, increasing by 3.98% per annum from 203 to 237 separations between 2015-15 and 2019-20. Most admitted patient services are concentrated at Ballarat and Horsham campuses.

There was very high growth in admitted patient demand at Horsham, increasing by 15.29% per annum from 42 to 74 separations in the period 2015-16 to 2019-20. There was static demand at Ballarat, at around 150 separations over the last five years.

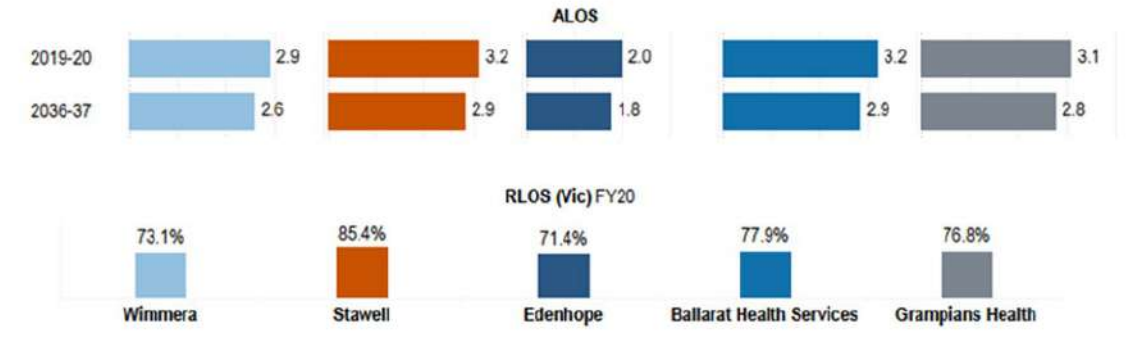
Projected demand growth for Grampians Health is moderate at 2.22% per annum, increasing from 237 to 345 separations between 2019-20 to 2036-37. Growth is projected to be lower at Horsham (1.26% per annum) compared to Ballarat (2.70% per annum).

Primary catchment market share is relatively low at 72.63% in 2019-20 and is projected to increase slightly to 73.20% per annum by 2036-37.

Both Horsham and Ballarat have lower ALOS compared to the state-wide average, 27% lower and 23% lower respectively.

Acute Internal Medicine - Rheumatology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	203	237	3.98%	344.7	2.22%
Wimmera Health Care Group	42	74	15.29%	91.8	1.26%
Stawell Regional Health	7	13	17.04%	17.6	1.72%
Edenhope & District Hospital	<5	<5	-15.91%	0.8	-0.97%
Ballarat Health Services	152	149	-0.51%	234.4	2.70%
Market Share - GH Primary Catchment	60.66%	72.63%		73.20%	



RUR of 1.39 indicates that there is substantially higher utilisation than the state-wide average.

Regional self-sufficiency

- Current self-sufficiency, 72.3%
- Baseline projected self-sufficiency, 74.2%
- Proposed self-sufficiency, 75.0%

Current and emerging issues and future directions

- Ballarat does not have an inpatient consultation service in rheumatology.
- A rheumatology specialist clinic service was established in 2021 with one clinic per week and demand has grown strongly as there is a large patient cohort with rheumatoid arthritis.
- Currently the rheumatology specialist clinic does not extend to patients with chronic pain syndrome and fibromyalgia rheumatica given resource constraints. The Ballarat SACS chronic pain service is reported to have a three-year waiting list.

Proposed key developments

It is proposed that:

- Over time Grampians Health develops an inpatient rheumatology consultation service available to each campus. It is expected that this may be one to two sessions per week.
- Grampians Health further expand rheumatology specialist clinics in line with increased demand at Ballarat.
- To achieve the above objectives Grampians Health would:
  - At least for the next two years, continue the rotating specialist rheumatology model between Ballarat and Western Health to supplement the existing part-time rheumatologist who works at Ballarat and Melbourne Health.
  - In the next three to five years, appoint a second rheumatologist at Ballarat. This aligns with the workforce benchmarks for rheumatology which indicate 2.61 FTE for the region.
  - Retain advanced trainee placements in rheumatology.

9.13.3. Drug and Alcohol

Current activity, market share and projected demand

There is a relatively low volume of admitted acute patient separations in the drug and alcohol specialty for Grampians Health at 237 separations in 2019-20, with 79 separations at Horsham campus and 145 separations at Ballarat. There are minimal drug and alcohol separations at Stawell and Edenhope.

There was a reduction in the volume of drug and alcohol separations for Grampians Health over the last five years, largely driven by the 5.38% per annum reduction at Horsham, with a static service volume for admitted drug and alcohol separations at Ballarat.

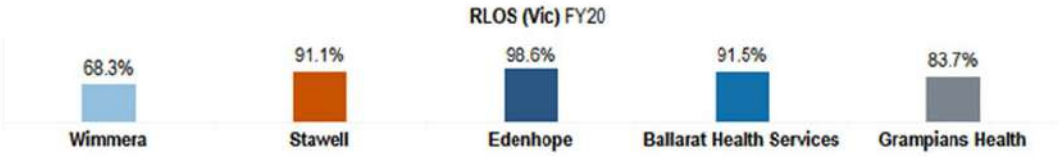
Baseline demand projections indicate relatively stable patient numbers at 234 separations, with a slight increase anticipated at Ballarat (145 to 159 separations) and a slight reduction at Horsham from 78 to 65 separations.

ALOS is below the state-wide expected ALOS to a very large margin for Horsham (32% lower ALOS than expected) and by a smaller margin (8% lower ALOS) at Ballarat.

Primary catchment market share is relatively high at 80.3% in 2019-20 and anticipated to remain at close to this level (80.68% under baseline projections in 2036-37.

Acute Internal Medicine - Drug & Alcohol

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	262	237	-2.45%	234.4	-0.07%
Wimmera Health Care Group	97	78	-5.38%	64.6	-1.09%
Stawell Regional Health	15	11	-6.77%	9.0	-1.38%
Edenhope & District Hospital	5	<5	-11.50%	1.9	-2.82%
Ballarat Health Services	145	145	0.02%	159.0	0.54%
Market Share - GH Primary Catchment	84.51%	80.33%		80.68%	



RUR of 1.92 indicates substantially higher utilisation than the state-wide average and may reflect increased prevalence.

Regional self-sufficiency – drug and alcohol

- Current self-sufficiency, 86.8%
- Baseline projected self-sufficiency, 86.9%
- Proposed self-sufficiency, 90.0%

Current and emerging issues and future directions

- Problematic alcohol and other drug use is a large challenge across the catchment (and the broader region).
- There is substantial unmet demand for people in the community with direct and indirect health issues arising from problematic alcohol and other drug use. Similarly, patients attending Grampians Health campuses with co-occurring substance-related issues have unmet needs:
  - Approximately 1,700 admitted patients per year at Ballarat campus have AOD comorbidities.
  - Approximately 2,000 ED patients had primary codes related to substance issues (excluding ED patients who were subsequently admitted). These 2,000 ED patients accounted for around 9000 hours in the ED.
  - For patients on the ward experiencing alcohol and other drug withdrawal there are challenges in effective and responsive patient care in the absence of clinical care pathways and team-based approaches supported by clinicians with specialist education and training in AOD patient management.
- Patients admitted to Ballarat's mental health service with co-occurring substance use issues require inter-disciplinary service models, inclusive of addiction medicine input.

- People with problematic substance use issues often have, or are at risk of developing, multiple, complex health, and social issues. There are reported to be limited collaboration and referral pathways to third party providers of AOD services, and with social support providers.

Proposed key developments

It is proposed to:

- Establish a crisis hub at Ballarat as part of the mental health Royal Commission findings.
- Establish C-L service at Ballarat that can consult and respond to all other inpatient units and provide telehealth consultations to other campuses, particularly Horsham and Stawell.
- Develop integrated, shared-care service models at Ballarat to support the interdisciplinary management of patients with co-occurring mental ill-health and problematic substance use issues.
- Expand Ballarat's specialist addiction medicine clinic service to two sessions per week in the next two years and up to five sessions per week over the next five years, dependent on demand. Combine these sessions with clinical and other support services with third party providers to ensure integrated care.
- Strengthen links to community-housing services to maximise the opportunity for people with co-occurring problematic substance misuse to retain or gain access to stable housing.
- Over the next five years, and subject to specialist accreditation, develop the Grampians Health addiction medicine workforce through placements of advanced addiction medicine trainees.
- With Windana as a partner, explore the feasibility of:
  - An off-site acute drug and alcohol withdrawal unit at Ballarat that complements (and potentially collocated with) Windana's 20-bed residential alcohol and other drug rehabilitation service located in Ballarat East; and
  - A psychologist-led, day treatment and rehabilitation unit for patients with drug and alcohol needs.
- An Opioid Replacement Treatment (pharmacotherapy) program at Ballarat and Horsham campuses to complement GP-provided programs.
- Develop strong referral and liaison relationship with third party AOD providers and social support agencies across the region.
- Ensure effective links to drug and alcohol services for adolescent patients and links to RCH to enable patient-centred care.

10. Subacute Services

This section describes and analyses the subacute services of Geriatric Evaluation and Management (GEM), rehabilitation, palliative care, and Health Independence Program (HIP) community-based ambulatory services.

10.1. OVERVIEW OF SERVICE PROVISION

Edenhope

Although not a designated provider[41] of subacute care, as a small rural hospital, Edenhope has flexibility in the use of its 20 acute beds and the nature of the community-based services it provides. Accordingly, Edenhope provides level 1 subacute admitted services, including palliative care within its overall acute bed capacity. Edenhope also provides level one subacute ambulatory care through its ambulatory allied health and nursing services.

Horsham

Horsham campus provides Level 3 subacute admitted services from a 20-bed unit (Wyuna). These admitted subacute services comprise: 10 GEM beds and 6 rehabilitation beds. Additionally, Horsham provides 4 Transition Care Program (TCP) beds.

HIP services delivered at Horsham include community rehabilitation, complex care (HARP), cognitive dementia and memory (CDAMS) services, chronic heart failure (CHF) programs, chronic pain services, cardiac rehabilitation, continence services, falls prevention and balance, respiratory services and pulmonary rehabilitation (COPD), movement disorder clinic, residential in reach services, and stroke care.

Horsham also delivers Level 2 community palliative care[42] to the LGAs of Horsham Rural City, Yarriambiack, Hindmarsh and West Wimmera.

Stawell

Stawell campus is not a designated provider of admitted rehabilitation, GEM, or palliative care services. It does however, offer (up to three) TCP bed-based services (Simpson Ward).

Stawell also provides ambulatory subacute care services, including, Complex Care, Post-Acute Care (PAC), Community Rehabilitation, Cardiac Rehabilitation, Falls Prevention, Gait and Balance Program, Continence Service and Memory Service. Most of the specialist clinic services are provided as outreach from Ballarat or Horsham. Stawell also provides community TCP services.

41. Department of Health, 2009, Planning the future of Victoria's subacute service system: A capability and access planning framework, Victorian Government
42. Department of Health, 2016, Palliative Care Service Capability Framework, Victorian Government.

Ballarat

Ballarat is a designated provider of Level 4 GEM and rehabilitation admitted patient services and subacute ambulatory care services. On the Queen Elizabeth Centre (QEC) campus, the 30-bed rehabilitation ward comprises neurology, musculoskeletal and orthogeriatric streams. The GEM ward has 20 beds.

Additionally, on the Ballarat acute hospital site, there is:

- An 'Acute on GEM' inpatient service that has capacity for 8-12 patients; and
- Liaison and inpatient referral service to general medicine and surgery by GEM, rehabilitation, and palliative medicine specialists.

Ballarat provides admitted palliative care services at Level 3 (the highest capability level[43]) in the 11-bed Gandarra ward.

Within resource constraints, some consultation services are provided to other inpatient services across the region is provided by GEM, rehabilitation and palliative medicine specialists including to:

- Bacchus Marsh, Ararat, Stawell, Horsham, and other smaller acute hospitals; and
- St John of God Hospital Ballarat (predominantly for palliative care patients).

Ambulatory

Ballarat's range of subacute ambulatory care services include:

- Complex Care;
- PAC;
- Community Rehabilitation;
- Cardiac and Pulmonary Rehabilitation;
- Persistent Pain Program;
- Continence Clinic;
- CDAMS;
- Victorian Paediatric Rehabilitation Services;
- Residential-in-Reach;
- Amputee outpatient clinic;
- Spasticity Clinic;
- Falls and Balance Clinic;
- Acquired Brain Injury (ABI) Clinic;
- Lymphedema Clinic;
- Diabetic/High Risk Foot Clinic;
- Voluntary Assisted Dying program; and
- TCP community support (particularly for patients with no GP)

Additionally, MBS clinics in Geriatric Medicine and Palliative Care are delivered.

Regional consultancy

Ballarat provides region-wide consultancy palliative care services through the Grampians Regional Palliative Care Team. This service provides specialist medical and advanced nursing support and does visits to patients at home, in residential aged care facilities, outpatient clinics or to health services across the region. This includes outreach to community palliative care programs including those provided by: Djerriwarrh, Central Grampians, Wimmera, and Ballarat Hospice Care.

43. Victorian Department of Health, Palliative care service capability framework 2016

GEM and rehabilitation consultation-liaison (CL) services are provided to hospitals across the region through telehealth and to a lesser extent through visits. Resource limitations mean that these C-L services do not cover the entire region.

Workforce

Ballarat is the only Grampians Health campus that employs subacute medical specialists across rehabilitation, geriatric medicine, or palliative care medicine. Ballarat's subacute specialist medical workforce of 8.6 FTE comprises:

- Rehabilitation Medicine, 2.0 FTE provided by two specialists;
- Geriatric Medicine, 4.5 FTE provided by eight specialists; and
- Palliative Care Medicine, 2.1 FTE provided by three specialists.

10.2. GERIATRIC MEDICINE

GEM services are a specialist medical assessment and clinical care of conditions of the elderly.

10.2.1. Current activity, market share and projected demand

GEM admitted patient services are provided at Stawell, Horsham, and Ballarat. Overall, Grampians Health GEM separations increased significantly, doubling from 433 to 864 separations from 2015-16 to 2019-20. The 18.8% per annum growth was predominantly driven by the 25.31% per annum growth at Ballarat, from 287 to 708 separations, with strong growth (13.16%) also at Stawell and stable growth at Horsham (0.64%). (It should be noted that historically Stawell has been not a designated provider of GEM or rehabilitation admitted patient services, which potentially changes now that it is part of Grampians Health.)

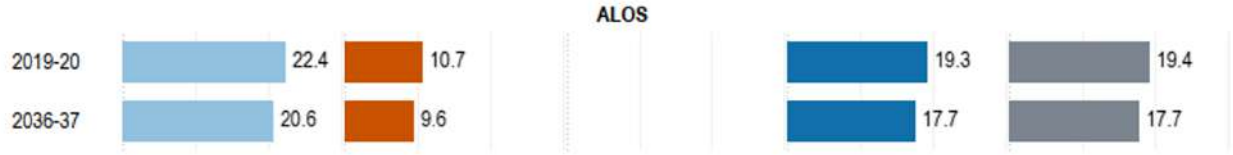
Baseline *demand projections* indicate continued moderate growth (2.87% per annum) for Grampians Health from 864 to 1,397 separations between 2019-20 and 2036-37, with growth across all campuses as follows: Horsham, 1.49% growth to 154 separations; Stawell, 0.77% per cent growth to 41 separations; and Ballarat, 3.16% growth to 1,202 separations.

ALOS for GEM separations is highest at Horsham, 22.4 days in 2019-20 compared to 19.3 days at Ballarat and 10.7 days at Horsham. Further ALOS declines are expected to a modest extent at all campuses, with ALOS for Grampians Health declining from 19.4 to 17.7 days between 2019-20 to 2036-37.

Primary catchment market share is very high for Grampians Health at 97.45% in 2019-20 and is projected to remain high in 2036-37 at 97.63%.

Subacute Medicine Services - GEM

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	433	864	18.84%	1,397	2.87%
Wimmera Health Care Group	117	120	0.64%	154	1.49%
Stawell Regional Health	22	36	13.16%	41	0.77%
Edenhope & District Hospital	7				
Ballarat Health Services	287	708	25.31%	1,202	3.16%
Market Share - GH Primary Catchment	93.40%	97.45%		97.63%	



RUR of 1.13 indicates utilisation that is slightly higher than the state-wide average.

Regional self-sufficiency is marginally lower than the Grampians Health market share. Nevertheless, there is a high level of self-sufficiency that is projected to be maintained above 95%. Regional levels are:

- Current: 95.7%
- Baseline projection: 96.1%
- Proposed projection: 98.0%

10.3. REHABILITATION

10.3.1. Current activity, market share and projected demand

There has been relatively stable utilisation at Horsham at around 120 separations per annum, between 2015-16 to 2019-20. There is projected future modest growth of 0.91% per annum, from 120 to 140 separations.

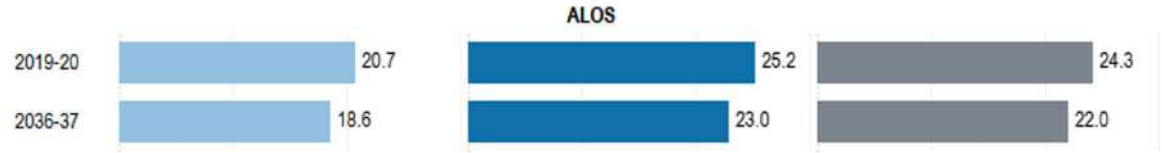
At Ballarat, very strong growth in service volumes between of 4.68% per annum between 2015-16 to 2019-20 has led to an increase from 364 to 437 separations. Growth is also expected to be high into the future with 2.58% per annum growth expected to increase rehabilitation separations to 674 by 2036-37.

For the Grampians Health primary catchment, market share declined slightly from 83.18% in 2015-16 to 78.90% in 2019-20. Projected changes in demand are expected to yield a primary catchment market share of 80.97% in 2036-37.

ALOS is higher at Ballarat at 25.2 days compared to Horsham's ALOS of 20.7 days consistent with the higher complexity of care for a Level 4 service (Ballarat) versus a Level 3 service (Horsham). For both sites, ALOS is expected to reduce moderately in 2036-37: to 23.0 days for Ballarat and to 18.6 days for Horsham/Dimboola.

Subacute Medicine Services - Rehabilitation Sub Acute

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	486	558	3.49%	814.3	2.25%
Wimmera Health Care Group	122	120	-0.33%	140.4	0.91%
Ballarat Health Services	364	437	4.68%	673.9	2.58%
Market Share - GH Primary Catchment	83.18%	78.90%		80.97%	



RUR of 0.76 indicates that utilisation of admitted rehabilitation services is 24% lower than the state-wide average.

Regional self-sufficiency

- Current regional self-sufficiency: 71.3%
- Baseline projected regional self-sufficiency: 73.4%
- Proposed regional self-sufficiency: 85%

10.4. PALLIATIVE CARE

10.4.1. Current activity, market share and projected demand

Two health services are designated by the Victorian Department of Health to provide admitted palliative care services: Horsham and Ballarat. The number of palliative care separations at Horsham declined between 2015-16 to 2019-20 from 34 to 24 separations, a 7.90% per annum rate of decline. By contrast, demand increased by 8.10% per annum at Ballarat from 197 to 269 separations over this period.

Future demand for admitted palliative care services is expected to increase at both sites with 0.29% per annum growth at Horsham, and 2.76% per annum growth at Ballarat leading to an overall increase for Grampians Health from 293 separations to 453 separations over the period 2019-20 to 2036-37.

The ALOS at Ballarat is 12.8 days as compared to 7.7 days at Horsham in 2019-20, with only a very slight reduction in ALOS anticipated by 2036-37, 12.7 days and 7.5 days respectively for Ballarat and Horsham.

Primary catchment market share has been very high at 95.4% over the last five years and is anticipated to increase slightly to 96.3% by 2036-37.

Subacute Medicine Services - Palliative Care

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	231	293	6.17%	453.3	2.59%
Wimmera Health Care Group	34	24	-7.90%	25.7	0.29%
Ballarat Health Services	197	269	8.10%	427.6	2.76%
Market Share - GH Primary Catchment	95.41%	95.40%		96.31%	

RUR of 1.23 indicates that admitted palliative care service utilisation is above the state-wide average. This may suggest that service models may have greater scope for palliative care at home.

Regional self-sufficiency

- Current regional self-sufficiency: 92.3%
- Baseline projection regional self-sufficiency: 92.3%
- Proposed regional self-sufficiency: 95%

10.4.2. Current and emerging issues and future directions

- The disparate nature of **operating structures, service eligibility criteria, clinical practices and funding systems** hinder person-centred care planning and service integration between acute/subacute and community services. Feedback from stakeholders suggested that this may lead to siloed care within and between different subacute service categories, limiting the potential for more flexible, collaborative and embedded models of subacute service teams across the entire patient journey, including in ED, acute and home-based settings.

- **Contemporary models of care** for all areas of subacute services enhance the development of more community and home-based services for patient who would otherwise occupy beds. Home-based service provision of subacute services at both Ballarat and Horsham appears to be under-developed and could be expanded to increase access, especially for vulnerable patients.

- **Resourcing of subacute services** appears to be at minimum levels, which is below levels that result in a vibrant and flexible service, limiting the effectiveness of the service to support access and to optimise patient outcomes and efficient patient flow. In particular, the subacute service system lacks resource reliability, and service availability is challenged when specialist medical staff and skilled nursing and allied health practitioners take leave. The same under-investment has hindered subacute teams from being more:
  - Proactive in adopting innovative service models; and
  - Limiting subacute clinical presence across different disciplines.

- **Specialist designation**. Historically, specialist subacute services were designated to regional and sub-regional health services (by the Victorian Department of Health); hence specialist rehabilitation is funded at Ballarat and Horsham. The designation is to the entity, not the site. Therefore, amalgamation may change where future specialist rehabilitation services may be provided.

- **Timeliness of service** - The 'wait time' or 'referral-to-appointment time' and 'first-to-subsequent review time', for all the subacute clinics have increased. This is in part due to the pandemic and re-prioritisation of services and medical staff redeployment. The consequent delay in accessing these services creates a cascading effect with more ED presentations and potentially avoidable admissions.

- **Accessing palliative care services** - Palliative care access is increasingly challenged by the need to balance bed-based and home-based service availability. The increased demand is due to the additional cohorts of patients with palliative care need across non-cancer diagnoses, including for patients with chronic conditions such as respiratory, heart failure and end-stage renal disease. The higher-than-average utilisation of bed-based palliative care services indicates a potential under-utilisation of community-based palliative care, which may be due to one or more reasons.

- **Changes in patient expectations** - Supporting patients' access to voluntary assisted dying services is a further service need that is challenged by resourcing fragility. It is noteworthy that the delivery of Ballarat's Voluntary Assisted Dying program is outside of the core scope of practice for each of the three subacute disciplines.

- **Access to chronic pain management** clinical services is an area that requires development across Grampians Health in the context of the extensive waiting lists for outpatient services being a current barrier to access, together with no access to services in the inpatient setting. The QEC is not currently supported by the Ballarat Acute Pain Service which operates at the acute site. Access to pain management services is relevant to QEC's role which includes post-surgical patients and other patients with acute pain management needs, as well as multi-morbid patients who experience chronic pain as part of their presentation. This is a service gap and may contribute to delays in transferring patients from the acute site to the QEC.

- **Medical workforce**.
  - Succession planning for specialist subacute medical teams for GEM, rehabilitation and palliative care will be important in the short-to medium term. Three staff accounting for 2.5 FTE are approaching retirement age in the next 5-10 years.
  - There is currently no after-hours coverage for the subacute disciplines provided to patients who are not admitted to the Queen Elizabeth Centre in Ballarat or the "@home" older persons program (Ballarat), nor the immediate capacity to extend this service with the current staffing. It is also noted for the rehabilitation, GEM and palliative medicine workforce that out-of-hours medical cover at Ballarat includes nights and weekends, and is provided by the same medical staff senior and junior who deliver the in-hours care. The on-call arrangements are fragile and remain reliant on a model whereby junior medical staff take urgent calls and come on-site as needed. The junior staff who rotate to QEC are unfamiliar and inexperienced with this arrangement.

- **Nursing and allied health workforce.** At all Grampians Health sites, workforce development is not keeping pace with service demand across medical, nursing, and allied health. Enhanced scope of practice offers substantial potential for increased embedding of subacute care models in acute streams of care, including ED, to optimise care pathways and health outcomes. There are, however, insufficient numbers of nurse practitioners and clinical nurse consultants, with subacute specialisation to realise this potential currently.

- **NDIS clients** with a life limiting illness have a short period of time to achieve their goals and preferred place of care and death. At present this group of patients have a prolonged length of stay on the inpatient rehabilitation and palliative care wards, which is suboptimal.

Proposed key developments

Subacute (bed-based and community) is a well-established service at Grampians Health, particularly at Ballarat and Horsham. The services are more patchy at Stawell and Edenhope as subacute services have not been targeted or funded at these campuses. Nevertheless, the issues identified above provide a basis for improved subacute services across all campuses, over time. The following initiatives are designed to strengthen and extend the current service base.

It is proposed that Grampians Health:

- ***Develop contemporary Models of Care*** with respect to higher complexity patients being clinically managed at home. This means that significant expansion of Better@Home programs for rehabilitation and GEM. It is proposed that within 3 years, 25 of the current inpatient GEM and rehabilitation bed-days be delivered in home. (This initiative reinforces the proposed increased HITH service development (Section 8).

- ***Self-sufficiency be increased*** marginally for subacute care from 92% to 95% and that Grampians Health provides all of the additional self-sufficiency for the region.

- Develop an ***acute care of the elderly program*** at all campuses (including Ballarat and Horsham) to enable specialist medical, nursing, and allied health service models to enhance functional recovery, prevent and manage delirium as well as behavioural and psychological symptoms of dementia (BPSD), and provide care pathways to support timely discharge with an increased focus on care at home.
  - At Ballarat, this would build on the GEM-on-Acute model.
  - At Stawell and Edenhope, this would enhance capability to deliver acute care of the elderly (or inpatient complex care) through service workforce development and specialist outreach from Ballarat. The service would target timely transfer of patients through pre-emptive patient review at Ballarat/Horsham and providing support to Stawell/Edenhope GPs for direct clinical advice using both visiting and video-telehealth models.

- Expand the use of ***telehealth*** to increase specialist support to patients and GPs across the region and to promote improved service capability of all Grampians Health campuses in specialist subacute care and care at home.

- ***Palliative care outpatient services*** outside Ballarat - Improve the delivery of palliative care services to patients attending other outpatient appointments within the region (such as oncology or chronic non-malignant disease clinics) in a structured, telehealth or hybrid model. This would improve symptom management and proactive care planning and has the potential to decrease transfers to Ballarat from the region for patients who will not benefit from this.

- Develop ***partnerships*** between geriatric medicine and other clinical streams:
  - Mental Health - Partner with mental health and general medicine to manage complex behavioural issues and severe delirium in older patients. This will involve development of pathways of care for the management of complex behavioural and psychological symptoms of dementia.
  - Geriatric Oncology – Partner with oncology services to ensure that the additional needs of older adults with cancer can be addressed to complement routine oncology care.

- The above service initiatives will require ***specialist workforce expansion***, including:
  - Geriatrician, specialist gerontic nurses, and allied health practitioners to be integrated into workforce of the proposed MAPU and enhanced ACE program;
  - Enabling access to subacute specialists, particularly geriatricians, in other acute wards and ED services to support timely, patient-centred care and to optimise patient flow. This would initially be focused on Ballarat and progressively extended to the other campuses. The expected service would include a dedicated geriatric medicine consulting service to support the care of medical, surgical, and mental health patients in the diagnosis and management of conditions affecting older persons. It would include:
    - De-prescribing of medications and management of delirium;
    - Peri-operative care especially of frail older persons;
    - Orthogeriatric care and bone protection; and
    - Geriatric trauma care.

- ***Workforce development*** that would:
  - Establish an organisation-wide training program for care of the elderly for medical, nursing, and allied health staff; and
  - Further strengthen specialisation of nurses and allied health practitioners in subacute services and increase the number of nurse practitioners involved in subacute services.

- Ensure Ballarat and Horsham subacute services have appropriate access to ***interventional pain management*** and ***chronic pain management*** expertise.

- Through partnerships with metropolitan hospitals, increase Ballarat's capability (including through workforce, infrastructure, and equipment) to provide ***rehabilitation for more complex patients*** including:
  - Rehabilitation for younger persons aged under 25 years; and
  - Upper limb amputee rehabilitation.

- Over the longer-term, undertake clinical and financial examination for delivering quaternary subacute services such as ***spinal and head injury (Level 5) services*** that are outreached from Austin Health and/or Alfred Health.

- Develop a ***NDIS*** program audit that identifies capability and service profile for NDIS patients across Grampians Health. Explore innovative approaches that use existing bed stock in RACS with a dedicated team to manage these patients and free up bed capacity with the aim of providing these patients with a better quality of life.

- Transition the ***Voluntary Assisted Dying Program*** to community-based GPs.

10.5. COMMUNITY BASED HEALTH INDEPENDENCE PROGRAM

HIP services are an increasingly important complement to inpatient services and support people with complex and chronic conditions, and frail older patients, to maximise independence through a range of ambulatory and community-based clinical programs.

HIP incorporates a broad range of services including all SACS, specialist subacute clinics, and other chronic disease services such as Complex Care (HARP), residential-in-reach (RIR) and TCP, amongst others.

10.5.1. Current activity, market share and projected demand

Overall, Grampians Health has experienced strong growth in HIP service demand, with 5.1% per annum growth with 87,165 patient contacts in 2018-19 – the most recent year for which data is available. Projected growth to 2036-37 is lower at 1.7% per annum and expected to generate 118,755 patient contacts.

Strongest historical growth has been in three HIP programs: complex care (7.2% per annum), PAC (12.9%); and community-based palliative care (6.4%).

Projected demand for HIP programs indicated an overall annual growth of 1.7% per annum with the highest projected growth from 2018-19 to 2036-37 being: TCP (4.6% per annum growth; RIR (4.1% per annum); hospital consultative based palliative care (2.7% per annum); and complex care (2.1% per annum).

Table 10-1: Historical trend in HIP service demand (patient contacts)

HIP program	Horsham		Stawell		Ballarat		Grampians Health	
	2018-19	% Change per annum[1]	2018-19	% Change per annum[1]	2018-19	% Change per annum[1]	2018-19	% Change per annum[1]
SACS	8,022	-8.8%	5,647	7.1%	26,836	5.6%	40,505	2.2%
Complex care (HARP)	2,158	-4.9%	502		9,401	8.8%	12,061	7.2%
Subacute specialist clinics[2]								
Residential In-reach (RIR)	704	1.3%			1,352	2.0%	2,056	1.8%
Post-Acute Care (PAC)	5,417	6.0%	5,004		8,368	-0.6%	18,789	12.9%
Transition Care Program (TCP)	1,231	20.2%	951	8.8%	3,870	-1.6%	6,052	3.2%
Community-based Palliative Care	5,842	6.4%					5,842	6.4%
Hospital Consultative Palliative Care					1,860	-2.9%	1,860	-2.9%
Total	**23,374**	**-0.7%**	**12,104**	**31.4%**	**51,687**	**4.0%**	**87,165**	**5.1%**

Table 10-2: Projected HIP service demand (patient contacts)

HIP program	Horsham		Stawell		Ballarat		Grampians Health	
	2036-37	% Change pa.[1]	2036-37	% Change pa	2036-37	% Change pa	2036-37	% Change pa[1]
SACS	9,433	0.9%	5,694	0.1%	38,266	2.0%	53,393	1.6%
Complex care (HARP)	2,496	0.8%	593	0.9%	14,439	2.4%	17,528	2.1%
Subacute specialist clinics[2]								

HIP program	Horsham		Stawell		Ballarat		Grampians Health	
	2036-37	% Change pa.[1]	2036-37	% Change pa	2036-37	% Change pa	2036-37	% Change pa[1]
Residential In-reach (RIR)	1,032	2.2%			3,195	4.9%	4,227	4.1%
Post-Acute Care (PAC)	4,993	-0.5%	4,239	-0.9%	9,953	1.0%	19,185	0.1%
Transition Care Program (TCP)	1,806	2.2%	2,071	4.4%	9,714	5.3%	13,591	4.6%
Community-based Palliative Care	7,843	1.7%					7,843	1.7%
Hospital Consultative Palliative Care					2,988	2.7%	2,988	2.7%
Total	**27,603**	**0.9%**	**12,597**	**0.2%**	**78,555**	**2.4%**	**118,755**	**1.7%**

Notes:
1. Per change per annum since 2015-16 to 2018-19
2. Subacute specialist clinics (CDAMS, Movement disorder clinic etc) are embedded into the SACS data

10.5.2. Current and emerging issues and future directions

The main issues arising in relation to HIP services relate to:

- The increased demand for HIP services associated with population ageing and increased prevalence of chronic disease.
- People seeking diagnosis for possible cognitive impairment and other neurocognitive disorders, with multiple chronic conditions (falls and impairments of continence) have worse health outcomes, functional status and institutional risk in the long term. These patients' needs are not well addressed because of extended wait times to access specialist clinics e.g. CDAMS/falls/continence.
- The poor integration of services with ED, acute or subacute inpatient settings, leading to inconsistencies and gaps in service referral for patients with ambulatory complex care needs.

Proposed key developments

It is proposed that:

- **HIP services be developed to enable more complex subacute patients** being clinically managed in the community through Better@Home, as well as to meet expected increased demand.
- Similarly, **expand the capacity and capability of HIP services**, and community palliative care, to manage increased demand for:
  - Ambulatory rehabilitation (including cardiac rehabilitation and paediatric rehabilitation);
  - Diagnosis and management of complex chronic conditions, including but not limited to diabetes, respiratory, heart failure, chronic renal failure, neurodegenerative disorders, and chronic pain;
  - Palliative care; and
  - RIR including both nursing and senior medical staff support.
- **Develop Grampians Health-wide HIP service models**, supported by telehealth, to enhance local patient access to specialist ambulatory care and to increase diversion and substitution models that can reduce ED and hospital bed utilisation rates.

- **Expand the hours of operation for HIP** and strengthen care pathways to support patient flow and discharge planning from ED and from admitted acute and subacute wards to ambulatory HIP programs.
- **Integrate the TCP into the geriatric medicine service** to allow for streamlined transitions and overcome issues related to lack of GP involvement.

10.5.3. Chronic Pain Management services

Currently there are two distinct chronic pain management services offered at Ballarat and at Horsham campuses.

Ballarat's service comprises an MBS clinic that operates once per fortnight at Ballarat's QEC campus. The service has two pain physicians and a Persistent Pain Management Program delivered by allied health clinicians through the HIP program. There are very substantial wait lists, where the times are quantified in years not months, which compels patients awaiting treatment to seek alternative pathways including through the ED. There is no nurse coordinator for the clinic to support patient follow up or to audit wait lists.

Horsham has a multi-disciplinary pain management program was established in 2021 and is funded as a specialist HIP clinic until 2023.

Current Issues

Demand for pain management services is significantly greater than supply. The extent of waiting times for services is unable to be quantified as the waiting list are not maintained with any accuracy.

The services at Ballarat are disconnected with only limited overlap during joint case conferences that are held fortnightly. There is no common intake system between the MBS and persistent pain management program and limited linkages to AOD treatment and consultancy services, despite the number of patients presenting with opioid dependence.

There is limited opportunity for referral to step-down community-based support programs as there is community capacity and capability are significantly underdeveloped in this area.

The Horsham pain management service (The Wimmera and Southern Mallee Health Service) is a multi-disciplinary clinic including a GP Specialist in pain management, a physiotherapist, occupational therapist, and psychologist. The service involves a screening and assessment process undertaken by the service coordinator which then progresses participation in the pain education and exercise group program.

Whilst Ballarat and Horsham chronic pain programs operate separately, there are monthly coordination meetings to discuss common clients. There is, however, no specialist workforce outreach from Ballarat to Horsham.

Proposed key developments

The increasing demand for pain management for chronic conditions, together with the increasing prevalence of poor health outcomes from inappropriate use of over-the-counter pain medications indicates a need for a more consistent approach to pain management across Grampians Health. It is proposed that Grampians Health develop an exemplar rural pain management service across multiple sites.

There is scope to develop an organisation-wide chronic pain management program with an integrated approach to models of care, workforce development, and referral and intake.

Ballarat's MBS pain management clinic and the persistent pain management program would be functionally integrated with strong links forged with community-based services to support referral pathways. Training opportunities would extend across relevant disciplines including anaesthetic registrars as well as nursing and allied health.

The program would enable access to specialist consultations including mental health and addiction medicine for patients who have co-occurring mental health and/or problematic substance use issues. Dedicated program coordination would support multi-disciplinary team models, patient management and follow-up together with regular wait list review.

Establishment of an exemplar pain service would involve developing the service from first principles including:

- Developing a single referral, assessment, and intake system;
- Streamlining patient appointments and 'courses of care';
- A single point of recording and reporting referrals and waiting time;
- Developing service streams as appropriate to the capacity and capability of each regional pain management campus;
- Establishing administrative processes that can support (and maximise) MBS and HIP clinic services;
- Supporting telehealth services from Ballarat to Horsham in the first instance and explore opportunities extending C-L services to other sites/locations and settings; and
- Developing links between the pain management services and related services including AOD and neurology, acute pain services etc.
- Ensuring effective service transition planning for paediatric patients who are transferring to adult services.

Fundamental to the success of an exemplar service would involve detailed examination of the requisite workforce structure that would be required to implement a successful regional pain management service. This should include consideration of for example, pain management specialist, anaesthetic registrars, GPs with a specialist interest, NPs, Clinical Nurse Consultants, physiotherapists, occupational therapists, social workers, psychologists etc.

11. Surgical and Procedural Services

For the purposes of this CSP, surgery services include the clinical disciplines listed in Table 11-1. It is noted that diagnostic endoscopy services are described in section 9.6. It is also noted that not all patient admissions within the following MCRGs require a surgical procedure.

Table 11-1: Surgical and Procedural Specialties

CLINICAL STREAM	
▪ General Surgery	▪ Endoscopy (in Section 9.6)
▪ Breast Surgery	▪ Orthopaedic Surgery
▪ Colorectal Surgery	▪ Plastic Surgery
▪ Ear Nose and Throat	▪ Urology
▪ Gynaecology	▪ Vascular
▪ Ophthalmology	▪ Anaesthetics
▪ Other –Extensive Burns and Head & Neck Surgery	▪ Perioperative Services
▪ Cardiothoracic Surgery	▪ Neurosurgery

11.1. ACUTE SURGICAL AGGREGATION

This section provides a summary of all surgery undertaken at Grampians Health by campus and by key efficiency metrics.

The over-arching historical trend for surgery activity between 2015-16 and 2019-20 was stable, increasing marginally from 18,595 to 18,612 separations. In 2019-20, surgical and procedural separations accounted for 35% of all acute separations. The two main campuses of Ballarat (increased at a modest average of 0.54% per annum) and Horsham (declined at a modest average by -2.27% per annum), resulting in a stable trend.

Even though the trend was stable, it represents a *reduction* in Grampians Health's market share, which fell significantly from 74.27% to 68.51%; an overall decrease of 5.76%. *The rate of decrease is significant and represents a reduction in access to surgery in the Grampians Health catchment*. This is a key finding and points to the need to substantially increase surgical access across Grampians Health, particularly at the Horsham campus.

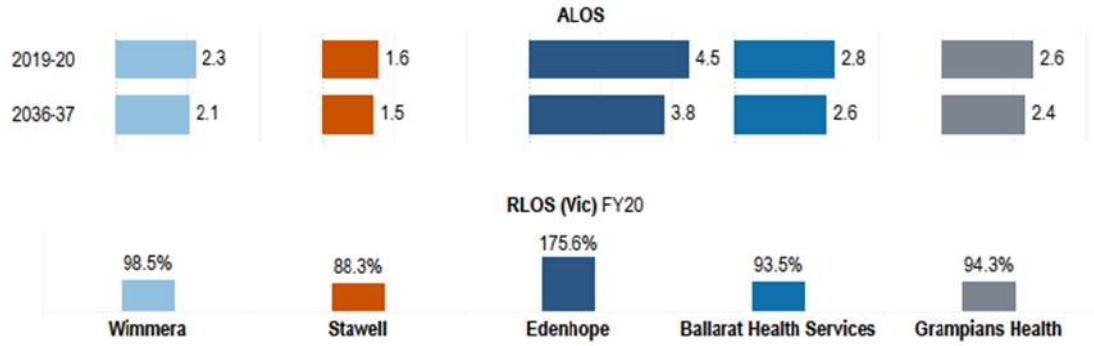
The RLOS is generally very good being well below the state average for the equivalent casemix at Ballarat (-6.5%) and Stawell (-10.7%), and slightly below at Horsham (-1.5%). It is noted that there are bed pressures at the Ballarat and Horsham campuses contributing to timely discharges, which seems likely to be contributing to satisfactory RLOS.

While ALOS and RLOS are discussed under each clinical speciality throughout the report a summary of both ALOS and RLOS by MCRG is provided in ***Appendix 2 – Consolidated ALOS and RLOS.***

There is no surgery at the Edenhope campus, the reported surgical numbers are for non-procedural separations only.

Surgery and Procedural Services - All

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	18,595	18,612	0.02%	23,097	1.28%
Wimmera Health Care Group	4,214	3,844	-2.27%	3,997	0.23%
Stawell Regional Health	1,774	1,889	1.59%	2,244	1.02%
Edenhope & District Hospital	66	67	0.33%	64	-0.23%
Ballarat Health Services	12,541	12,812	0.54%	16,793	1.60%
Market Share - GH Primary Catchment	74.27%	68.51%		68.28%	



The aggregated **demand forecast** for surgery to 2036-37 indicates an increase to almost 23,100 separations, which is an average increase of 1.28% per annum. This is considerably higher than the historical trend of 0.2% on average per annum. Most of the growth is expected to be at the Ballarat campus with an average increase of 1.6% per annum. Overall, the proportion of surgical and procedural separations from all acute is expected to decrease to 31%, meaning that acute medical separations are expected to increase at higher rates than surgery.

Notwithstanding the projected overall increases in surgery, the projected market share for Grampians Health in 2036-37 (68.28%) is marginally **lower** than the 2019-10 market share (68.51%). **The decline in market share experienced to 2019-20 is due to the basis for demand projection of the modelling. Therefore, the baseline projections for future surgical demand would not accord with the strategic directions of Grampians Health to increase regional self-sufficiency**.

The projected market share would need to be restored to levels *above* the 2015-16 level to improve access to patients in the Grampians Health catchment. Even at 75% overall market share for surgery, access would be lower than other rural and regional health services, and lower than expected by Grampians Health.

Surgical services are an area for focused service development. The specific strategies are developed by clinical stream to align with the different market share rates and clinical capability at each campus.

11.2. AN OVERVIEW OF SURGERY BY CAMPUS

The surgical MCRGs by volume and ranked for each campus are provided in Table 11-2 to Table 11-4 below. Note that the analysis excludes diagnostic interventional cardiology and endoscopy.

The top five surgical MCRGs by volume at Ballarat campus in 2019-20 were orthopaedics, general surgery, gynaecology, urology, and ENT. General Surgery is projected to become the highest ranked in 2036-37, followed by orthopaedics, urology, gynaecology, and ENT.

Table 11-2: Surgical separations at Ballarat by volume and rank out of total separations, 2019-20 to 2036-37

Ballarat	2019 - 20		2036-37	
MCRG Description	Overall Rank	Separations	Overall Rank	Separations
Orthopaedics	6	1,887	9	2,433
General Surgery	7	1,861	8	2,542
Gynaecology	14	1,082	17	1,241
Urology	15	1,062	13	1,494
Ear, Nose & Throat	21	761	22	961
Upper GIT Surgery	25	537	26	672
Plastic & Reconstructive Surgery	27	477	28	647
Vascular Surgery	30	342	30	431
Colorectal Surgery	31	342	32	417
Ophthalmology	34	244	33	395
Breast Surgery	35	221	35	288
Head & Neck Surgery	36	154	37	192
Neurosurgery	39	133	38	180
Dermatology	40	88	40	105
Tracheostomy	41	49	41	50
Cardiothoracic Surgery	43	21	43	30
Extensive Burns	44	5	44	7

The top five surgical MCRGs by volume at the Horsham campus in 2019-20 were general surgery, orthopaedics, ophthalmology, gynaecology, and plastic and reconstructive surgery. The only change projected in this order in 2036-37 is plastic and reconstructive moving to fourth and gynaecology moving to fifth.

Table 11-3: Surgical separations at Horsham by volume and rank out of total separations, 2019-20 to 2036-37

Horsham	2019 - 20		2036-37	
MCRG Description	Overall Rank	Separations	Overall Rank	Separations
General Surgery	4	667	4	702
Orthopaedics	5	588	5	608
Ophthalmology	13	319	12	403
Gynaecology	14	295	15	247
Plastic & Reconstructive Surgery	15	250	14	257
Urology	16	201	17	223
Ear, Nose & Throat	19	170	19	160
Upper GIT Surgery	20	165	20	159
Colorectal Surgery	27	81	27	78
Neurosurgery	32	51	31	65
Vascular Surgery	33	37	33	34
Breast Surgery	34	25	35	25
Head & Neck Surgery	38	12	38	11
Extensive Burns	41	1	41	1

The top five surgical MCRGs by volume at the Stawell campus in 2019-20 were ophthalmology, orthopaedics, gynaecology, general surgery, and ENT. The same top five MCRGs are projected to stay in the same order in 2036-37, however, some of the strategies outlined in the clinical service streams below will likely alter the ranking.

Table 11-4: Surgical separations at Stawell by volume and rank out of total separations, 2019-20 to 2036-37

Stawell	2019 - 20		2036-37	
MCRG Description	Overall Rank	Separations	Overall Rank	Separations
Ophthalmology	2	620	1	924
Orthopaedics	3	437	3	458
Gynaecology	7	155	8	152
General Surgery	10	110	10	121
Ear, Nose & Throat	12	105	13	93
Plastic & Reconstructive Surgery	17	35	17	34
Upper GIT Surgery	18	22	18	23
Urology	20	15	19	18
Neurosurgery	24	9	23	11
Head & Neck Surgery	27	3	27	2
Colorectal Surgery	29	2	29	1
Vascular Surgery	30	2	28	2
Breast Surgery	31	2	30	1

11.3. A FRAMEWORK FOR SURGICAL MODELS

The amalgamation provides opportunities to reconsider existing service models and develop more innovative approaches. There are potentially four overarching service models that will suit the different surgical specialities. Importantly, these models are equally applicable at non-Grampians Health hospitals in the region.

Each of these four models operate in other jurisdictions and can readily be adapted to a Grampians Health context.

The first model would be a traditional 'local surgery by a local (resident) surgeon and surgical team'. This involves locally based surgeons undertaking procedures which are within the relevant capability framework[44] of the local hospital and credentialling of the surgeon and anaesthetist. This capability would include the ICU or HDU support, equipment, proficient nursing staff in theatre, recovery and wards, and management of post-surgery care.

Constraining factors such as low case volumes, inadequate facilities/equipment, credentialling, and patient characteristics such as American Society of Anaesthesiologists (ASA)[45] score, age, BMI, and comorbidities will be important limitations to this model.

Therefore, the model is particularly suited to *less complex surgery* that can be undertaken within a local context.

44. Department of Health and Human Services, Capability framework for Victorian surgical and procedural services, Implementation Version, 2019
45. ANZCA, Guideline for the perioperative care of patients selected for day stay procedures, page 2.

The second model includes a new concept for Grampians Health, consisting of 'travelling surgical teams'. This model would typically involve clinical teams travelling from the Ballarat campus to Horsham and Stawell (or Ararat and Maryborough) to deliver the necessary level of clinical capability not otherwise possible at the local hospital. This model delivers higher level of safe surgery closer to home. There are two main variations of this model:

- The more typical *travelling of the surgeon* to the local hospital, relying on the suitability of the theatre, equipment and the appropriate anaesthetic and nursing workforce at the local hospital; and

- The *traveling of an entire surgical team* could include the surgeon, anaesthetist, anaesthetic nurse, theatre nurse and recovery nurse and specialised equipment. Suitable overnight cover would also need to be arranged within the team or with local coverage as part of this model in case a patient experiences a complication after-hours.

The third model is a proven model that establishes specialised (elective) surgery centres for particular specialties or procedures. The model envisages that selected high volume elective surgeries and/or high-cost equipment dependent surgery, is undertaken at one location generating operational efficiencies. There are major elective surgery centres in Melbourne and across Australia that can be developed on a scale that would be feasible in Grampians Region. It is expected that cataract surgery, diagnostic endoscopy, and some gynaecology and bowel procedures would be typical surgeries that may be suitable for this model. This model would suit the future vision for Stawell campus with the right enabler developments.

The fourth model, 'centralising surgery' at Ballarat. This will be necessary for some of the more complex tertiary and (future) quaternary level surgery. Travelling to Ballarat for surgery is not considered patient-centric, however, if this is the most appropriate model to ensure safety and quality then this will be a suitable and necessary model. Surgery that will need to be centralised to Ballarat may include thoracic surgery, paediatric surgery, neurosurgery, and complex vascular, upper-GI, ENT, and gynaecology. Complex patients with an ASA of 3-5[46], many co-morbidities and/or bariatric patients may also be centralised to Ballarat hospital.

All four service models are expected to operate at Grampians Health. The most suitable model will be developed that can be safely delivered as close to home as possible across the surgical specialties.

A further opportunity for surgical and procedural services at Grampians Health is to develop a single health service waiting list for surgical and procedural patients, in line with the *Victorian Elective Surgery Access Policy* (2015)[47]. This aligns with the Elective Surgery Reform project, detailed below.

Currently, there are some specialities at Grampians Health which work in the manner of a private hospital; they receive a referral and add the patient to the surgeons own list. Specialists can only refer patients directly onto the elective surgery waiting list at the health service to which they have admitting rights.

By referring all patients to the health service's elective surgery waiting list, the management of patients on the list are transparent, more efficient, enable patients to be allocated to surgeons and campuses for more timely surgery, and patient-focused. Elective surgery will be managed to ensure all patients are treated equitably within clinically appropriate timeframes.

46. American Society of Anaesthesiologists' Physical Status Classification System is used to assess and communicate a patient's pre-anaesthesia medical co-morbidities. ASA 1 are healthy patients, ASA 2 are patients with mild systemic disease, ASA 3 are patients with severe systemic disease, ASA 4 patients have severe systemic disease which is a constant threat to life, and ASA 5 are moribund patients who are not expected to survive without the operation.
47. Victorian Department of Health, Elective Surgery Access Policy, July 2015.

11.4. ELECTIVE SURGERY REFORM PROJECT

The Grampians Region Health Service Partnership (GRHSP) is collaboratively participating to achieve the elective surgery reform project (ESRP); to improve elective surgery throughput, reduce wait times and improve patient outcomes.

Sub-components of the ESRP are to build a regional approach to elective surgery, embed innovative elective surgery models, more effectively use the capacity and capability across all regional, sub-regional and rural health services, and support models of care for patients to receive best care, which may include partnering with community-based services along the care pathway.

The specific implementable models of care within the ESRP are described below:

1. **Shared services models** - to streamline patients access to appropriate services according to their need, location, and the elective surgery capability framework.
2. **Same day surgical models of care** – to increase the use of established and new same day models of surgery.
3. **Strategies for reducing bed days** - including shared and fast-tracked pathways of care, improve perioperative processes, patient flow and the introduction of an Enhanced Recovery After Surgery (ERAS)[48] program.
4. **Review theatre management processes** - to create opportunities to improve the timeliness of patient access to surgical procedures.

11.4.1. Shared services model of care

The ESRP includes the clinical governance components of safe, effective, person-centred care, as well as consumer engagement, clinician engagement and communication as key components, and include:

- **Right care, right place, best time** – with the aim being to match surgical procedures to the capability of each site and simultaneously maximising the operating theatre capacity at each site.
- **Streamlined access according to patient need and location** – which requires an uplift of specialist clinics across all sites and pre-operative screening to identify the best place and pathway for surgery for each patient.
- **Shared resources for care provision** – which includes models for same day/ reduced stay surgical care, regional clinical pathways, ERAS and appropriate workforce skills.
- **Shared monitoring systems** – including shared governance frameworks, elective surgery waiting lists and auditing tools.

11.4.2. Same day surgical models of care

The aim of enhancing same day surgical models of care is to increase surgical throughput and thereby relieve some of the pressures from the current waiting lists. The flow of patients for this model starts with a preadmission screening process to select suitable patients and procedures which can be managed as same day surgical cases. Those patients will be managed by clinical protocols that are used to inform, direct and record care from admission to discharge. Patients will be discharged from the acute setting to community-based services, including HITH and Better@Home services. Outpatients follow up will occur in specialist clinics or the patient's GP.

48. The ERAS Society, available https://erassociety.org/

11.4.3. Strategies for reducing bed days

Implementation of the same day surgical models of care and the discharge of patients to Grampians Health@Home, as described above, is bed substitution.

Other strategies include targeting sites for certain specialties or procedures, such as endoscopy, ophthalmology, laparoscopic cholecystectomy, hernia repairs and cystoscopies to the lower acuity sites, to maximise theatre time at that site and improve efficiency at the higher acuity sites.

Improving the perioperative processes will also help to reduce bed-days, including preadmission clinics, introduction of an ERAS program which will improve patient outcomes, reducing LOS and complications, and reducing nursing workload. The first planned program purchase will be the colorectal ERAS, which will come with multidisciplinary training, strategies for implementation, built in monitoring systems and assistance in planning for the future.

Introduction of more care pathways may also reduce bed-days, such as the introduction of a fast-track primary joint replacement care pathway which has resulted in a reduction of LOS for total hip replacements and total knee replacements.

11.4.4. Review of theatre management processes

A review of theatre management processes will determine if operating theatre capacity is utilised, which has a flow on effect for patient's receiving timely care. The Institute of Healthcare Improvement white paper on patient flow will be used as a guide for the review. One key driver identified in the white paper is to reduce the variance in surgical scheduling, particularly separation of elective and non-elective surgery in the same theatre. Elective surgery schedules will be redesigned as an outcome of the review.

11.4.5. Progress to date

The GRHSP applied for grant funding for the ESRP in April 2022. The first tasks of the ESRP will be to develop a governance and project framework. Then the baseline capacity and systems capability will need to be explored, along with KPI mechanisms. The surgical care pathway guidelines and models will then need to be determined, along with a needs assessment for workforce training. The process of engaging staff and consumers will also be an important component. If funding is successful, the plan is to pilot the model of care for a regional elective surgery waitlist, and same day and multiday care pathways at multiple sites by October 2022, as well implement a trial of the ERAS.

The ESRP is a strategy to be implemented by the Grampians Region Health Service Partnership.

11.5. GENERAL SURGERY

General Surgery includes all *non-sub-specialty surgery*. *Non-Specialty Surgery* DRGs includes abdominal surgery, and a limited number of thoracic, neck, and multiple site surgery.

The *general surgeons* at Grampians Health also conduct most – but not all - breast surgery, upper GIT surgery and colorectal surgery. These sub-specialities are described below.

11.5.1. Current activity, market share and projected demand

There were 2,671 general surgery separations performed at Grampians Health in 2019-20, up from 2,582 in 2015-16, increasing growth by 0.85% per annum on average.

Of the 2,671 separations performed in 2019-20, the Ballarat campus performed 1,861, or 70%, Horsham campus performed 667, or 25% and Stawell campus performed the least at 110, or 4%.

The **ALOS** in 2019-20 was 3.3 days for Grampians Health. This has fluctuated since 2015-16 with a low of 2.82 to a high of 3.46 in 2018-19. The *Other non-subspeciality* DRGs have contributed to the LOS with historically high ALOS, including 5.8 days in 2019-20.

The **RLOS** was 1.05 in 2019-20 at Grampians Health, which indicates that the ALOS is above the State average by 5%, casemix adjusted.

The **RUR** for general surgery in FY20 was 1.29, suggesting that there is a much higher rate of general surgery than might be expected compared with the state rate. However, general surgery RUR is only applicable in rural regions and can be skewed by a single site – such as Barwon Health.

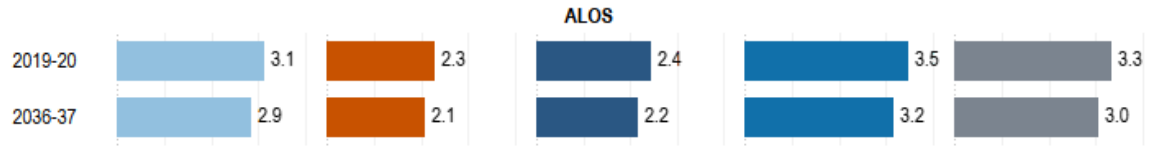
Grampians Health ***primary market share*** was 76.6% in 2019-20, which is within the expected range of 75% to 80%. Other catchment hospitals accounted for 16.7% market share, particularly Maryborough and District, and East Wimmera Health Service. The metropolitan hospitals, including specialist, accounted for 11%.

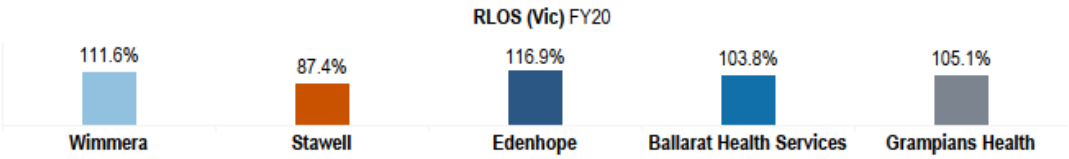
Regional self-sufficiency – General Surgery

- Current regional self-sufficiency: 82.3%
- Baseline projected regional self-sufficiency: 82.7%
- Proposed regional self-sufficiency: 90%

Surgery and Procedural Services - General Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	2,582	2,671	0.85%	3,394	1.42%
Wimmera Health Care Group	657	667	0.37%	702	0.30%
Stawell Regional Health	137	110	-5.41%	121	0.56%
Edenhope & District Hospital	31	33	1.63%	30	-0.65%
Ballarat Health Services	1,757	1,861	1.45%	2,542	1.85%
Market Share - GH Primary Catchment	80.26%	76.62%		76.54%	





Projected demand

Total general surgery separations at Grampians Health are expected to increase from 2,671 in 2019-20 to 3,394 in 2036-37, an increase of 723 separations or an average annual growth rate of 1.4%. Most of the growth is expected at the Ballarat campus, consistent with the breakdown of current separations by Grampians Health sites. Ballarat campus separations are projected to increase from 1,861 to 2,542 in 2036-37, an average annual increase of 1.85%.

11.5.2. Current and emerging issues and future directions

Workforce Capacity. Based on information provided by Grampians Health, there is a total of 11.2 FTE general surgeons, including four at Horsham and 7.2 at Ballarat. Based on the benchmark estimates for general surgery, there is demand for 12.8 general surgeons, including three surgeons at Horsham. Grampians Region has a shortfall of three general surgeons. The development of general surgeon capacity over time will be important for the development of Horsham as a surgical hub with outreach to the broader Wimmera region.

Post-operative access. Consultations reported difficulty accessing elective and emergency surgery post-operative beds (ICU and HDU) at Ballarat campus, which in some instances leads to cases being cancelled. This anecdote was reinforced by anaesthesia. Consultations raised the prospect of a four-bed High Dependency Unit (HDU) and a separate Coronary Care Unit (CCU) to help with this congestion. Refer to ICU in section 11.20 and CCU in section 9.3 for future developments. The strategies for reducing bed-days in the Elective Surgery Reform Project and service models such as a 23hr ward may ameliorate this problem.

Horsham and Stawell campus capability. There are currently limitations with the Horsham and Stawell campus' infrastructure and anaesthetic capability, as outlined in various clinical streams below. The strategy for Horsham in the future is to become a hub for *'local surgery by local surgeon'* with more complex procedures and ICU with ventilation capability. For general surgery, this means increasing the workforce to four general surgeons within five years to improve general surgery capacity and acuity. These surgeons would also provide a service to the Stawell campus (and Nhill in West Wimmera) for any general surgery, as well as for leave and unanticipated absences.

Waiting list management – It is proposed that a single general surgery waiting list be developed for Grampians Health, in line with the Elective Surgery Reform Project.

Trauma surgery. The Ballarat campus is a Level 5 Regional Trauma Service for the Grampians region, according to the Capability Framework for *Victorian Urgent, Emergency, and Trauma Care Services* (2019).[49] This framework supports a coordinated urgent, emergency and trauma system of care, which is timely for all Victorians, and ensures all patients receive the same high quality and safe care, regardless of where they live. A Level 5 service must provide resuscitation and stabilisation of major trauma patients and organise patient transport to a Major Trauma Service. This requires a multidisciplinary response[50].

On the basis that there could be a modifications of trauma surgery sites, Ballarat campus may be able to extend the type of trauma to be undertaken at Ballarat. This will require a separate analysis of the clinical and support service needs when the nature of the modifications become known. This CSP does not provide for increased trauma capability.

49. Victorian Department of Health, Capability Framework for Victorian Urgent, Emergency, and Trauma Care Services (2019)
50. Victorian State Trauma System, Major Trauma Guidelines and Education, Abdominal Trauma, available: https://trauma.reach.vic.gov.au/resources/trauma-victoria-guideline-pdf

Proposed key developments

It is proposed that:

- General surgery is developed as a single team across Grampians Health.
- Grampians Health increase self-sufficiency for general surgery from 82.3% to 90% by 2036-37.
- For Horsham, general surgery be developed as a hub for the Wimmera sub-region. This requires Horsham to be consistently at clinical capability framework level 4 for general surgery;

  The service model would be *general surgery delivered by local surgeons* with outreach from Horsham to other Wimmera hospitals, namely Stawell and Nhill. The service model could also mean a 'travelling team' is suitable. The more complex surgery as befits a level 4 service would be undertaken at Horsham with support of an ICU/HDU.

  A local complement of four general surgeons provides a stable and sustainable workforce. This may be higher than the benchmark ratio of 2.2 FTE for the Wimmera region. Nevertheless, the model provides for a sustainable model, provides for outreach as well as planned leave.
- As the ICU/HDU bed pressures at Ballarat were a consistent theme of the consultations by Ballarat-based surgeons, the development of increased ICU/HDU capacity is considered in more detail in section 11.21. The projected demand does indicate a doubling of capacity increase to around 12 ICU and 3 HDU bed equivalents. Any expansion of ICU/HDU capacity would directly benefit all other surgical specialties in addition to general surgery. Additionally, service models such as a 23hr ward could also be explored in the future to help ameliorate ICU/HDU bed pressures.
- The existing general surgery activity at Ararat and Maryborough be maintained as part of the CSP.

11.6. BREAST SURGERY

11.6.1. Current activity, market share and projected demand

Breast surgery is a developing area of sub-specialty for general surgeons at Grampians Health. The number of cases is small at 247 separations in 2019-20, increasing from 220 in 2015-16. As might be expected, most surgery was performed at Ballarat campus. There were fewer than five cases at Stawell and were 25 separations at Horsham. However, the ALOS at Horsham campus indicates that the complexity of surgery is quite low.

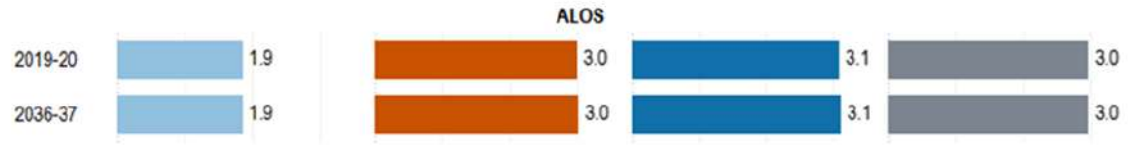
Although there has been an increase in breast surgery activity between 2015-16 and 2019-20, the actual market share for breast surgery has declined from 87.42% to 75.24%; a fall of -12.18% over the four years. This is consistent with the falling market share for surgery more generally.

The decline in market share at Grampians Health is reported to be due to higher expectations of patient outcomes and the limitations that Grampians Health has in this specialty. Therefore, this points to examining future clinical capability to improve access to breast surgery at Grampians Health, particularly at Ballarat.

It is noted that for all campuses, the **RLOS** is higher than might be expected, and the low patient volumes may reflect of higher RLOS.

Surgery and Procedural Services - Breast Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	220	247	2.99%	314.5	1.42%
Wimmera Health Care Group	38	25	-10.24%	25.4	0.16%
Stawell Regional Health	7	<5	-26.89%	1.2	-2.74%
Ballarat Health Services	175	221	5.98%	287.9	1.57%
Market Share - GH Primary Catchment	87.42%	75.24%		76.64%	



Baseline demand projections for breast surgery increase from 247 separations in 2019-20 to 315 in 2036-37, an average increase of 1.42% per annum, all of which is projected for the Ballarat campus. The growth in activity only increases *market share* marginally to 76.64%. However, this level of market share may be appropriate for the *current* level of specialisation at Grampians Health.

Regional self-sufficiency – Breast Surgery

- Current regional self-sufficiency: 80.9%
- Baseline projected regional self-sufficiency: 82.5%
- Proposed regional self-sufficiency: 90.0%

11.6.2. Current and emerging issues and future directions

Breast surgery at Ballarat is a fledgling specialty. There are important drivers that suggest that Grampians Health further develop breast surgery and consolidate the specialty over the next three to five years. Improving patient access to specialist breast surgery locally is consistent with the strategic direction of Grampians Health. However, it is important to consider is that the current breast surgery cases of only 221 at Ballarat, projected 315 cases in 2036-37, are insufficient to deliver a sustainable quality service by a sub- specialist surgeon.

It is understood that a visiting specialist surgeon model may provide the foundations of a more sustainable service and a launching pad for increased self-sufficiency from the current 80.9% to 90%. Nevertheless, the increased specialisation will need to be assessed against other surgical specialist development priorities.

Proposed key development

It is proposed that Grampians Health:

- Assess the basis upon which there would be a sustainable breast surgery service at Ballarat, as well as the impact on related services such as general surgery requirements, expected patient outcomes, and financial implications. Nevertheless, the expectation is that Grampians Health would be in a strong position to build on the existing fledgling service.
- Support regional self-sufficiency of 90% by 2036-37, from the current 81%.

11.7. COLORECTAL SURGERY

11.7.1. Current activity, market share and projected demand

Colorectal surgery is a small clinical discipline in Grampians Health and is largely undertaken by General Surgeons. The following analysis is in addition to the above General Surgery data.

There were 424 colorectal separations performed at Grampians Health in 2019-20, increasing slightly from 404 in 2015-16, an average annual increase of 0.92%. Most separations from 2015-16 to 2019-20 were 'Major small and large bowel procedures, including rectal', with 251 separations in 2019-20.

Of the 424 separations performed in 2019-20, Ballarat campus performed 342, or 80%, Horsham campus performed 81, or 19%, and Stawell performed fewer than five separations.

The **ALOS** in 2019-20 was 7.41 days at Grampians Health and is projected to decrease to 6.4 days in 2036-37. The **RLOS** in 2019-20 was 5% lower than the Statewide average, casemix adjusted.

Surgery and Procedural Services - Colorectal Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	404	424	1.24%	496.3	0.92%
Wimmera Health Care Group	111	81	-7.65%	78.1	-0.19%
Stawell Regional Health	7	<5	-26.29%	1.5	-1.89%
Ballarat Health Services	286	342	4.54%	416.7	1.18%
Market Share - GH Primary Catchment	85.61%	79.33%		79.72%	

Grampians Health primary **market share** was 79.3% in 2019-20, which is within the expected range. The metropolitan hospitals, including specialist, accounted for 12.6% of market share, which would account for patients requiring more complex surgery. The market share for Grampians Health is expected to decrease from 85.6% in 2015-16 to 79.72 by 2036-37.

The RUR for colorectal in 2019-20 was 1.09, which is a utilisation rate marginally higher than the state rate.

Regional self-sufficiency – Colorectal Surgery

- Current regional self-sufficiency: 81.4%, which is higher than might be expected.
- Baseline projected regional self-sufficiency: 82.2%
- Proposed regional self-sufficiency: 83.0%

Projected demand for colorectal separations at Grampians Health is expected to increase from 424 in 2019-20 to 496 in 2036-37, an increase of 72 separations per annum, which is a very modest average annual growth rate of 0.92%. Most of the growth is expected at Ballarat, consistent with the breakdown of current separations by Grampians Health sites. Ballarat separations are projected to increase from 216 to 256 per annum by 2036-37.

11.7.2. Current and emerging issues and future directions

There are no current or emerging issues for colorectal surgery.

Proposed key development

The future direction for colorectal surgery would be to maintain the current levels of market share and self-sufficiency (80-85%).

11.8. UPPER GIT

Upper Gastro-intestinal Tract (GIT) surgery is provided by general surgeons at Grampians Health and includes the lower complexity procedures in this MCRG. There were 724 separations for Upper GIT at Grampians Health in 2019-20. This was an increase on the 665 separations in 2015-16, an average annual growth rate of 2.1%. Ballarat campus performed 537 or 74% of all separations. Most of the separations in 2019-20 were for cholecystectomies (353) and disorders of the biliary tract and pancreas (289).

The ***primary market share*** for Upper GIT in Grampians Health was 67% in 2019-20, which is at the expected level as it excludes procedures that are more complex and referred to Melbourne. A further 10.4% of market share was undertaken at other catchment hospitals.

The ***self-sufficiency*** for Upper GIT surgery in Grampians Health catchment in 2019-20 was 77.5%, which is very acceptable.

The ***RUR*** for Upper GIT Surgery in 2019-20 was 1.31, which means people in the Grampians Health catchment are accessing Upper GIT services at a higher rate than the Statewide average.

Separations for Upper GIT are **projected** to increase to 855 in 2036-37, which is an average annual increase of 1% from 2019-20.

11.8.1. Current and emerging issues and future directions

There are no current or emerging issues for Upper GIT surgery.

Proposed key development

The future direction for Upper GIT surgery would be to maintain the current levels of market share and self-sufficiency.

11.9. CARDIOTHORACIC SURGERY

Cardiothoracic has been a very small service at Grampians Health occurring at Ballarat campus only. There were 21 cardiothoracic separations performed at Grampians Health in 2019-20, decreasing since 2015-16 when there were 46 separations. Most separations from 2015-16 to 2019-20 were 'Other cardiothoracic surgery'.

Regional self-sufficiency – Cardiothoracic surgery

- Current regional self-sufficiency: 6.5%
- Baseline projected regional self-sufficiency: 7.11%
- Proposed regional self-sufficiency: 10%

The RUR for cardiothoracic surgery in 2019-20 was 0.94, which means the people in the Grampians Health catchment are accessing cardiothoracic surgery at about the same level as the statewide rate (-0.6% lower). Combined with the very low self-sufficiency, it means that the catchment the population are continuing to appropriately access cardiothoracic surgery out of the region.

11.9.1. Current and emerging issues and future directions

It is expected that metropolitan hospitals will continue to meet a very high proportion of demand from Grampians Region. Nevertheless, with the recent appointment of a visiting sessional thoracic surgeon, the future separations and self-sufficiency are likely to increase beyond what has been projected, which in part are based on historical separations. This is very positive for Grampians Health, and the Ballarat campus. The suitability of support staff for the thoracic surgeon, such as anaesthetists and theatre nurses, will need to be reviewed and adjusted over time.

Other than interventional catheter procedures, there are no plans for *cardiac surgery* to commence at Grampians Health.

Proposed key development

It is proposed that the future provision of thoracic surgery occur in increments as the demand, increases in lower complexity thoracic surgery, along with theatre time, ICU capacity, workforce skill developments, and clinical support services. A modest thoracic surgery service would extend Grampians Health capability to the upper end of a Level 5 surgical service.

11.10. EAR, NOSE AND THROAT

Ear, Nose and Throat (ENT) is a core service for regional and sub-regional health services.

11.10.1. Current Activity

There were 1,045 ENT separations at Grampians Health in 2019-20, decreasing from 1,131 in 2015-16. This is an average annual decline of -1.96%. However, the largest decline occurred from 2018-19 to 2019-20, which may be COVID-19 and surgeon availability related.

Most separations from 2015-16 to 2019-20 were Otitis Media (middle ear infections) and Upper Respiratory Infections (URI). All other DRGs declined in 2019-20 at Grampians Health.

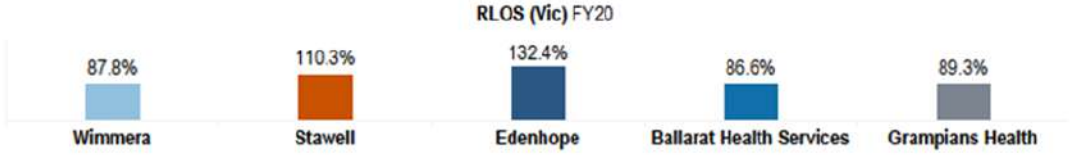
Of the 1,045 separations in 2019-20, Ballarat campus performed 761, or 73%, Horsham campus performed 170, or 16%, Stawell campus performed 105, or 10%. There were also 8 separations recorded at Edenhope, which were for Otitis Media and URI.

The **ALOS** in 2019-20 was 1.37 days for 1,045 separations at Grampians Health. The ALOS was lowest in 2016-17 when it was 1.24 days and highest in 2017-18 when it was 1.39 days. ALOS is expected to be 1.3 days in 2036-37, which is consistent with the current rate.

The **RLOS** was 0.89 for FY20 at Grampians Health, which indicates that the ALOS is below the State average by 11%, casemix adjusted. However, at Stawell the RLOS in 2019-20 was 1.10, or 10% higher than the State average, casemix adjusted.

Surgery and Procedural Services - Ear, Nose & Throat

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,131	1,045	-1.96%	1,225	0.94%
Wimmera Health Care Group	199	170	-3.83%	160	-0.36%
Stawell Regional Health	117	105	-2.64%	93	-0.70%
Edenhope & District Hospital	<5	8	19.90%	11	1.55%
Ballarat Health Services	811	761	-1.57%	961	1.38%
Market Share - GH Primary Catchment	77.77%	69.92%		71.88%	



Grampians Health ***market share*** was 70% in 2019-20, which is just in the expected range of 70% to 75%. Other catchment hospitals accounted for 20.2% of market share, mainly being East Grampians and Maryborough and District. The metropolitan hospitals, including specialist, accounted for 18%.

Regional self-sufficiency – ENT

- Current regional self-sufficiency: 81.9%, which is higher than might be expected.

- Baseline projected regional self-sufficiency: 83.1%
- Proposed regional self-sufficiency: 90%.

The **RUR** for ENT in 2019-20 was 1.57, which means that the Grampians Region population is accessing ENT services at much higher rates (57% higher) than the statewide rates. Given that the self-sufficiency for Grampians Region is relatively low, it means that the catchment population is accessing services *out of region*. In summary, there may be no compelling reason to substantially increase ENT based on RUR. However, if these patients are to access services, then it is best undertaken within the catchment. As it is, the Grampians Health catchment market share is relatively low at 70%, then there is scope to substantially increase 'local' ENT services.

Baseline projected demand for ENT separations at Grampians Health are expected to increase from 1,045 in 2019-20 to 1,225 in 2036-37, an increase of 180 separations, which is a very modest average annual growth rate of 0.9%. Most of the growth is expected at Ballarat campus, consistent with the breakdown of current separations by Grampians Health sites. Ballarat separations are projected to increase from 761 to 1,037, an average annual increase of 1.4%.

Market share for Grampians Health is expected to increase slightly to 71.8% in 2036-37.

Based on the above analysis, the baseline projected demand could increase to around 90% self-sufficiency.

11.10.2. Current and emerging issues and future directions

There are a series of current and emerging issues with ENT at Grampians Health, and these are all mutually dependent.

- ***Access.*** Market share is low, and self-sufficiency can potentially be improved for ENT. Increases in separations would potentially significantly improve local access for this core service.
- ***ENT Streaming.*** There is an opportunity to improve the 'streaming' of ENT at Grampians Health to Horsham campus and Ballarat campus, moving the current ENT activity at Stawell campus to Horsham campus, to consolidate ENT and build critical mass at Horsham campus. Only 10% of ENT procedures in 2019-20 were performed at Stawell campus, and 16% at Horsham campus. This aligns with the shared services objective the Elective Surgical Reform Project; to match the right care in the right place at the right time and streamline access according to the patient need and location.

  When consolidated, Horsham campus should account for a third of all ENT procedures, with further capacity to expand market share. This preserves Ballarat campus for the highest acuity procedures and more complex patients (ASA 3-5).[51] However, it relies on the availability of appropriate equipment and anaesthetic support at Horsham campus. It also relies on continuing ENT surgery being performed at East Grampians.

  A further consideration in this would be the appropriate support of paediatric HDU or ICU provision for children seen at the Horsham campus.
- ***Anaesthetic Support.*** The current anaesthetics arrangement at Horsham campus will be unsuitable with increased volumes of ENT and is likely to require FANZCA coverage (as proposed in Anaesthetics, Section 11.19), making ENT streaming more tenable.

51. American Society of Anaesthesiologists' Physical Status Classification System is used to assess and communicate a patient's pre-anaesthesia medical co-morbidities. ASA 1 are healthy patients, ASA 2 are patients with mild systemic disease, ASA 3 are patients with severe systemic disease, ASA 4 patients have severe systemic disease which is a constant threat to life, and ASA 5 are moribund patients who are not expected to survive without the operation.

- ***Workforce sustainability.*** The ENT surgeon currently visiting Stawell campus and Ballarat campus (as well as other rural hospitals outside of Grampians Health) is nearing retirement. It has been difficult to recruit a replacement who is willing to cover the clinical scope of the retiring surgeon. As such, this is a risk to ENT availability in the region. According to the Medical Specialist Workforce Ratios (AIHW, 2015), there should be 4.11 FTE ENT surgeons for Grampians Health's primary catchment, for both public and private work. This compares to two surgeons (1.36 FTE) in Ballarat campus (with another surgeon due to commence shortly) and 0.2 FTE at Stawell campus. Additional consultant FTE will be required for Horsham campus in the future.

  The physiotherapy led vestibular clinic is considered a valuable service for patient outcomes and can reduce a patient's wait time to medical clinics. A longer-term plan would be to expand this clinic, provided the appropriate physiotherapy workforce can be established, along with appropriate clinical supervision and available infrastructure at the Horsham and Stawell campuses.

- ***Waiting list management*** **–** It is proposed that a single ENT waiting list be developed for Grampians Health.

- ***Travelling ENT team.*** Without an ENT surgeon willing to travel to Horsham campus, and with the anaesthetic service enhancing capability, a travelling ENT team out of Ballarat could be the most sustainable model (at least in the short to medium-term as described in section 11.3). The team will need to comprise the surgeon, anaesthetist, anaesthetic nurse, scrub nurse, instrument technician and recovery nurse. Suitable overnight cover would also need to be arranged in case of complications. This travelling team should only need to be a 'stop gap' solution until the ENT and anaesthetic specialist workforce is sufficiently established to cover Horsham campus.

Proposed key developments

It is proposed that Grampians Health support ENT regional self-sufficiency of 90% by 2036-37, from the current 82%.

The emerging issues for ENT lend themselves to a modification and enhancement of the current model. Changes to the current model include:

- The streaming of ENT to Horsham campus from Stawell campus;
- Significantly increasing the market share (and regional self-sufficiency) for ENT, particularly increased activity at Horsham campus, and higher acuity patients to Ballarat campus;
- Workforce recruitment and retention of at least one additional ENT surgeon in the Wimmera region is a priority. A surgeon could be resident in Horsham campus and supported from Ballarat, or alternatively, a Ballarat-based ENT surgeon travelling to Horsham campus on rotation.

11.11. GYNAECOLOGY

Gynaecology is a core service for regional and sub-regional health services.

11.11.1. Current activity, market share and projected demand

There were 1,534 gynaecology separations performed by campuses across Grampians Health in 2019-20, down from 1,727 in 2015-16, an average annual decrease of -2.9%. Most separations in 2019-20 were 'other procedural gynaecology' with 477 separations (32%), followed by Diagnostic Curettage or Diagnostic Hysterectomy with 244 separations (16%).

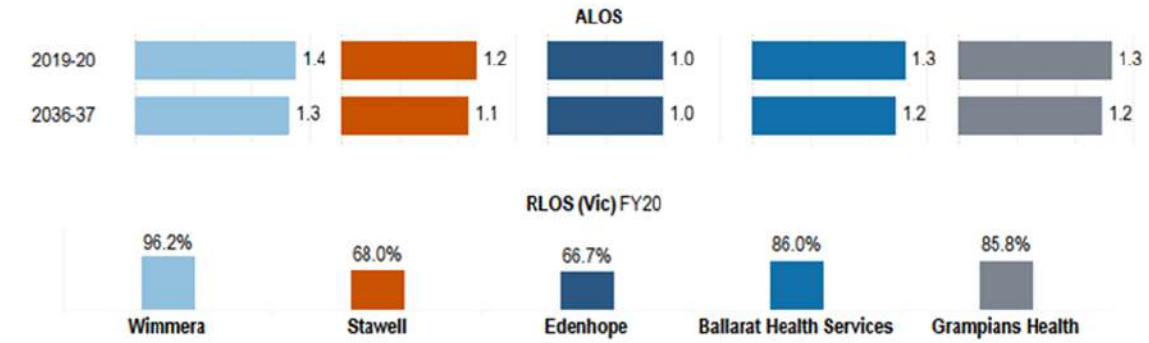
Almost all gynaecology CRGs *declined* between 2015-16 and 2018-19. The most significant of these were surgical terminations (-89%), hysterectomies (-36%), conisation procedures (-6.5%), and endoscopic procedures (-7.9%).

At Horsham, all gynaecology CRGs have progressively declined at Horsham from 2019-20. At Ballarat, surgical terminations and hysterectomies were the gynaecological procedure that declined significantly. *These are important considerations for the future service capability in the future*.

Of the 1,284 separations performed in 2019-20, Ballarat campus performed 1,082, or 71%, Horsham campus performed 295, or 19% and Stawell campus performed 155 separations, or 10%.

Surgery and Procedural Services - Gynaecology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,727	1,534	-2.91%	1,642	0.40%
Wimmera Health Care Group	362	295	-4.96%	247	-1.04%
Stawell Regional Health	146	155	1.55%	152	-0.11%
Edenhope & District Hospital		<5		2	-0.80%
Ballarat Health Services	1,219	1,082	-2.94%	1,241	0.81%
Market Share - GH Primary Catchment	73.20%	65.45%		66.28%	



ALOS for gynaecology separations was 1.3 days in 2019-20, which has been decreasing since 2016-17 when it was 1.4 days. The decrease in overall ALOS was driven by decreasing ALOS in the most common procedures.

The RLOS for Grampians Health was 86%, or 14% lower than the state rate, casemix adjusted. Ballarat campus was at the Grampians Health rate in FY20. Stawell campus had significantly lower RLOS at 32% lower than the State average, casemix adjusted. Horsham campus also had lower than expected RLOS at 4% lower than the State average, casemix adjusted.

Regional self-sufficiency – Gynaecology

- Current regional self-sufficiency: 84%, which is within the expected range of 80% to 85%.
- Baseline projected regional self-sufficiency: 84.9%.
- Proposed regional self-sufficiency: 90%.

The RUR for gynaecology in 2019-20 was 1.06, which is only marginally above the state average utilisation rate.

Market share for Grampian's Health *primary catchment* for gynaecology in 2019-20 was 65% which is considerably lower than expected and ideally would be around 80%. The self-sufficiency of the region is being buoyed by 30% of activity at other regional and rural hospitals, particularly Ararat, Nhill, and Maryborough.

Baseline projected demand for gynaecology separations at Grampians Health is expected to increase to 1,642 by 2036-37, which is 0.4% growth per annum on average. Ballarat campus is driving most of the growth, with an additional 159 separations expected by 2036-37, an average annual growth rate of 0.8%. Horsham campus separations are expected to decline by 1.04% annually on average. 'Other procedural gynaecology' separations are expected to increase the most to 517 separations in 2036-37.

11.11.2. Current and emerging issues and future directions

- ***Access.*** Market share of 65% is very low for gynaecology. There is a lack of access for new patients through clinics. There is reportedly a three-year waiting list for clinic, including for women who are high-risk with pre-cancerous diagnoses.

  There is also a lack of access to theatres for gynaecology at Ballarat and Horsham, including for women requiring surgical termination of pregnancy (STOP), which is a time-critical procedure. Currently the gynaecology list at Ballarat includes emergency caesarean sections, which take priority and cause delays for other gynaecology procedures, including STOPs. The Elective Surgery Reform Project recognises that this is an inefficient way to schedule a theatre list. Dedicated emergency obstetric lists appear to be required daily to circumvent the cancellation of emergency gynaecology cases.

  In short, access to gynaecology in the region is very concerning.

- ***Gynaecology streaming.*** Access issues may be ameliorated by streaming of gynaecology patients in the future between the campuses, including Horsham and Stawell within their respective surgical capability levels.

- ***Alternative models of care.*** There is also an opportunity to transfer some of the 'minor procedures' currently performed in theatre to an outpatient procedure room with local anaesthetic and diathermy, which would free up theatre space and be performed at a lower cost. An example would be large loop excision of the transformation zone (LLETZ), which is a common procedure with a high success rate for high grade cervical dysplasia (abnormal cells).

  There is also scope for greater use of telehealth, to ameliorate the long waiting list for clinic. The gynaecologists are supportive of this, but administration support is required to help coordinate the telehealth appointments.

- ***Robotically assisted surgery.*** As discussed in the Urology (Section 11.16), the procurement of a robot, would allow gynae-oncology patients to have robotically assisted surgery for their benign or cancer treatment, rather than through the traditional open method. This would provide clinical benefits to the patients. There is currently a professor of gynaecology at Ballarat who is trained in the robotic techniques and is willing to mentor up to three more gynaecologists on a robot. Gynae-oncology can start working with a robot as soon as one may be procured and has the capacity and demand for four public lists a month; one for gynaecology cancer and three for benign gynaecology.

- ***Regional Service.*** Ballarat can provide a regional gynaecology service for a range of conditions, supported by a registrar position (which may be a rotational position from the pool of registrars), particularly to support Horsham campus.

- ***Waiting list management –*** It is proposed that a single gynaecology waiting list be developed for Grampians Health in line with the Framework for Surgical Models and the Elective Surgery Reform Project.

Proposed key developments

Access to gynaecology in the Grampians Region is significantly under-developed. Increasing market share (and regional self-sufficiency to 90% from the current 84%), should be a key focus. This could be achieved through:

- Streaming gynaecology surgery to Horsham and Stawell, including areas of significant decline at Ballarat for more timely surgical terminations and hysterectomies;
- Additional gynaecology clinics;
- Implementing alternative models of care for some procedures on an ambulatory basis;
- The procurement of a robot for robotically assisted surgery;
- Improving the streaming of patients by campus according to complexity and risk; and
- Enhancing the registrar workforce.

11.12. NEUROSURGERY

11.12.1. Current activity, market share and projected demand

There were 198 neurosurgery separations performed by Grampians Health hospitals in 2019-20, up from 136 in 2015-16. Most separations were 'head injuries' with 178 separations (90%) in 2019-20.

The ALOS for neurosurgery in 2019-20 was 2.6 days, down from 2.7 days in 2018-19.

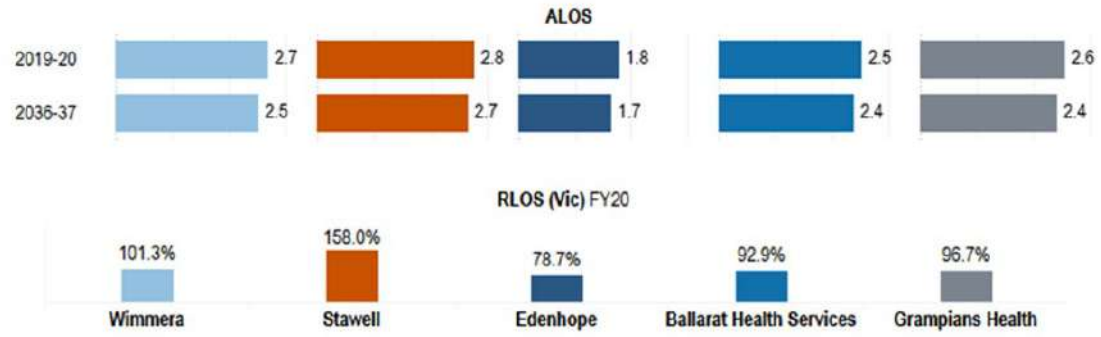
The RLOS for Grampians Health in FY20 was 96.7, which indicates that the ALOS is what might be expected compared to State average, casemix adjusted.

The RUR for neurosurgery was 2.90 in 2019-20, which means that the Grampians Health catchment population is accessing neurosurgery at 2.9 times the statewide rate, casemix adjusted. This extremely high rate is driven by two high volume DRGs relating to *'head injury with minor complexity'*.

The **market share** for Grampian's Health in 2019-20 was only 39.5%, which is expected given people go to metropolitan Melbourne hospitals for most neurosurgeries.

Surgery and Procedural Services - Neurosurgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	136	198	9.88%	260.2	1.61%
Wimmera Health Care Group	39	51	6.69%	65.2	1.51%
Stawell Regional Health	10	9	-2.06%	10.8	0.92%
Edenhope & District Hospital	<5	5	50.52%	3.9	-1.65%
Ballarat Health Services	86	133	11.60%	180.3	1.79%
Market Share - GH Primary Catchment	30.26%	40.49%		39.37%	



Regional self-sufficiency – Neurosurgery

- Current regional self-sufficiency: 39.5%, which is at expected levels
- Baseline projected regional self-sufficiency: 39.4%
- Proposed regional self-sufficiency: 40.0%

Baseline projected demand for neurosurgery separations at Grampians Health is expected to increase to 260 by 2036-37, a growth rate of 1.6% per annum on average, which maintains the current self-sufficiency.

11.12.2. Current and emerging issues and future directions

Neurosurgery involving craniotomy is unlikely to grow at Grampians Health and it is appropriate that people go to Melbourne hospitals to receive their care. It is also appropriate for some of the other neurosurgery procedures, such as those for head injuries, continue to be done at Grampians Health.

Proposed key developments

The goal should be for neurosurgery to be maintained at the current levels.

11.13. OPHTHALMOLOGY

Ophthalmology is a core service for regional and sub-regional health services.

11.13.1. Current Activity

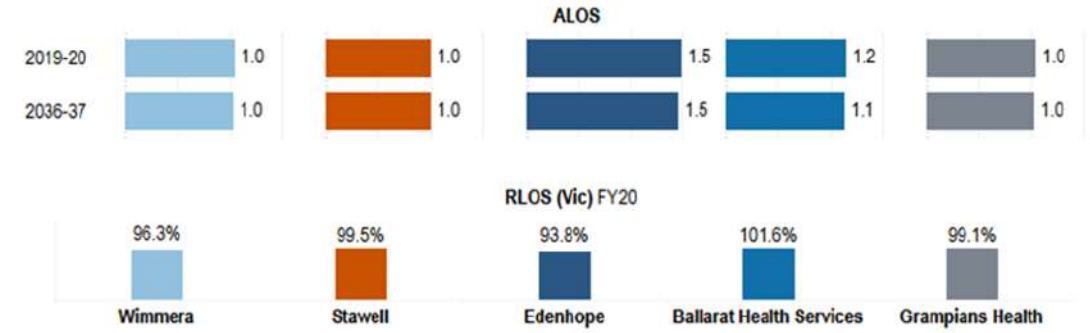
There were 1,184 ophthalmology separations at Grampians Health hospitals in 2019-20, up from 827 in 2015-16, a significant average annual increase of 9.39%. Almost all (87%) separations are cataract procedures in 2019-20.

Of the 1,184 separations performed in 2019-20, Ballarat campus had the lowest volume with 244 (21%), Horsham campus performed 319 (27%), and Stawell campus performed the majority being 620 (52%). Edenhope campus had fewer than five ophthalmology separations.

The **ALOS** for cataracts and other ophthalmology procedures was generally 1 day at each of the Grampians Health hospitals, as would be expected given they are day procedures. The non-procedural ALOS at Grampians Health in 2019-20 was 2.31 days, up from 1.93 days in 2018-19.

Surgery and Procedural Services - Ophthalmology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	827	1,184	9.39%	1,724	2.24%
Wimmera Health Care Group	176	319	15.99%	403	1.40%
Stawell Regional Health	298	620	20.09%	924	2.37%
Edenhope & District Hospital		<5		3	1.40%
Ballarat Health Services	353	244	-8.86%	395	2.88%
Market Share - GH Primary Catchment	42.85%	44.98%		43.53%	



The **RLOS** for Grampians Health in FY20 was 0.99, which indicates that the ALOS is what might be expected compared to State average, casemix adjusted.

The **market share** for Grampian's Health in 2019-20 was only 45%. This is lower than expected and ideally would be around 70%-80%. The cause of the lower-than-expected market share for Grampians Health is that other providers of ophthalmology in the catchment, being East Grampians (Ararat) and West Wimmera Health Service (Nhill), among others, undertake high volumes and account for 48% of the market.

Regional self-sufficiency – Ophthalmology

- Current regional self-sufficiency: 84.9%, which is at expected levels
- Baseline projected regional self-sufficiency: 86.2%
- Proposed regional self-sufficiency: 90%

The **RUR** for ophthalmology in 2019-20 was 0.94, which means that the Grampians Region population is accessing ophthalmology at lower rates (6% lower) the statewide rates. Given that the self-sufficiency for Grampians Region is reasonable at 85% but much lower at Grampians Health, there may be an opportunity to further develop additional ophthalmology by Grampians Health, especially given the relatively low RUR.

Baseline demand projections for ophthalmology separations at Grampians Health are expected to increase to 1,724 by 2036-37, a much slower growth rate of only 2% per annum on average. Most of the growth in separations is for cataracts, with 1,028 separations in 2019-20 increasing to 1,485 in 2036-37.

Stawell campus is driving most of the expected growth, building on its relatively high market share, with an additional 304 separations (56%) expected by 2036-37. Horsham campus is expecting an additional 84 (15.5%) and Ballarat campus an additional 151 (28%).

11.13.2. Current and emerging issues and future directions

- ***Admitted Patient Access.*** There is good access to ophthalmology surgery across the catchment and the broader region.

- ***Specialist Clinic Access.*** The mix of new and review presentations to ophthalmology clinics requires assessment. Public ophthalmology clinics at Grampians Health are only available at Ballarat and the sessions have a high proportion of review patients, specifically presentations for an injection for macular degeneration. These presentations prevent up to approximately 10 new patients a week accessing a clinic. This adds to the waiting list for clinics and affects the potential flow of patients to theatre. This may have a bearing on the low market share.

- Low access to public clinics is ameliorated to some extent by private clinics, some of which are bulk-billed, whilst others are not. This is a point of access inequity that needs consideration.

- ***Ophthalmology streaming.*** There is an opportunity to stream all ophthalmology from Horsham campus, and potentially some patients from Ballarat/Ararat to the Stawell campus.

  The intention would be to develop a *centre of excellence for ophthalmology at Stawell* campus, which would also increase access for other multi-day stay procedures in Horsham campus. Half of all ophthalmology separations for Grampians Health were performed at Stawell campus in 2019-20, which is a strong foundation to build upon. The potential transfer of the projected 15.5% of all Horsham campus' separations would mean Stawell campus would have 70% of Grampians Health's ophthalmology by 2036-37, excluding any transfers from Ballarat. The remaining 30% (or less) of ophthalmology performed at Ballarat campus would include some local demand together with higher risk procedures and more complex patients (ASA 3-4).[52]

  There are two potential strategies in relation to streaming:

  - A high-volume centre of excellence for ophthalmology at Stawell campus which would assist to increase Grampians Health's market share and RUR; and
  - A second high volume centre by growing Ararat, or a new theatre at Beaufort, or a dedicated day surgery complex at Ballarat campus that would include higher volumes of ophthalmology. The service model for the eastern end of the catchment would be determined by a detailed feasibility study that includes capital redevelopments.

- ***Waiting list management –*** It is proposed that a single ophthalmology waiting list be developed for Grampians Health, in line with the Framework for Surgical Models and the Elective Surgery Reform Project.

52. American Society of Anaesthesiologists' Physical Status Classification System is used to assess and communicate a patient's pre-anaesthesia medical co-morbidities. ASA 1 are healthy patients, ASA 2 are patients with mild systemic disease, ASA 3 are patients with severe systemic disease, ASA 4 patients have severe systemic disease which is a constant threat to life, and ASA 5 are moribund patients who are not expected to survive without the operation.

- ***Workforce.*** The Medical Specialist Workforce Ratios (AIHW, 2015) suggest that there should be 3.62 FTE ophthalmologists per 100,000 population, which equates to 9 FTE for Grampians catchment. There are 3.3 FTE ophthalmologists in the Grampians Region and only one visiting ophthalmologist servicing the broader Wimmera region.

  Increasing specialist capacity is an important strategy to better enable more local access to cataract surgery, to increase Grampians Health primary market share and the self-sufficiency of the Grampians Region.

  There are different strategies that can support enhanced access. The most cost effective might be the recruitment of a senior registrar (in an accredited position) that would support the surgical services at Ballarat campus and Stawell campus, as well as public clinics at Stawell. Support for other health services at East Grampians might also be possible and should be considered part of this model to an extent if they are undertaking lists.

  This model may also help attract future consultants, especially if the registrars have a known interest in rural and regional work and are from the Royal College of Surgeons 'Train for Rural' program.[53]

Proposed key developments

The key strategies for ophthalmology are to:

- Increase market share by consolidating ophthalmology through Stawell campus and Ballarat campus;
- The goal is for regional self-sufficiency driven by Grampians Health to 90% by 2036-37, from the current 85%;
- Utilise dedicated day surgery lists where possible to increase theatre throughput;
- Increase the number of new patients through clinics each week;
- Develop a single waiting list for Grampians Health; and
- Enhance capacity through the addition of a jointly funded registrar for the region.

11.14. ORTHOPAEDICS

Orthopaedics is a core service for regional and sub-regional health services.

11.14.1. Current activity, market share and projected demand

There were 2,922 orthopaedic separations performed by Grampians Health Hospitals in 2019-20, down from 3,405 in 2015-16, a percentage decrease per annum of 3.75% Most separations are other procedures with 1,076 separations (37%) in 2019-20.

Of the 2,922 separations performed in 2019-20, Ballarat performed the majority 1,887, or 65%, Horsham performed 588, or 20% and Stawell performed 437, or 15%.

The **ALOS** for orthopaedic procedures was 3.5 days in 2019-20, which has remained relatively consistent since 2014-15. The ALOS at the Horsham (4.1) and Edenhope (15.4) campuses are higher than the overall ALOS for Grampians Health for 2019-20. The ALOS for these campuses have been increasing since 2017-18.

53. Royal Australasian College of Surgeons, Train for Rural – Rural Health Equity Strategy, April 2021

The **RLOS** for Ballarat was 0.88 for 2019-20, which indicates that the ALOS is below what might be expected by 12%, casemix adjusted. Horsham campus had an RLOS of 1.23, which is 23% over the expected state average, casemix adjusted.

Regional self-sufficiency – Orthopaedics

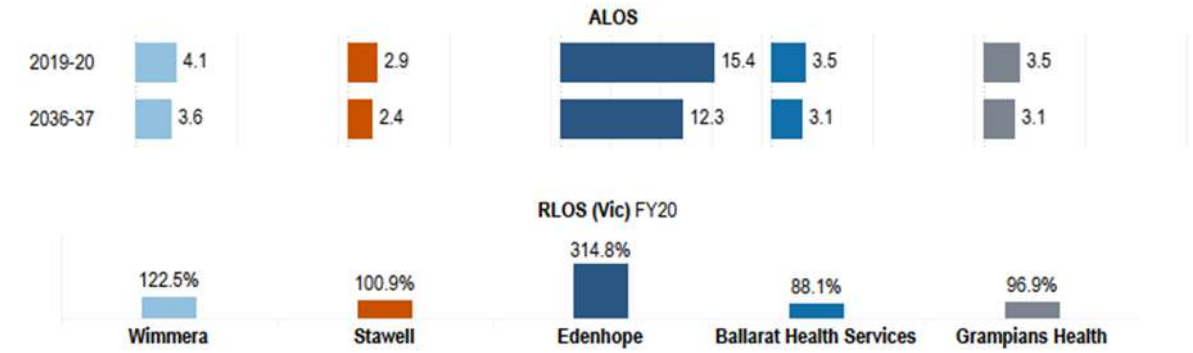
- Current regional self-sufficiency: 76.7%, which is below expected levels of 85%.
- Baseline projected regional self-sufficiency: 77.0%
- Proposed regional self-sufficiency: 90%

Grampian's Health total catchment **market share** in 2019-20 was 60%, the primary catchment market share was 72%. This is well below the expected acceptable market share of 85% for the primary catchment. Ideally the market share should be developed up to 90% consistent with the self-sufficiency. The remaining catchment separations were mainly performed at Specialist or other rural hospitals.

The **RUR** for orthopaedics in 2019-20 was 1.17. which means that the Grampians Region population is accessing orthopaedic services at a higher rate (17% higher) than the Statewide rates. Given that the self-sufficiency for Grampians Region is relatively low, it means that the catchment population is accessing services *out of region* at higher than expected levels.

Surgery and Procedural Services - Orthopaedics

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	3,405	2,922	-3.75%	3,508	1.08%
Wimmera Health Care Group	851	588	-8.81%	608	0.19%
Stawell Regional Health	352	437	5.59%	458	0.27%
Edenhope & District Hospital	25	9	-22.25%	10	0.31%
Ballarat Health Services	2,177	1,887	-3.51%	2,433	1.51%
Market Share - GH Primary Catchment	78.46%	72.09%		71.93%	



Baseline projected demand for orthopaedic separations at Grampians Health are expected to increase to 3,508 by 2036-37, an increase of 1% per annum from 2020-37. Most of the growth in separations is for hip and knee replacement, with 486 separations in 2019-20 increasing to 722 in 2036-37.

Ballarat is driving most of the growth, with an additional 546 separations expected by 2036-37. Limited growth is forecasted at the Horsham and Stawell campuses with an increase of 20 and 21 total separations projected respectively.

11.14.2. Current and emerging issues and future directions

- ***Access*** **–**The current market share and self-sufficiency for orthopaedic surgery indicates that there is a significant opportunity to grow capacity. Improved access will require review of theatre availability and the development of workforce capacity and capability. Improved theatre access is expected through the Elective Surgery Reform project.

- ***Medical Workforce Model*** **–** Medical workforce capacity and sustainability are limitations for orthopaedic surgery. According to the Medical Specialist Workforce Ratios (AIHW, 2015), there should be 11.33 FTE orthopaedic surgeons Grampians catchment, for both public and private work. The Grampians Health actual workforce data indicates that an FTE of 3.77, with the orthopaedic surgeons based at the Ballarat campus providing outreach to Horsham. There is currently no orthopaedic surgeon at the Horsham campus.

  A sustainable critical mass of orthopaedic surgeons at Horsham is likely to be between 2-3 FTE and 8-9 FTE in Ballarat, which could include outreach surgical services to support Ararat, Nhill and Maryborough. The adoption of a travelling orthopaedic surgical team from the Ballarat campus is proposed as a stop gap strategy to enable the delivery of safe surgery closer to home until position(s) are recruited to Horsham. The model would also need to be supported by satisfactory pre-and-post-surgery care management.

- ***Improved patient flow*** **–** Patient flow blockage was noted in the consultations. Improved patient flow for orthopaedic surgery requires agreed clinical pathways, protocols and strategies including criteria-led discharge and timely transfer of patients back to health services closer to home. Anecdotally there are limitations with respect to patient flow due to a number of factors, including a lack of nursing staff.

- ***Waiting list management*** **–** It is proposed that a single orthopaedics waiting list be developed for Grampians Health, in line with the Framework for Surgical Models and the Elective Surgery Reform Project.

- ***Diversion and substitution*** **–** The RUR data indicates that patients are accessing orthopaedic surgery at slightly higher rates, suggesting that there is scope to (further) develop community-based diversion and substitution programs that reduce admissions and introduction of an osteoarthritis hip and knee screening clinic (OAHKS). The OAHKS program delivered at the Ballarat campus could be clinically incorporated into the existing HIP program or Specialist Outpatient clinics with the right workforce skill mix. Anecdotally, there are a range of patients who would benefit from the expansion of community-based conservative care programs such as the 'Good Living with osteo-Arthritis' (GLA:D) education and exercise program that could either avoid/delay the need for surgery or reduce further deterioration whilst waiting for surgery.

Proposed key developments

The strategy for orthopaedic surgery is to grow the current service profile in the short-to medium-term and develop a regional service over the medium to longer-term that is sustainable, involving:

- Increasing regional self-sufficiency to 90% by 2036-37, from the current 77%;
- Medical workforce recruitment of additional orthopaedic surgeons. There should be a focus on recruitment of 2-3 surgeons for the Horsham campus;
- Implementation of a 'travelling orthopaedic surgical team' model in the short-term to meet demands in the catchment until there is adequate recruitment to the Horsham campus;
- Developing additional accredited registrar positions;

- Strengthening nursing capability and enabling efficient expansion of capacity through education and rotation of nurse graduates through the orthopaedic theatres and wards;
- Requirement of additional theatre capacity;
- Implementing clinical protocols to include criteria-led discharge; and
- Expanding and further developing community-based conservative care and prevention programs, such as OAHKS and GLA:D.

11.15. PLASTICS

11.15.1. Current activity, market share and projected demand

There were 763 plastic and reconstructive surgery separations performed by Grampians Health Hospitals in 2019-20, up from 700 in 2015-16, an average annual increase of 2.17%. There was an average 4.6% decrease per annum in separations at the Horsham campus. Most of the overall separations are skin, subcutaneous tissue and breast procedures with 518 separations (68%) in 2019-20.

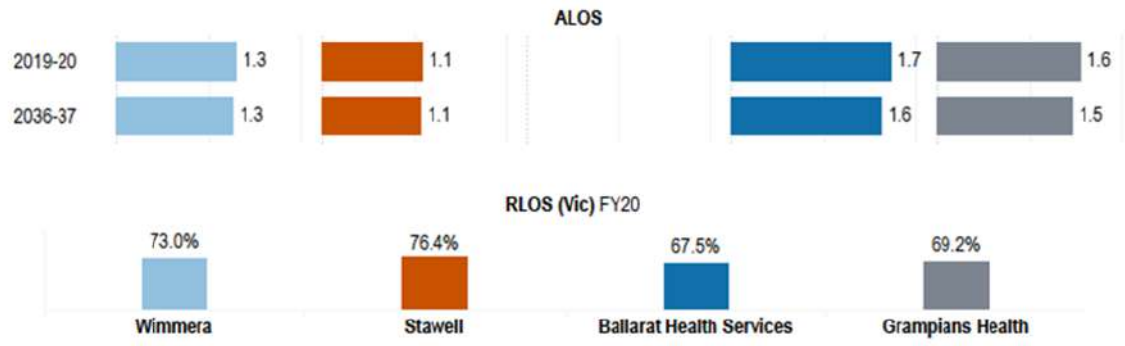
Of the 763 separations performed in 2019-20, Ballarat performed the majority being 477, or 63%, Horsham performed 250, or 33% and Stawell performed 35, or 4%.

The **ALOS** for plastics procedures at Grampians Health was 1.6 days, down from 2.1 in 2015-16. The reduction in ALOS is mostly attributable to decreases seen in Maxillo-Facial surgery and Microvascular tissue transfer or skin grafts bed days.

The **RLOS** was 0.70, which indicates that the ALOS is below what might be expected by 30%, casemix adjusted.

Surgery and Procedural Services - Plastic & Reconstructive Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	700	763	2.17%	938.2	1.23%
Wimmera Health Care Group	302	250	-4.58%	257.4	0.16%
Stawell Regional Health	30	35	3.88%	34.1	-0.13%
Edenhope & District Hospital	<5				
Ballarat Health Services	366	477	6.87%	646.7	1.80%
Market Share - GH Primary Catchment	68.16%	55.97%		55.56%	



Regional self-sufficiency – Plastic surgery

- Current regional self-sufficiency: 65.4%, which is within the expected range of 65% to 70%.

- Baseline projected regional self-sufficiency: 67.3%
- Proposed regional self-sufficiency: 75%

Grampian's Health primary catchment **market share** in 2019-20 was 56%, significantly lower than expected and ideally would push up to around 75%.

Baseline market projections for plastics and reconstructive surgery separations at Grampians Health are expected to marginally increase to 938 by 2036-37, a growth rate of only 1.2% per annum on average. Most of the growth in separations is for microvascular tissue transfer and skin grafts, with 166 separations in 2019-20 increasing to 274 in 2036-37.

As expected, the Ballarat campus is driving most of the growth, with an additional 170 separations expected by 2036-37.

The **RUR** for plastics and reconstructive surgery in 2019-20 was 1.43 indicating that the Grampians Region population is accessing these services at a higher rate (43% higher) than the Statewide rates. It may be due to minor peripheral procedures that may be undertaken in rural health services that would not be undertaken in metropolitan hospitals

11.15.2. Current and emerging issues and future directions

- ***Sustainable Medical Workforce*** **–** To meet the demands for plastics and reconstructive surgery in the catchment Grampians Health would need to strengthen the specialist medical workforce.

  Specialist plastic and reconstructive surgery would usually be confined to Ballarat, with general surgeons undertaking most of the less complex (grafts and flaps) plastic surgery at Ballarat and Horsham.

  The fragility of the specialist plastics and reconstructive surgery at Grampians Health is expected to be strengthened over time through recruitment, partnerships and/or rotational accredited training positions with Barwon Health. Other options in the short-term may include contracting specialist capability on a rotating basis from the Barwon South-West health services.

Proposed key developments

- The principal strategy for plastics and reconstructive surgery is to strengthen the specialist medical workforce to increase capacity and capability. This will rely on effective recruitment to Ballarat and/or regional partnerships; and
- Improve regional self-sufficiency to 75% by 2036-37, from the current 65%.

11.16. UROLOGY

Urology is a core specialty for any sub-regional health service.

11.16.1. Current activity, market share and projected demand

There were 1,284 urology separations performed by Grampians Health Hospitals in 2019-20, down slightly from 1,372 in 2015-16, an average annual decrease of -1.7%. Most separations are 'other urological procedures with 598 separations (46%) in 2019-20.

Of the 1,284 separations performed in 2019-20, Ballarat campus performed 1,062, or 83%, Horsham campus performed 201, or 16% and Stawell campus and Edenhope campus performed only 15 and 6 separations respectively.

The **ALOS** for urology separations was 1.81 days in 2019-20, which has been decreasing since 2017-18 when it was 2.08 days. The decrease in ALOS was driven by other urological procedures at Ballarat campus, consistent with volumes.

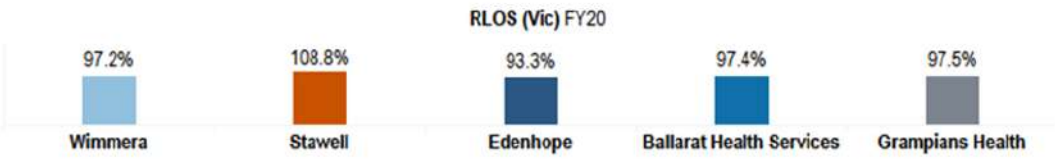
The **RLOS** for Ballarat campus was 0.97 in FY 20, which indicates that the ALOS is marginally below what might be expected by 3% compared to the State average, casemix adjusted. However, Stawell campus, which had only 15 separations in 2019-20 had an RLOS of 1.09%.

Regional self-sufficiency – Urological surgery

- Current regional self-sufficiency: 82.9%, which is within the expected range of 80% to 85%
- Baseline projected regional self-sufficiency: 84.5%
- Proposed regional self-sufficiency: 90%

Surgery and Procedural Services - Urology

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	1,372	1,284	-1.65%	1,741	1.81%
Wimmera Health Care Group	241	201	-4.47%	223	0.62%
Stawell Regional Health	51	15	-26.94%	18	1.28%
Edenhope & District Hospital	<5	6	58.22%	5	-0.84%
Ballarat Health Services	1,079	1,062	-0.39%	1,494	2.03%
Market Share - GH Primary Catchment	87.25%	81.92%		83.46%	



Grampian's Health **market share** in 2019-20 was 82%, which is appreciably higher than the expected range of 70-75%.

However, the **RUR** for urology in 2019-20 was 0.69, which is significantly below expected levels. It suggests that men in the Grampians Region are not accessing urology procedures at rates in other parts of the state. There is scope to increase awareness, education, and access to outpatient clinics.

Baseline projected demand for urology separations at Grampians Health are expected to increase to 1,741 by 2036-37, with a growth rate of 1.8% per annum on average. Most of the growth in separations is for 'other urological procedures', with 598 separations in 2019-20 increasing to 780 in 2036-37.

Ballarat campus is driving most of the growth, with an additional 432 separations expected by 2036-37, an average annual growth rate of 2%.

11.16.2. Current and emerging issues and future directions

- ***Specialist Workforce.*** Urology surgeons have been very difficult to recruit to Ballarat (and other Grampians Health campuses) over the past 5 years. According to the medical specialist workforce ratios, there should be 3.65 FTE for the Grampians Health catchment, to cover both public and private work. Currently, Ballarat has one staff specialist at half time (0.5 FTE) and two VMO's at 1.99 FTE. There is also a VMO at Horsham who is wanting to retire (who is part of Ballarat practice).

- ***Robotically assisted Surgery.*** Reportedly, one significant barrier to recruitment of recent younger specialist urologists is the lack of robotically assisted surgery, with recent and current trainees trained on robots in metropolitan Melbourne.

  There are three main issues with robots in surgery.[54] First, there is scepticism about the perceived benefits of robotically assisted surgery compared to traditional open surgery. Secondly, the cost is a serious factor for most public hospitals. Finally, there is no validated curriculum for credentialing proficiency in robotically assisted surgery.

  To date, the robots in Australia have cost approximately $4m, and up to $6 million. However, with three new brands entering the market soon, the cost is expected to fall by approximately a third. It is anticipated that the lower costs will enable more machines in the public system where surgical education and training (SET) occurs. Furthermore, the Australian Medical Robotics Academy has developed a fully validated approach to surgical training so that surgeons can learn more quickly and adapt by application of modern educational methods.

  Both public and private patients could potentially have robotically assisted surgery, with an arrangement with SJOG. This would mirror what has been done in some metropolitan health services.

  The future is expected to involve robotically assisted surgery in many more procedures and disciplines, including prostate cancer, gynae-oncology, kidney cancer, and general surgery with cholecystectomy, appendicectomy and hernia repair. Other disciplines to embrace robotically assisted surgery include gynaecology, colorectal, ENT, and cardiothoracic surgery.[55]

  Therefore, a future that includes a robot could be used on a regular basis by Ballarat campus and potentially SJOG in Ballarat.

- ***The capability of Horsham campus.*** Urology surgery is one clinical stream that should increase at Horsham based on demand and clinical capability frameworks. Increasing urology surgery will require some planning for new equipment, upskilling nursing staff for urological patients, and more access to theatres. Currently, Ballarat receives many transfers from Horsham for urology, particularly after-hours. It would be preferable for the lower acuity urology to continue to grow at Horsham campus, if these barriers can be overcome.

54. Royal Australasian College of Surgeons, Surgical News, *The state of robotic surgery*, Volume 22, Issue 3, pages 28-29. Accessed 30 April 2022 https://www.surgeons.org/-/media/Project/RACS/surgeons-org/files/surgical-news/MayJune_2021_SurgicalNews_web_updated.pdf?rev=d3994d64c3b14c9a937a5c7e6a45a2f5
55. Royal Australasian College of Surgeons, Surgical News, *The state of robotic surgery*, Volume 22, Issue 3, pages 28-29. Accessed 30 April 2022 https://www.surgeons.org/-/media/Project/RACS/surgeons-org/files/surgical-news/MayJune_2021_SurgicalNews_web_updated.pdf?rev=d3994d64c3b14c9a937a5c7e6a45a2f5

Proposed key developments

For urology, it is proposed to:

- Support increase in regional self-sufficiency to 90% by 2036-37, from the current 83%;
- Conduct a review that assesses the feasibility of a robot, inclusive of all the other specialities which can utilise robot assisted surgery in addition to urology. This feasibility may or may not include SJOG. A robot is considered important to urology for future consultant recruitment; and
- Build capability for urology at Horsham, the nursing staff could rotate to Ballarat periodically, which would provide them with exposure to urology at Ballarat with supervision and training. Simultaneously, nurses from Ballarat could rotate to Horsham during the same periods, to provide back fill for the Horsham staff and enhance the capability of Horsham. This type of model would also help to build understanding between the campuses.

11.17. VASCULAR

Vascular surgery is a small clinical discipline in Grampians Health. Vascular surgery is shared by part-time vascular surgeons at Ballarat and general surgeons at all campuses.

There were 381 vascular separations performed at Grampians Health in 2019-20, increasing from 338 in 2015-16. This is an average annual increase of 3.07%.

Most separations from 2015-16 to 2019-20 were 'Other vascular procedures' with 162 separations in 2019-20, closely followed by 'non-procedural vascular surgery including skin ulcers', with 155 separations in 2019-20.

Of the 381 separations performed in 2019-20, Ballarat campus performed 342, or 90%, Horsham campus performed 37, or 9.7%, and Stawell performed less than 5 separations.

The **ALOS** in 2019-20 was 6.0 days at Grampians Health and is projected to decrease to 5.3 days in 2036-37. The **RLOS** in 2019-20 was 3.1% lower than the Statewide average, casemix adjusted. This indicates that the acuity/complexity of vascular surgery may be lower within the same DRGs.

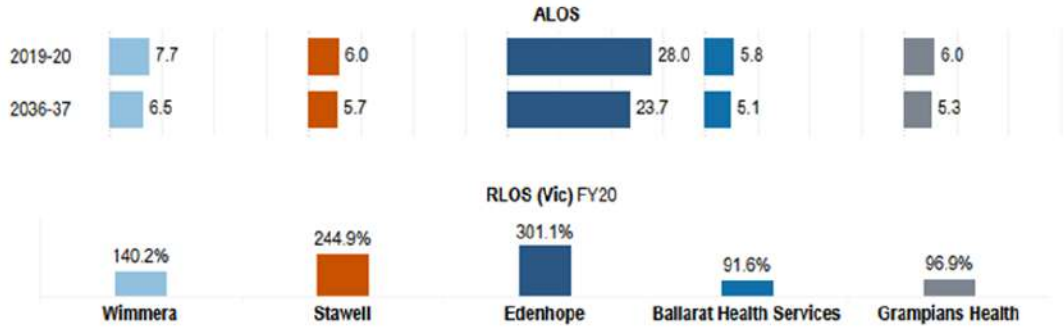
Regional self-sufficiency – Vascular surgery

- Current regional self-sufficiency: 75.9%, which is within the expected range of 70% to 80%.
- Baseline projected regional self-sufficiency: 77.7%.
- Proposed regional self-sufficiency: 85%.

The **RUR** for vascular in 2019-20 was 1.05, or 5% higher than the statewide utilisation rate.

Surgery and Procedural Services - Vascular Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	338	381	3.07%	467.1	1.20%
Wimmera Health Care Group	49	37	-6.91%	33.6	-0.53%
Stawell Regional Health	19	<5	-43.04%	1.6	-1.46%
Edenhope & District Hospital	<5	<5	0.00%	0.8	-1.66%
Ballarat Health Services	269	342	6.16%	431.1	1.38%
Market Share - GH Primary Catchment	68.67%	67.60%		72.65%	



Grampians Health **market share** was 67.6% in 2019-20, which is lower than the expected range. The metropolitan hospitals, including specialist, accounted for 18% of market share, which would account for patients requiring more complex surgery. The market share for Grampians Health is expected to increase to 72.65% in 2036-37.

Baseline projected demand for vascular separations at Grampians Health are expected to increase from 381 in 2019-20 to 467 in 2036-37, an increase of 86 separations per annum, which is very modest growth. Most of the growth is expected at Ballarat, consistent with the breakdown of current separations by Grampians Health sites. Ballarat separations are projected to increase from 342 to 431 per annum by 2036-37.

11.17.1. Current and emerging issues and future directions

Specialist Workforce. Currently, the vascular service at the Ballarat campus is part of the General Surgery 3 Unit, along with plastics. The workforce to service vascular is currently a challenge, with an expectation that the specialty can build on the base of the existing part-time vascular surgeons to support additional recruitment of specialists and registrars.

Proposed key developments

It is proposed that:

- The vascular specialist workforce be progressively developed opportunistically to ensure succession planning and consultation support to the western campuses of Grampians Health for vascular surgery as required; and
- Vascular surgery self-sufficiency be increased to 85%, from the current base of 76% by 2036-37.

11.18. OTHER SURGICAL SPECIALTIES

There are smaller surgical services at Grampians Health which are unlikely to be developed into the future. These include Extensive Burns and Head and Neck Surgery.

11.18.1. Extensive Burns

There were only 6 separations for extensive burns in 2019-20 at Grampians Health, which is at the expected level given that Alfred Health runs the Statewide service for burns.

Extensive Burns

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	<5	6	19.25%	8.072	1.69%
Wimmera Health Care Group	<5	<5	0.00%	0.706	-2.02%
Stawell Regional Health	<5				
Ballarat Health Services	<5	5	50.03%	7.365	2.22%
Market Share - GH Primary Catchment	21.43%	25.00%		30.32%	

The **ALOS** for extensive burns was 5.5 days in 2019-20. There is no relative stay indicator available for extensive burns.

The **self-sufficiency** for Grampians Health primary catchment in 2019-20 was 29.4%, which is entirely consistent with expectations.

The Grampians Health's **market share** in 2019-20 was 22%, with Melbourne specialist hospitals accounting for 56% of market share.

Baseline projected demand separations for Extensive Burns are projected to increase to 8 by 2036-37.

Current and emerging issues and future directions

Grampians Health is providing an appropriate service for Extensive Burns.

Proposed key developments

There are no proposed developments for Extensive Burns.

11.18.2. Head and Neck

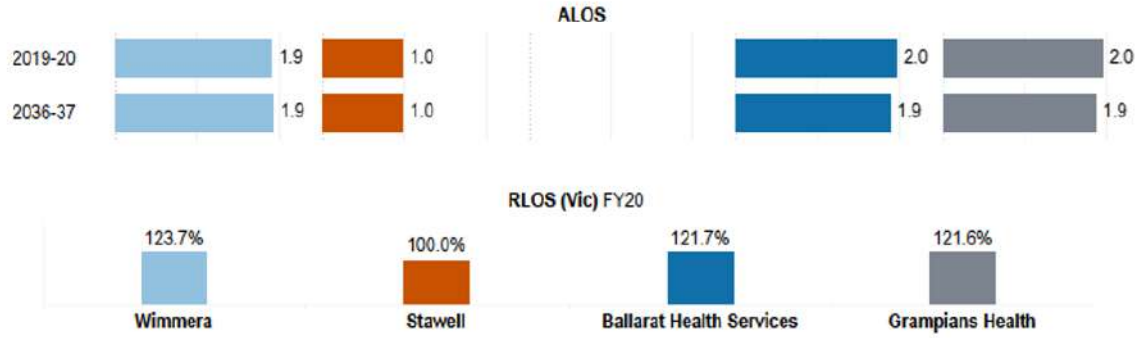
There were 169 head and neck separations in 2019-20 at Grampians Health. Most separations were for 'other head and neck surgery' with 107 separations.

The **ALOS** for Head & Neck was 2 days in 2019-20. The **RLOS** was 121.6 for Grampians Health in FY2020. This indicates that Grampians Health LOS is 21.6% higher than the Statewide average, casemix adjusted.

The **self-sufficiency** for Grampians Health primary catchment in 2019-20 was 71.1%, which is consistent with expectations.

Surgery and Procedural Services - Head & Neck Surgery

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	159	169	1.57%	205.8	1.16%
Wimmera Health Care Group	11	12	3.04%	11.0	-0.72%
Stawell Regional Health	<5	<5	11.28%	2.5	-1.22%
Edenhope & District Hospital					
Ballarat Health Services	146	154	1.30%	192.3	1.33%
Market Share - GH Primary Catchment	80.15%	69.14%		69.35%	



Baseline projected demand separations are projected to increase to 206 separations by 2036-37, a growth rate of 1.16% per annum on average.

Current and emerging issues and future directions

Grampians Health is providing an appropriate service for Head and Neck.

Proposed key developments

There are no proposed developments for Head and Neck.

11.19. ANAESTHETICS

Anaesthetic staff are involved in every stage of a surgical patient's journey, encompassing pre-anaesthetic assessment, intra-operative anaesthesia, and post-operative anaesthetic support, including (acute) pain management.

11.19.1. Current and emerging issues and future directions

There are several operational issues that relate to anaesthetics. However, the CSP has focused on the two more strategic and foundational issues.

Integration. As with other specialties, there are clear benefits in developing a single anaesthetics department across Grampians Health. This is an integration process that has many advantages including consistent clinical practices, guidelines for the utilisation of GP anaesthetists (GPAs), rotations between campuses, integrated Mortality and Morbidity (M&M) and departmental meetings and supervising and credentialling of registrars and GPAs.

The anaesthetics capability of Horsham and Stawell campuses. The capability of Horsham campus was raised in several of the surgical and procedural consultations, including by the anaesthetists at the Ballarat campus. The anaesthetic capability is limiting more complex surgery to clinical capability levels 3-4.

A central proposition is that for Horsham to develop as a surgery hub, and enhance clinical capability of the ICU, it is necessary to support the local anaesthetic capability. Telehealth links back to Ballarat are already established. (Refer to ICU Section 11.20).

Enhanced capability at Horsham would be able to also support the surgical program at Stawell and support Stawell based GPAs. As a spoke service, Stawell campus should be focusing on day stay patients, with strict criteria on a patient's ASA score (1-2 only), co-morbidities, age, and body mass index (BMI). Clinical pathways will need to be updated for tonsils, laparoscopic cholecystectomies, cystoscopies, and hernia, for example, and these are being addressed through the Elective Surgery Reform Project. Criteria-led Discharge should be introduced. Streaming the day stay cases to Stawell campus will help to prevent the bed-block currently occurring at Horsham campus.

Once a core surgical and ICU profile is determined for Horsham and Stawell, the anaesthetic workforce can then be planned, including registrar support.

Proposed key developments

The integration of anaesthetics across Grampians Health will enhance the capability and capacity of the service and improve quality and safety.

A sustainable anaesthetics service model that supports a surgery hub and ICU is required for Horsham. This will invariably involve the recruitment and/or rotation of anaesthetists to Horsham from Ballarat.

11.20. INTENSIVE CARE

By way of context, it is useful to differentiate between intensive care, coronary care and high dependency.

Intensive care unit – An ICU is a specially staffed and equipped, separate and self-contained area within a hospital for the management of patients with life-threatening or potentially life-threatening, and reversible or potentially reversible organ failure. The ICU provides resources for the support of patients and their families, and utilises the specialised skills of medical, nursing, and other staff experienced in the management of critically ill patients. These skills and resources, necessary to care for the critically ill, are most efficiently concentrated in one area of the hospital.[56]

High Dependency unit – an HDU is a specially staffed and equipped unit or area of an ICU that provides a level of intermediate care between intensive care and general inpatient care. In practice, beds are usually integrated within an ICU rather than provided as a separate unit so that specialty skills are maintained, and patient transfers are reduced.[57]

Coronary care unit – A CCU is a specialised area of a healthcare facility providing intensive care for emergency and acute cardiac illness at a high level of expertise. These units have advanced monitoring and diagnostic equipment and access to a specialist cardiac team with critical care training. Staffing levels are typically more intensive than other inpatient settings.[58]

56. Australasian Health Facility Guidelines, Part B - Health Facility Briefing and Planning 0360 - Intensive Care – General
57. Australasian Health Facility Guidelines, Part B - Health Facility Briefing and Planning 0360 - Intensive Care – General
58. Australasian Health Facility Guidelines, Part B - Health Facility Briefing and Planning HPU 260 - Cardiac Care Unit

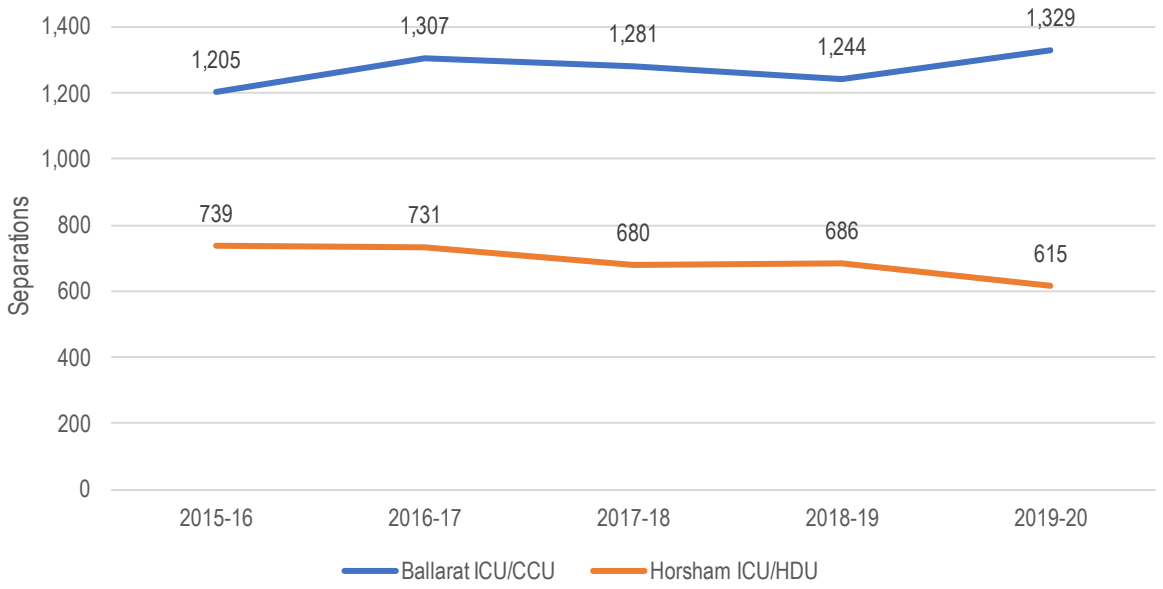
Intensive care services at Grampians Health are provided at two campuses, Ballarat and Horsham. Although both campuses operate a combined adult ICU/CCU service, the level of intensive care service[59] provided is higher at Ballarat:

- Ballarat campus has 13 operational beds (and staffed as seven ICU equivalents), and is designated as a level 2 combined Adult ICU/CCU service; and
- Horsham campus is staffed as 5 ICU equivalents and is designated as a level 1 combined Adult ICU/HDU service. The medical workforce for Horsham's intensive care service comprises general medicine physicians, general surgeons and paediatricians. This limits the level of acuity of the service which approximates operating at HDU capability.

11.20.1. Service demand

Service demand for ICU/HDU/CCU is shown below, indicating 2.5% per annum growth at Ballarat and a reduction in demand of -4.5% per annum at Horsham.

Figure 11-1: Trends in ICU/HDU/CCU episodes, 2015-16 to 2019-20



As shown in Table 11-5, growth in intensive care demand at Ballarat is strongest, at 3.3% per annum compared to 1.2% per annum for coronary care episodes.

The demand for ICU/HDU and CCU has been predominantly driven by emergency patient admissions. At Ballarat, in 2019-20, emergency admissions accounted for 91.4% of CCU episodes and 81.9% of ICU episodes. The proportion of emergency admissions has been stable for ICU over the last five years but for CCU has increased from 86.9% in 2015-16.

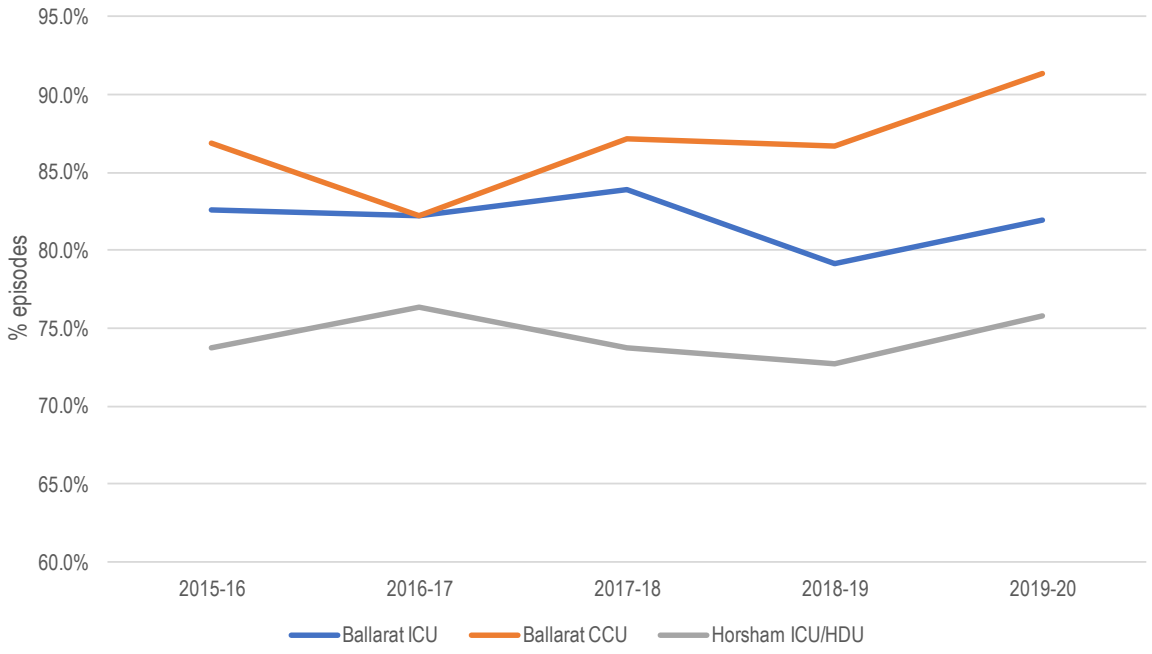
59. Victorian Department of Health, 2009, Victoria's intensive care services - Future directions.

Table 11-5: Demand by ICU/HDU/CCU episodes, 2015-16 to 2019-20

		2015-16	2016-17	2017-18	2018-19	2019-20	Change from 2015-16 to 2019-20
Ballarat	ICU/HDU	739	823	798	823	840	3.3%
	CCU	466	484	483	421	489	1.2%
	Sub-total	*1,205*	*1,307*	*1,281*	*1,244*	*1,329*	*2.5%*
Horsham	ICU/HDU	739	731	680	686	615	-4.5%
	Sub-total	*739*	*731*	*680*	*686*	*615*	*-4.5%*
Total		**1,944**	**2,038**	**1,961**	**1,930**	**1,944**	**0.0%**

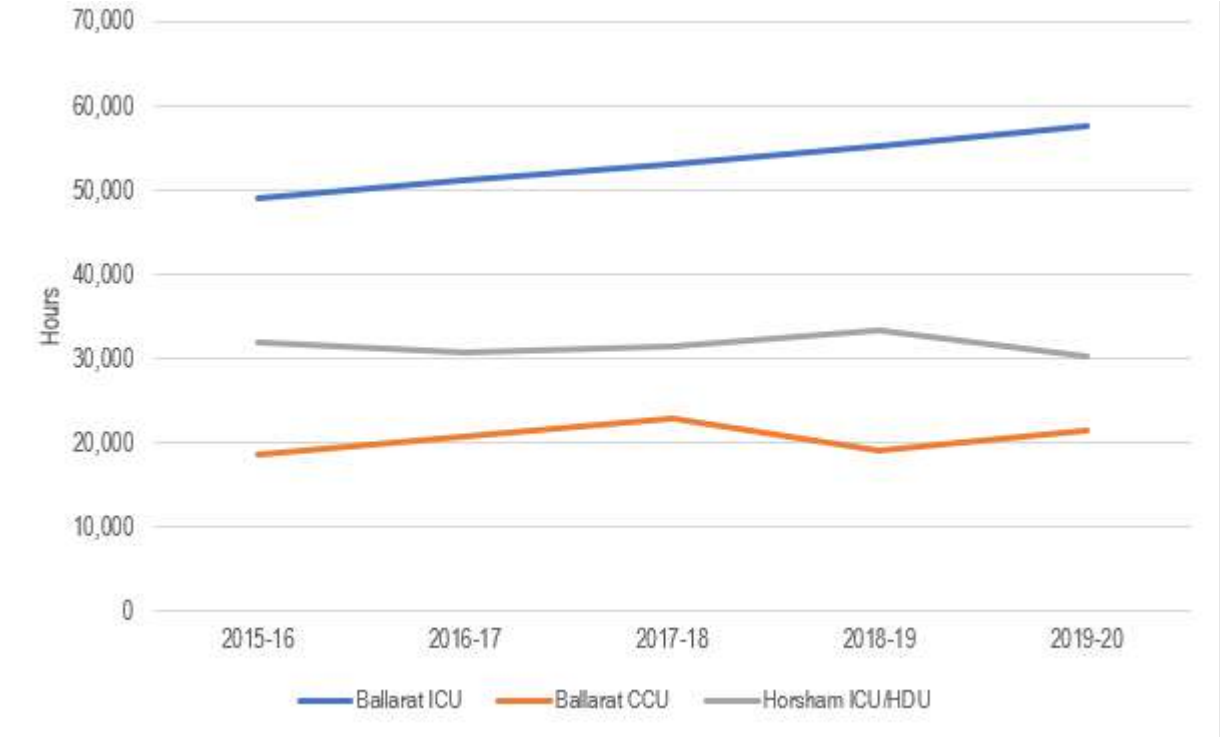
At Horsham, emergency admissions are also the majority (75.8%) of ICU/HDU episodes. However, a high proportion of the Horsham ICU hours were for "non-complex" conditions. This indicates that the ICU is being used for higher levels of monitoring rather than for patients requiring an ICU.

Figure 11-2: Trend in emergency ICU/HDU/CCU admissions, 2015-16 to 2019-20



Over the last five years, the hours have been entirely consistent with episodes. At Ballarat there has been very strong demand for ICU hours (4.0% per annum growth) and CCU hours has been lower at 3.5% per annum. At Horsham, demand for ICU/HDU hours has declined at 1.3% per annum.

Figure 11-3: Trend in ICU/HDU/CCU hours, 2015-16 to 2019-20



Projected change in ICU and CCU demand between 2019-20 to 2036-37 is summarised below. Steady growth of 1.3% per annum is projected for ICU hours at Ballarat and slightly lower growth of 0.9% per annum for CCU hours at Ballarat.

Low growth of 0.4% per annum is projected for Horsham.

Table 11-6: Projected demand for ICU/HDU and CCU hours, 2019-20 to 2036-37

Campus	Type	ICU/CCU Hrs				
		2019-20	2026-27	2031-32	2036-37	Change % per annum
Ballarat	ICU	57,565	63,078	67,341	71,198	1.3%
Ballarat	CCU	21,486	22,769	23,775	24,812	0.9%
Sub-total	Sub-total	79,051	85,847	91,116	96,010	1.1%
Horsham (Adjusted)	ICU/HDU	24,344	25,014	26,076	26,751	0.6%
Sub-total	**Sub-total**	24,344	25,014	26,076	26,751	0.6%
Total	**Total**	**103,395**	**110,861**	**117,192**	**122,761**	**1.0%**

The expected increase in ICU and CCU capacity[60] using baseline projections between 2019-20 and 2036-37 is summarised in Table 11-7 below.

- At Ballarat:
  - Demand for ICU equivalent bed capacity is expected to increase from 8.8 beds to 10.8 beds. (Note that the current ICU equivalent is 7 beds). This effectively provides 11 ICU equivalent beds, *plus* provision for HDU of four beds, totalling 15 beds in 2036-37 based on enhanced self-sufficiency scenario modelling; and
  - Demand for CCU bed capacity is expected to increase from 3.3 beds to 5.8 beds.
- At Horsham, bed capacity is based on a *revision* of the projected demand. Specifically, the revised demand for ICU/HDU is a combination of:
  - Increased surgical activity and increased ED activity at Horsham; offset by
  - Historical utilisation of the ICU/HDU for patients that would not ordinarily be admitted to an ICU. There were approximately 31% to 33% separations across each of the four years with 'non-complex' conditions, which means that they would be unlikely to *require* ICU/HDU capability.

  Overall, projected demand at Horsham is expected to increase beds from 3.7 to 4.1 beds (which is more than Horsham's 5 operational ICU beds). In short, Horsham does not need to increase ICU beds to meet expected increased ICU demand.

Table 11-7: Projected demand for ICU and CCU beds, 2019-20 to 2036-37

Campus	Type	ICU/CCU Beds				
		2019-20	2026-27	2031-32	2036-37	Change % per annum
Ballarat	ICU	8.76	9.60	10.25	10.84	1.3%
Ballarat	CCU	3.27	3.47	3.62	3.78	0.9%
Sub-total	Sub-total	12.03	13.07	13.87	14.61	1.1%
Horsham	ICU/HDU	3.71	3.81	3.97	4.07	0.5%
Sub-total	**Sub-total**	3.71	3.81	3.97	4.07	0.5%
Total	**Total**	**15.74**	**16.88**	**17.84**	**18.68**	**1.0%**

11.20.2. Current and emerging issues and future directions

The Ballarat clinicians of all specialties have focused on two elements; the paucity of beds and need to separate ICU/HDU from the CCU. The specific identified issues include:

- At Horsham, there are substantial medical and nursing workforce challenges in provision of its ICU/HDU service. The hospital lacks sufficient specialist medical and nursing workforce to support more complex patient care at level 1 ICU/HDU capability. As a consequence, more complex patients are required to be transferred to either Ballarat, Geelong or metropolitan ICUs.

60. ICU and CCU bed capacity is modelled with a benchmark of one ICU bed per 6,570 hours.

- At Ballarat, there are a range of emerging challenges:
  - Strong demand for ICU/CCU services – driven by a combination of factors including catchment population growth and population ageing; the increased complexity of Ballarat surgical, neurology and cardiac care service levels that are provided – has had a flow-on impact on high demand for ICU/CCU services. The capacity of the ICU remains at 7 ICU equivalents (in the 13 physical beds)
  - Readmission rates to ICU are relatively high compared with peer units – this is driven by the bed pressures on ICU, with patients discharged to wards to maintain ICU bed access for new patients and then some patients needing to be re-admitted to ICU from the ward.
  - The combined ICU/CCU service model means that there is a need for the nursing workforce to have dual certificates in critical care and coronary care. This creates an additional complexity in recruitment and retention, leading to substantial pressure on filling rosters with experienced nursing staff. There are also reported to be significant cultural differences between the service types.
  - The cancellation of elective lists due to inadequate HDU beds, although this happens less frequently over recent times due to a change in policy that requires an ICU bed available before surgery commences and the post-surgery "scramble" to accommodate the patient. This is also a contributor to high re-admission rates.
  - Ensuring adequate future-proofing for paediatric HDU. This includes managing and stabilising critically unwell children from an anaesthetic/ICU perspective at Ballarat, given bed pressures in Melbourne at the Royal Children's Hospital and the Monash Paediatric ICU.

Proposed key developments

It is proposed that:

- The Ballarat ICU would operate as a level 3 clinical capability, and Horsham ICU would continue to operate as a level 1.
- Demand analysis for Ballarat indicates the need for 11 ICU bed equivalents, plus four HDU beds (totalling 15 beds). The analysis makes no provision for flex bed capacity. The projected demand for a coronary care unit is up to six beds. These estimates are to 2036-37 but are virtually the same for 2031-32. The demand estimates have implications for the current combined ICU-CCU facility, given the clinician consultations. The key considerations are *demonstrating* that a:
  - 15 bed ICU/HDU facility can operate with acceptable efficiency; and
  - Six bed CCU could be operationally integrated as part of a cardiology ward (along with other lower acuity telemetry beds).

  On this basis, splitting the current ICU/HDU can be made to work.

  It is expected that some of the identified issues that weaken a joint model, such as a more specialised workforce of nurses, clinical culture, and staff recruitment and retention challenges, would strengthen both models of care.
- At Horsham, build the specialisation to operate effectively as a level 1 ICU that can support an enhanced surgical program, and manage more acute medical patients.

  The demand estimates, even with an expanded surgical program, indicate that the four bed capacity will continue to be suitable. The Unit would necessarily be planned to be embedded within a medical ward for operational efficiency.

Although there may not be a need for increased capacity, there is certainly a need for increased clinical capability. There would be increased access to medical and nursing specialists with relevant critical care experience which in addition to general physicians could include intensive care medicine, anaesthetics or emergency medicine, nurses with training in advanced life support and allied health (dietician, occupational therapist, pharmacist, social worker and speech pathologist) to enable more complex patients to be managed locally. This workforce challenge at Horsham's ICU/HDU could be undertaken through:

- Networked arrangements, including telehealth support (and virtual clinical management), joint credentialling, with Ballarat's ICU and CCU; and/or
- Supplement existing, and essentially self-sufficient staffing of Horsham from Ballarat.

- In the medium to longer-term, intensive care is proposed to operate as a single unit between Ballarat and Horsham, including the potential for joint appointments, which means that the Ballarat ICU and CCU medical and nursing specialists would be clinically networked to support the Horsham ICU. There would also be opportunities for rotation of staff between the two sites.

- Paediatric HDU - As part of future capability enhancements at Ballarat in the medium-term, strengthen provision for paediatric HDU, with networked links to the Royal Children's Hospital and the Monash Paediatric ICU. This means future proofing capital redevelopments to provide for a 18 bed facility that would have three purpose designed paediatric beds.

- ICU interface with Women's and Children's services - ICU would interface with Women and Children's services - this includes ensuring ICU has capacity for paediatric medical/ nursing workforce expertise.

11.21. PERIOPERATIVE SERVICES

Peri-operative services are pre-operative, inter-operative and immediately post-operative care for surgical patients.

11.21.1. Current and emerging issues and future directions

Optimisation of surgical patients. Consultations stressed the need to ensure patients are as well as possible prior to any procedure, to minimise day of surgery cancellations, post-surgery complications and reduce length of stay. There are several models available that address these issues; Perioperative Medicine Model of Care[61],[62] ERAS and the Victorian Perioperative Consultative Council's *Improving perioperative care before, during and after surgery*, produced by Safer Care Victoria.[63]

The perioperative medicine care model[64] has been implemented in most metropolitan health services. The goal of perioperative medicine is to improve the patient experience, reduce postoperative complications, reduce inpatient hospital days, and reduce early re-admissions following surgery. It encompasses an integrated, planned, and person-centred approach to patient care before, during and after any surgical procedure involving anaesthesia. The greatest benefit of a perioperative care model is for the elderly, the young and those with underlying health conditions.

61. Australia and New Zealand College of Anaesthetists, *An integrated, planned, and personalised approach to patient care – Perioperative Medicine,* available: https://www.anzca.edu.au/education-training/perioperative-medicine-qualification, updated 9.2.2022.
62. Queensland Health, Statewide General Medicine Clinical Network - Guide for Perioperative General Medicine Services
63. Safer Care Victoria, Victorian Perioperative Consultative Council, *Improving perioperative care before, during and after surgery,* Annual Report 2020.
64. Queensland Health, Statewide General Medicine Clinical Network - Guide for Perioperative General Medicine Services

Perioperative medicine typically has a medical lead (usually an anaesthetist or physician), other treating doctors, nurses and allied health who are involved in the patient's care. The team would work with the surgical team, the family, and carers and potentially the primary care team to ensure that the care for patients is optimised in the pre-operative, operative and post-operative phases.

The Elective Surgery Reform Project includes a pilot for the purchase, training, and implementation of ERAS for colorectal surgery. If the pilot is successful, there are at least twenty other ERAS guidelines for specialities or procedures that may be purchased and implemented.

ERAS programmes have been used successfully for over a decade to reduce length of stay and rates of complications in colorectal surgery. Such programs feature multiple interventions incorporated into all 3 phases of surgery – pre-operative, intra-operative and post-operative, with the overall aim of maintaining physiological function and reducing surgery-induced stress.

Medical co-management (such as through a perioperative medicine care model) of surgical patients has the potential to augment the effectiveness of such programmes, and recent guidelines stress the importance of a multidisciplinary team approach, including primary care and allied professionals – dietetics, exercise physiologists and psychologists, before patients are admitted for surgery and after discharge to ensure the successful implementation of an ERAS approach.[65]

The Victorian Perioperative Consultative Council's (VPCC) Improving perioperative care before, during and after surgery, produced by Safer Care Victoria, would augment both above approaches.[66]

The VPCC oversees, reviews, and monitors perioperative care in Victoria to improve outcomes for patients before, during and after surgery. It was established in 2019 after a review of two previous councils – the Victorian Consultative Council of Anaesthetic Mortality and Morbidity and the Victorian Surgical Consultative Council.

The premise of the VPCC's model is that consumers are vital to improving patient care and involving patients in shared decision making throughout their care improves outcomes. This requires the patients, family, carers, decision makers or other members of the patient's community who are chosen by the patient to be part of the team.

Theatre efficiency. Aspex has completed a comprehensive analysis of the theatres at Ballarat, Horsham, and Stawell campuses. The result of this analysis is provided as a *stand-alone document* that accompanies this CSP. The analysis indicates that there is room for further efficiencies in theatre at all campuses, as well as under-utilised capacity, particularly at Horsham. This aligns with the Elective Surgery Reform Project to *review theatre management processes* to create opportunities to improve the timeliness of patient access to surgical procedures.

Theatre capacity. Over the next 5 to 15 years, the projected demand for theatres will require additional capability, particularly at:

- Ballarat from 6 general theatres to 8 theatres, with two day-procedure rooms and 2 endoscopy suites (which has received capital redevelopment endorsement); and
- An additional operating theatre or endoscopy room at Stawell to achieve the service developments proposed in this CSP.

65. Queensland Health, Statewide General Medicine Clinical Network - Guide for Perioperative General Medicine Services
66. Safer Care Victoria, Victorian Perioperative Consultative Council, *Improving perioperative care before, during and after surgery,* Annual Report 2020.

Clinical streaming. Aspex has nominated specialties which would work well with campus streaming. These include all lower complexity ENT to be undertaken at Horsham, with the remainder at Ballarat, low complexity Ophthalmology to be undertaken at Stawell, with the remainder at Ballarat, and for gynaecology surgery to be streamed to each of the campuses, stratified by complexity. Again, this aligns with the Elective Surgery Reform project, in the objectives to ensure the *right care, right place, right time* and to *streamline access according to patient need and location*.

Proposed key developments

Many of the themes and suggestions made in this CSP have subsequently been found to align with the GRHSP Elective Surgery Reform Project. These include patient optimisation, theatre efficiency and clinical streaming. These synergies provide reinforcement that the objectives in the Elective Surgery Reform Project are sound options and will make considerable differences to the efficiency of perioperative services and patient flows.

It is proposed that theatres at Ballarat will need to increase from six general theatres and two procedure rooms (eight in total) to eight general theatres, two-day procedure rooms and two endoscopy suites (12 in total), and an additional theatre/endoscopy suite at Stawell. For a detailed breakdown of the future points of care refer to section 21.

12. Women's and Children's Services

Women's and Children's services include three clinical streams, namely:

- Maternity (Obstetrics);
- Neonatal care; and
- Paediatric services.

12.1. MATERNITY SERVICES

The strategic direction for Australian maternity services[67] aims to ensure equitable, safe, woman-centred, informed and evidence-based maternity care. Its focus is on women[68] being the decision-makers in their care and tailored to reflect their individual needs. There are now standard descriptors of maternity service models as outlined below.

Table 12-1: Models of maternity care

Model	Description
Private obstetrician (specialist) care	Antenatal care provided by a private specialist obstetrician. Intrapartum care is provided in either a private or public hospital by the private specialist obstetrician and hospital midwives in collaboration. Postnatal care is usually provided in the hospital by the private specialist obstetrician and hospital midwives and may continue in the home, hotel or hostel.
Private midwifery care	Antenatal, intrapartum and postnatal care is provided by a private midwife or group of midwives in collaboration with doctors in the event of identified risk factors. Antenatal, intrapartum and postnatal care could be provided in a range of locations including the home.
GP obstetrician care	Antenatal care provided by a GP obstetrician. Intrapartum care is provided in either a private or public hospital by the GP obstetrician and hospital midwives in collaboration. Postnatal care is usually provided in the hospital by the GP obstetrician and hospital midwives and may continue in the home or community.
Shared care	Antenatal care is provided by a community maternity service provider (doctor and/or midwife) in collaboration with hospital medical and/or midwifery staff under an established agreement and can occur both in the community and in hospital outpatient clinics. Intrapartum and early postnatal care usually takes place in the hospital, by hospital midwives and doctors, often in conjunction with the community doctor or midwife (particularly in rural settings).
Combined care	Antenatal care provided by a private maternity service provider (doctor and/or midwife) in the community. Intrapartum and early postnatal care provided in the public hospital by hospital midwives and doctors. Postnatal care may continue in the home or community by hospital midwives.
Public hospital maternity care	Antenatal care is provided in hospital outpatient clinics (either onsite or outreach) by midwives and/or doctors. Care could also be provided by a multidisciplinary team. Intrapartum and postnatal care is provided in the hospital by midwives and doctors in collaboration. Postnatal care may continue in the home or community by hospital midwives.
Team midwifery care	Antenatal, intrapartum, and postnatal care is provided by a small team of rostered midwives (no more than eight) in collaboration with doctors in the event of identified risk factors. Intrapartum care is usually provided in a hospital or birth centre. Postnatal care may continue in the home or community by the team midwives.
Midwifery Group Practice/ Caseload care	Antenatal, intrapartum and postnatal care is provided within a publicly funded caseload model by a known primary midwife with secondary backup midwife/midwives providing cover and assistance with collaboration with doctors in the event of identified risk factors. Antenatal care and postnatal care are usually provided in the hospital, community or home with intrapartum care in a hospital, birth centre or home.

67. COAG Health Council as represented by the Department of Health, Woman-centred care: Strategic directions for Australian maternity services, 2019
68. The person giving birth. The term is inclusive of the woman's baby, partner, and family. Under this definition the baby is not treated as a separate entity and its welfare is considered only so far as how it affects the mother.

The Victorian Department of Health's maternity capability framework[69] describes the requirements for providing safe and high-quality maternity care at each level for public and private services and is informed by the following principles:

- Maternity care is guided by a wellness model;
- Maternity care is provided as close to home as is safe and practicable and includes prompt transfer to specialised services when required;
- Maternity services in Victoria form a service network that ensures a commitment to safe and quality care across the system. This is based on a system that ensures women and babies are managed at a hospital or health service that provides the level of care that they require;
- Consultation, referral, and transfer processes are established to support clinical decision-making;
- The capability of a health service refers to the level of care (including the required workforce, infrastructure and equipment, and clinical support services) it can **continuously** meet;
- The community is made aware of the capability of the health services in the local and surrounding areas; and
- The Department of Health is responsible to determine the capability levels of health services. Further, the Department is responsible to review this capability and to work with health services to plan changes to levels of care provided.

Public birthing services within the Grampians region is available at four locations: Grampians Health Ballarat and Horsham campuses; East Grampians Health Service; and Maryborough District Health Service. In addition, a Level 1 maternity services pregnancy care and postnatal support without planned births are offered at West Wimmera Health Service - Nhill and Rural Northwest Health - Warracknabeal.

Grampians Health - Ballarat provides the Level 5 maternity service to the region for women with moderate and selected high risk pregnancies including management of labour, birth and puerperium at 32 weeks gestation or more the following options for maternity care:

- **Shared or Combined Care -** GPs who do not attend for birthing.
- **Public Hospital Maternity Care** - Women are provided public care through the outpatients clinic which operates weekdays in Ballarat. The public clinics are staffed by a combination of midwives, obstetricians, registrars and residents. Women receive care according to their medical needs, risk profile of the pregnancy and according to their previous obstetric history. Women may therefore receive antenatal care from a combination of medical and midwifery staff as required.

  Midwifery only clinics are available at Ballarat. These clinics do not operate as a continuity model since the care by a known midwife does not extend to intrapartum care.

  The obstetric workforce at Ballarat includes 10 obstetricians, six of whom undertake public antenatal care. The registrar workforce currently is a team of eight – four accredited and four unaccredited. The obstetricians normally undertake the overnight on call duties.

Grampians Health – Horsham campus provides a level 4 maternity service for the management of low and moderate risk pregnancies including management of labour, birth and puerperium at 34 weeks' gestation or more. The maternity unit is not stand alone and is incorporated in a combined maternity, paediatric and general ward. There are limited ante natal and birthing options. All routine antenatal care is delivered outside the public model by:

69. Department of Health, Victoria, Capability frameworks for Victorian maternity and newborn services, 2019

- **Shared or Combined Care -** GPs who do not attend for birthing. Women in surrounding areas, Stawell, Edenhope, Warracknabeal and Nhill may access this model. Transfer of care to either the obstetrician or GP obstetricians at Horsham occurs at various gestations.
- **GP obstetrician care**. Antenatal care provided by a GP obstetrician (GPO). Intrapartum care is provided at the hospital by the GP obstetrician and hospital midwives in collaboration. There are currently two GPOs providing this model in Horsham. It is noted that this GP practice has midwifery input into antenatal care by two midwives employed at the GP practice. However this does not operate as a continuity care midwifery model.
- **Private obstetrician (specialist) care**. There is one specialist obstetrician providing services in Horsham and sees 'normal' and 'high-risk' women for antenatal care. A proportion of high-risk women may birth at either Ballarat or a metropolitan hospital depending on the level of risk identified. All other women birth at Grampians Health - Horsham.

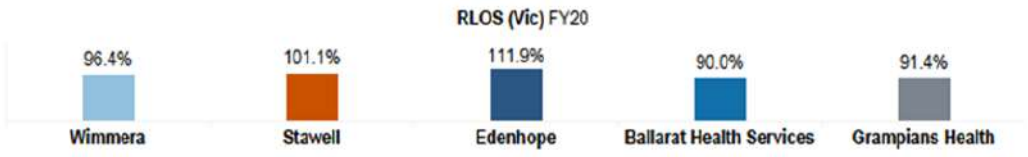
12.1.1. Current activity, market share and projected demand

The trend in obstetrics separations (including antenatal admissions, births and post-natal care) over the last five years shows an overall reduction for Grampians Health of 5.99%. There has been a minor reduction in separations at Horsham (-0.43% per annum) and major reduction at Ballarat (-7.52% per annum).

The data indicates that there are a number of women are choosing to birth outside the region mainly travelling to Djerriwarrh Health, Castlemaine Health, and Western District Health Service in Hamilton.

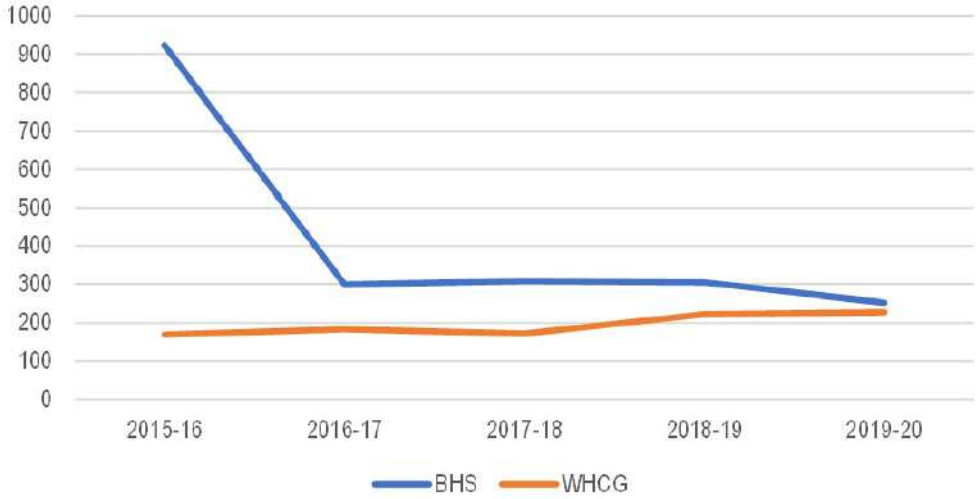
Maternity - Obstetrics

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	2,977	2,326	-5.99%	2,445	0.30%
Wimmera Health Care Group	574	564	-0.43%	407	-1.90%
Stawell Regional Health		<5		1	-3.33%
Edenhope & District Hospital		<5		1	-2.47%
Ballarat Health Services	2,403	1,757	-7.52%	2,035	0.87%
Market Share - GH Primary Catchment	90.21%	89.20%		91.47%	



The reduction in Ballarat obstetrics separations is driven by a very steep decline in antenatal separations, from 952 separations in 2015-16 to 252 separations in 2019-20 (Figure 12-1). This reflects a change in the model of care with a greater focus on outpatient clinics for antenatal care at Ballarat. The trend in antenatal separations at Horsham has increased from 169 to 228 separations over this period.

Figure 12-1: Antenatal separations, 2015-16 to 2019-20



At Ballarat, birthing trends over the period 2015-16 to 2019-20 show that:

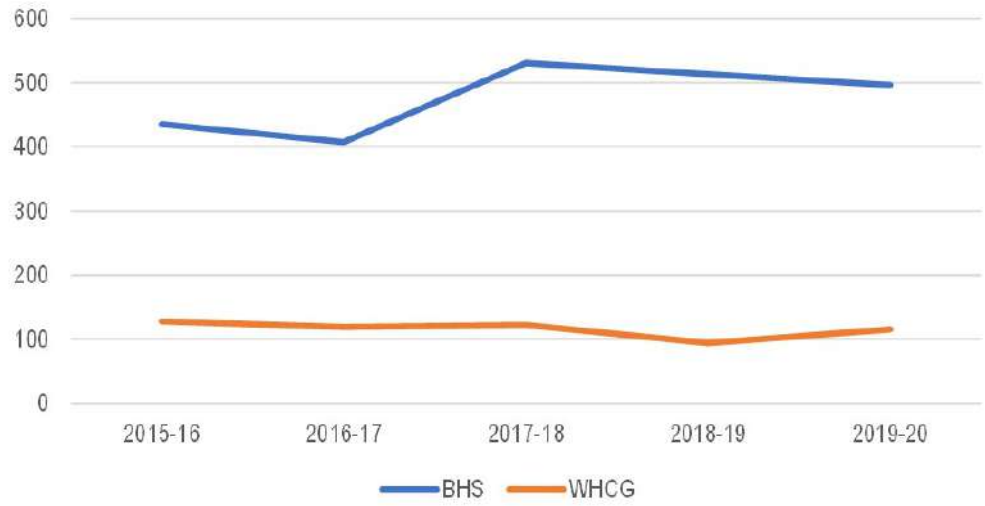
- Caesarean deliveries have increased from 435 to 497, a 3.4% per annum increase;
- Vaginal deliveries have decreased from 988 to 960, a -0.7% per annum decrease; and
- Total deliveries have increased from 1,423 to 1,457, a 0.6% per annum increase.

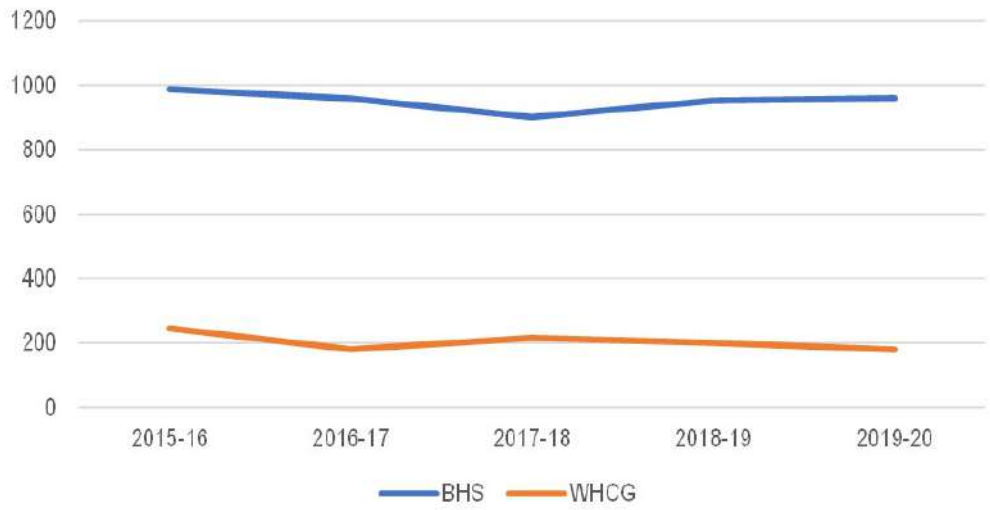
At Horsham, birthing trends over the period 2015-16 to 2019-20 show that:

- Caesarean deliveries have decreased from 128 to 115, a -2.6% per annum decrease;
- Vaginal deliveries have decreased from 246 to 180, a -7.5% per annum decrease; and
- Total deliveries have decreased from 374 to 295, a -5.8% per annum decrease.

The trend in births is shown in Figure 12-2.

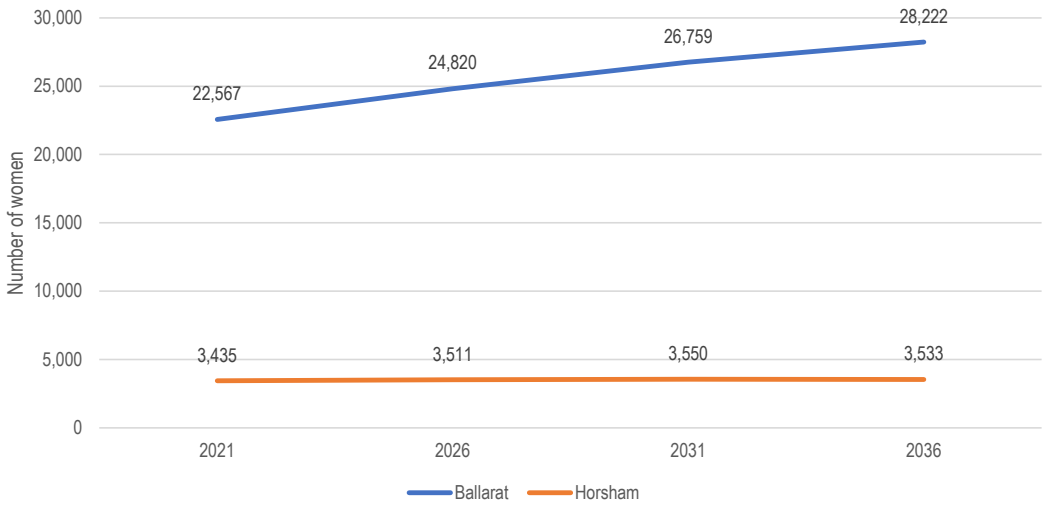
Figure 12-2: Trend in deliveries, Ballarat and Horsham





The trend in the population of women of child-bearing age, 15 to 44 years, is shown below for the period 2016 to 2021. The estimated resident population for Ballarat increased by 1.65% per annum over this period and for Horsham, there was a decrease of -0.69% per annum. A steady increase of 1.50% per annum is projected in Ballarat's 15 to 44 year old female population between 2021 to 2036 – and a minor increase (0.19% per annum change) projected for women in Horsham aged 15 to 44 years.

Figure 12-3: Women aged 15 to 44 years, estimated resident population, 2021 to 2036



The baseline demand scenarios for obstetrics over the next fifteen years, projects further reductions in the volume of Horsham obstetric separations, from 564 to 407 separations, a reduction of -1.9% per annum. In contrast, a modest increase of 0.87% per annum is projected at Ballarat from 1,747 to 2,035 separations. Overall, Grampians Health has a high primary catchment **market share** of 89.20% in 2019-20. This is expected to increase further to 91.47% in 2036-37.

RUR of 0.97 indicates utilisation aligned with the state-wide average.

Regional self-sufficiency

- Current regional self-sufficiency: 88.4%
- Baseline projected self-sufficiency: 89.7%
- Proposed regional self-sufficiency: 90.0%

For Ballarat, the baseline demand projections indicate stability of the primary catchment **market share** from 94.2% to 94.6%. The baseline projection for Horsham's primary catchment market share in 2036-37 is 85.4%, a slight reduction from 86.6% in 2019-20.

In contrast to the baseline projection, which assumes a decline in market share at Horsham, the *proposed* primary catchment market share for Horsham for this CSP is increased by 1.4% from 86.6% in 2019-20 to 88.0% in 2036-37. This modelled increase in Horsham's local market share recognises a greater likelihood that more women will birth locally with changing service model options as proposed in this CSP.

12.1.2. Current and emerging issues and future directions

- ***Access to public antenatal care at Horsham and surrounding Wimmera region.*** There are currently no public antenatal clinics, no obstetric registrars and no midwifery continuity of care models (Team midwifery care, Midwifery Group Practise or Caseload) available in Horsham.

- ***Limited access to midwifery continuity of care models.*** Horsham and Ballarat identify that neither campus provides true midwifery continuity of care models. There is no access to Team Midwifery, Midwifery Group Practise or public home birthing within the region. The limitation of the current service models has been recognised and change is currently being planned and implemented to increase access to midwifery continuity of care models at Horsham, for the local and surrounding community. Implementation of continuity of care models is recognised as the most significant change designed improve women's experience including in the care of women identified with high-risk pregnancies.

- ***Pressure on the availability and capability of the midwifery workforce.*** The lack of midwifery continuity of care models is considered a major contributing factor in the midwifery workforce shortages in Horsham. It is difficult to attract and retain midwives to a model where they must provide both midwifery and nursing services in a combined unit. In Horsham, there is a fragility and risk associated with a heavy reliance on agency staff to fulfil roster requirements.

  In addition, midwives are only providing intrapartum and domiciliary services and are not working across their full scope of practice, which has an adverse impact on job satisfaction and career development for midwives, contributing to retention and morale issues.

- ***Paediatric nursing workforce constraints -*** There is a substantial shortage of experienced nurses in many paediatric nursing shifts. Ballarat campus could accept more medical paediatric patients but admissions are often capped due to nurse workforce shortage. This is also a factor that limits Ballarat from accepting premature babies back from Melbourne due to nursing staff shortages.

- ***Sustainability of other regional birthing services.*** Whilst not part of Grampians Health, East Grampians Health Service has identified a significant workforce shortage (medical and midwifery) to support the ongoing provision of a maternity service.

- ***Aboriginal Birthing Services.*** Aboriginal Maternity Services offer flexible, person-centred care, strengthened by Aboriginal culture and practice, and build upon respectful trusting relationships between women, their families and the maternity service staff. There are three Aboriginal Co-Operatives in the Grampians region. The Ballarat and District Aboriginal Co-operative (BADAC) in Ballarat, the Budja Budja Aboriginal Co-Operative in Halls Gap and the Goolum Goolum Aboriginal Co-Operative in Horsham. Despite the presence of the cooperatives there is no formal Aboriginal Maternity Service recognised as one of the 14 services in Victoria. Ballarat provides care for indigenous women.

- ***Digital Health.*** There is a lack of integration between antenatal care provided privately in the community and hospital maternity services. Whilst women are booked to birth at either Horsham or Ballarat, there is insufficient sharing of antenatal information through the common electronic system, the Birthing Outcomes System (BOS). This means that there is a risk that women may present in labour, particularly at Horsham, with limited information available about their antenatal care history or their birth preferences. In addition, the lack of telehealth capability to support antenatal care providers in smaller towns leads to women and families travelling long distances at great inconvenience.

- ***Maternal Fetal Medicine (MFM).*** There is no dedicated MFM unit in the region with this currently being undertaken on an ad hoc basis using the current infrastructure. This puts considerable pressure on the inpatient services as antenatal presentations take up birth rooms and outpatient rooms.

- ***Integration and partnerships.*** There are opportunities to increase integration and partnerships between Ballarat and Horsham to strengthen workforce training opportunities and rotations for medical (registrars) and midwives.

Proposed key developments

It is proposed that Grampians Health:

- Develop a single maternity service delivered across inpatient sites and antenatal services. That would include:
  - Enhanced public access to (satellite) ante natal services;
  - An integrated medical and midwifery model that would support staff development;
  - Common protocols and procedures; and
  - Opportunities for a rotating workforce.

- Develop a multidisciplinary, team-based obstetric with the capability to undertake complex obstetric care including:
  - chronic physical and mental health conditions in mothers e.g. drug and alcohol, and diabetes;
  - planned involvement of paediatric specialists for pre-delivery consultations for known complications (as above) as well as unknown complications e.g. cleft lip and palate etc.

- Develop a Midwifery Group Practice continuity of model of care at both Horsham and Ballarat. This should be an all-risk model.

- As identified in section 11.11.2, develop a timely service for reproductive health interventions/STOPS, particularly in the western campuses of Grampians Health.

- Develop a Maternal Fetal Medicine service at Ballarat.

- Work with the Aboriginal Co-Operatives in the Grampians Region to develop a specific Aboriginal Maternity Service that can provide culturally sensitive care for Aboriginal women and their families.
- Work with service providers, to increase the use of digital health systems that ensure:
  - Access to maternity care for women who reside away from the main centres or who require a level of care not available locally; and
  - Sharing of antenatal, intrapartum, and postnatal information about each woman across the maternity system (in accordance with health privacy and confidentiality provisions).

12.2. NEONATAL SERVICES

Defining levels of care for Victorian newborn service[70] guides health services on the delivery of best-quality newborn care. The newborn or neonatal period commences at birth and ends 28 days after completed birth (corrected for prematurity). Victoria defines a neonate or newborn as a live birth less *than 28 days old. Infants may be cared for in a newborn service for more than 28 days, depending* on their clinical needs.

Newborn services across the state are classified according to six levels of care, and the Department of Health's capability framework identifies the workforce, infrastructure, and clinical support services recommended for each level of service to deliver safe, effective, and appropriate care to newborns. Specifically:

- Levels 1 and 2 provide primary newborn services, caring for low-risk, uncomplicated newborns;
- Levels 3, 4 and 5 provide secondary newborn services, caring for moderate to selected high-risk newborns in a special care nursery; and
- Level 6 (A and B) provides tertiary newborn services, caring for newborns requiring continuous life support and comprehensive multidisciplinary care in a neonatal intensive care unit. Level 6B also provides surgical services.

The classifications for newborn services do not directly correlate to the classifications for maternity services. When determining the most clinically appropriate location for a woman to receive care, it is important to consider both the needs of the woman and the anticipated needs of the baby. Decisions about patient care are based on sound clinical judgement, considering the local context as well as the newborn system in its entirety. Care should reflect the needs of the baby and family and encompass principles of effective team-based healthcare. Every effort should be made to keep the mother and baby together.

Public neonatal services within the Grampians region are available at three locations: Grampians Health's Ballarat and Horsham campus' both have a special care nursery (SCN). Technically East Grampians Health Service (Ararat) has the ability to be a level 2 SCN, providing stabilisation prior to retrieval and short term incubator care, and cardiorespiratory. In the private hospital sector, there is a special care nursery (7 cots) at St John of God in Ballarat.

70. Department of Health and Human Services, Defining levels of care for Victorian newborn services, 2015

Ballarat provides the highest level of public neonatal care in the region at Level 4.[71] It provides care for moderately unwell, uncomplicated newborns:

- ≥ 32 + 0 weeks gestation;
- Usually correlating to new-born birthweight ≥ 1,500 grams;
- Includes growing preterm and convalescing new-borns and infants; and
- May accept care of new-borns marginally under the gestational age/birthweight listed below, when clinically appropriate.

The special care nursery (SCN) has 10 neonatal cots, although has capacity to flex an additional two cots. The SCN is staffed by the consultant paediatricians (one is a neonatologist), registrars and residents providing 24-hour coverage. Staff indicate that over the last 10 years, the complexity has increased in line with maternal complexity and as a result, most nursing staff have either completed or are working towards postgraduate neonatal qualifications.

Horsham has a small Level 3 SCN. The SCN provides care for mild-moderately unwell, uncomplicated new-borns:

- ≥ 34 + 0 weeks gestation;
- Usually correlating to new-born birthweight ≥ 2,000 grams;
- Includes growing preterm and convalescing new-borns and infants; and
- May accept care of new-borns marginally under the gestational age/birthweight listed above, when clinically appropriate.

The Horsham SCN is annexed to the combined maternity, paediatric and medical ward. The unit is not staffed unless there is a baby admitted and then midwives working in the combined unit care for both the mother and the neonate. There is one paediatrician and two GP paediatricians working in Horsham. A process is underway to recruit another part-time paediatrician.

There are no neonatal services provided at Edenhope or at Stawell.

12.2.1. Current activity, market share and projected demand

The volume of qualified neonates at Grampians Health has increased by 1.17% per annum over the last five years from 622 to 652 separations. This mainly reflects growth at Horsham of 6.06% per annum as compared to stable demand at Ballarat (-0.09% per annum change) in the period 2015-16 to 2019-20.

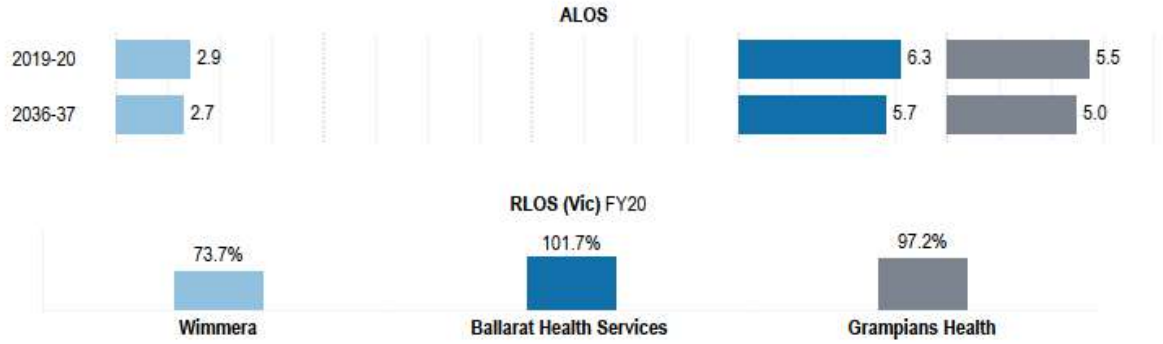
Current primary **market share** in 2019-20 is 84.07% and is projected to increase only slightly to 84.46% by 2036-37.

Over the next fifteen years, **baseline projections** indicate a reduction of 1.38% per annum at Horsham as compared to a 0.49% per annum increase at Ballarat. For Grampians Health, the baseline projections assume an increase in Ballarat's primary catchment market share from 84.07% to 84.46%%.

71. Department of Health and Human Services, Defining levels of care for Victorian newborn services, 2015

Maternity - Qualified Neonate

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	622	652	1.17%	663.7	0.11%
Wimmera Health Care Group	118	149	6.06%	117.9	-1.38%
Stawell Regional Health					
Edenhope & District Hospital					
Ballarat Health Services	504	502	-0.09%	545.9	0.49%
Market Share - GH Primary Catchment	85.58%	84.07%		84.46%	



RUR of 1.10 indicates utilisation slightly higher than the state-wide average.

Regional self-sufficiency

- Current regional self-sufficiency: 82.0%
- Baseline projected self-sufficiency: 82.5%
- Proposed regional self-sufficiency: 85.0%

12.2.2. Current and emerging issues and future directions

- ***Access***. The activity, market share and self-sufficiency data indicate that neonatal services are operating at capability, consistent with its role.
- ***Pressure on the availability, competence, and skill of the nursing workforce at Horsham*** – there are only two nurses with post-graduate paediatric qualifications and none with specialist neonatal skills. At present when a baby is admitted to the SCN midwives generally care for baby and the mother.
- ***Medical workforce model across Grampians Health*** **–** Currently Horsham has only one paediatrician, although a second is currently being recruited. Ballarat has 10 paediatricians, all of whom are visiting medical officers. Neonatologist expertise is limited and given the increasing complexity will need likely be required into the future.
- ***Regional clinical leadership***. Ballarat provides the clinical leadership in neonatal services across the region.

Proposed key developments

It is proposed that:

- Self-sufficiency be increased marginally for neonatology services from 82% to 85% and that both Horsham and Ballarat campuses provide all of the additional self-sufficiency for the region.
- Neonatal services be integrated as a single unit, with common protocols and procedures, and provision for rotation of medical and nursing staff.
- Recruit a second paediatrician at Horsham that would cover neonatal care as well as other paediatric requirements.
- Recruit a staff neonatologist for Grampians Health.
- Enhance the capability of nurses at Horsham with post graduate paediatric qualifications and specialist neonatal skills through training programs coordinated through Grampians Health.

12.3. PAEDIATRIC SERVICES

There is no paediatric capability framework in Victoria. Inpatient paediatric services are offered at both Horsham and Ballarat campuses. There are no inpatient paediatric beds at Stawell or Edenhope.

Paediatric services at Ballarat are provided in a 16-bed unit – with the capacity to flex to 21 spaces. Projected demand for paediatric beds indicates that 11 beds will be required by 2036-37.

The profile of the paediatric patients includes general surgery and moderate medical conditions. The medical workforce includes 24-hour coverage by a combination of consultant paediatricians (primarily visiting medial officers), registrars and residents. Paediatric presentations currently make up approximately 20% of the ED admissions in Ballarat.

A range of outpatient services are provided from four general paediatric clinics including:

- Allied Health – social work, occupational therapy, psychology, physiotherapy and speech therapy;
- Specialist clinics – paediatric diabetes, hip dysplasia, gait assessment; and
- Paediatric rehabilitation.

A business case for a Neuro-development screening clinic is currently in development.

At Horsham, inpatient paediatric services are provided in a combined medical, maternity and paediatric unit. There are currently six paediatric beds. The projected demand for paediatric admission is expected to require less than one bed.

Paediatric outpatients are provided on an ad hoc basis with paediatric patients often being referred to the inpatient unit to be assessed, bypassing the ED. The medical workforce is limited to one paediatric consultant and two GP paediatricians.

Stawell does not have dedicated inpatient paediatric beds. Occasional day surgery is undertaken in ENT and orthopaedics from the day surgery unit. The Urgent Care service reviews paediatric patients. The limited availability of paediatricians means that these children are often seen and treated by the Nurse Practitioner or the available nursing staff. The allied health services available for paediatrics are reported to be challenging for Stawell with care being dependent of the training and expertise of the available staff.

Participation in a Medical Research Future Fund[72] program and the allocation of some $3M to support GPs to manage paediatric patients is seen as a first step in building a strong paediatric service in the Western region of Victoria. The Strengthening Care for Rural Children Clinician Researcher Programme (SC4RC) aims to deliver and rigorously evaluate a primary health care system strengthening programme for rural children to bridge gaps in access to health services and diminished health outcomes. This model, where the where a paediatrician and GP work together within the GP practice, aims to improve the health of children by increasing capacity of the existing rural GP workforce to assess and more effectively manage paediatric conditions.

Another important initiative is the anticipated roll-out in 2022 of a Grampians Health Eating Disorder Unit which includes a paediatric and adult part. The paediatric and adult service components will be operationally aligned and will have clear division of teams and responsibilities.

Horsham currently has an agreement with Royal Children Hospital (RCH) to participate in the *Wimmera Southern Mallee By Five* project. This project is based on a Grand Round involving a partnership between the Wimmera Southern Mallee and the RCH's Centre for Community Child Health. It involves a local multidisciplinary model of support for children, families and professionals, builds on local expertise and uses digital platforms to deliver outcomes through a genuine exchange between local and specialist knowledge.

RCH also provide diabetes care for patients in the Horsham/ Wimmera area. In other parts of the region, the paediatric diabetes service is provided by Ballarat.

In Ballarat, in situ simulation training is provided in the paediatric and neonatal wards, with monthly testing of systems and team approaches to managing sick children. This is led by a team of medical, nurse and pharmacy educators. Ballarat is the only regional centre that currently runs and coordinates resuscitation programs with approval from Australian Research Council. Acute paediatrics is often an area of high stress and clinical risk in areas that do not frequently deal with sick children.

12.3.1. Current activity, market share and projected demand

Overall demand at Grampians Health for admitted paediatric services was moderate over the last five years with a 2.29% per annum increase to 3,294 separations in 2019-20. Lower growth (0.70% per annum) is projected out to 2036-37 with an expected 3,706 paediatric separations.

Volumes of admitted paediatric services were below 100 at Stawell (77) and Edenhope (13) in 2019-20. At Horsham, there were 386 paediatric separations, a substantial reduction from 530 in 2015-16 reflecting a 7.64% per annum decline. Ballarat's paediatric separations increased 4.49% per annum to 2,818 separations in 2019-20 and with 0.98% per annum growth expected to 2036-37 there is a projected 3,326 paediatric separations.

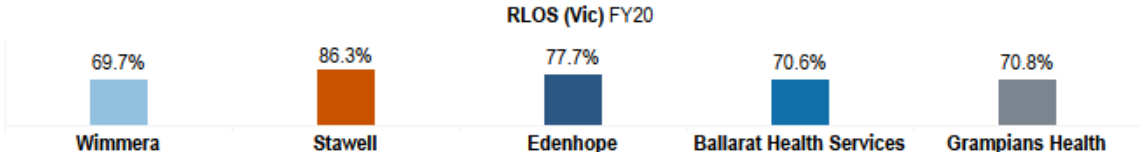
ALOS for paediatric separations is typically low, and this is reflected across all campuses. Likewise, compared to the state-wide ALOS, all sites are below expected: approximately 30% lower for both Horsham and Ballarat.

72 Australian Government Department of Health, *Life Saving Research – Funding for medical research*, Budget 2022-23

Primary catchment market share declined from 74.3% in 2015-16 to 67.1% in 2019-20 and is unlikely to change, with projected primary catchment market share of 67.8% in 2036-37.

Paediatrics

Separations	2015-16	2019-20	% Change per annum FY16 to FY20	2036-37	% Change per annum FY20 to FY37
Grampians Health	3,021	3,294	2.19%	3,706	0.70%
Wimmera Health Care Group	530	386	-7.64%	306	-1.35%
Stawell Regional Health	118	77	-10.20%	67	-0.84%
Edenhope & District Hospital	9	13	10.33%	7	-3.74%
Ballarat Health Services	2,364	2,818	4.49%	3,326	0.98%
Market Share - GH Primary Catchment	74.25%	67.09%		67.82%	



Regional self-sufficiency

- Current regional self-sufficiency: 72.8%
- Baseline projected self-sufficiency: 73.7%
- Proposed regional self-sufficiency: 75.0%

12.3.2. Current and emerging issues and future directions

- ***Medical Clinical Leadership.*** While Grampians Health appears to have a well-developed paediatric service, much of the paediatric expertise is focussed in the east of the region, in and around Ballarat. It is reported that there can be wait times of more than 12 months for outpatient clinic appointments. The SC4RC program is seen as one of the ways of increasing capacity and capability in the community. There is an opportunity for Grampians Health to be a leader and to develop a regional paediatric model.

- ***Pressure on the Horsham nursing workforce.*** At Horsham there are only two nurses with post graduate paediatric qualifications. Improving capability would reduce unnecessary transfers out of the area.

- ***The increased likelihood of higher dependency for paediatrics*** – With the pressures on metropolitan intensive care services, it is likely that Ballarat would need to develop a HDU capability for paediatrics.

- ***Access*** to programs or specialist allied health services can be problematic.
  - *Location* – some services continue to be concentrated in the east or are not available in the region at all (paediatric orthopaedics) – this can make it difficult for residents in Stawell, Horsham and Edenhope to easily access specialty services. Speciality services may need to consider outreach clinics or telehealth to improve access;
  - *Gaps in service* – there is an overall gap in services in some areas:
    - Developmental and behavioural presentations;
    - Allergy issues;
    - Eating disorders which have surged subsequent to COVID-19;
    - Gaps are emerging in chronic illnesses i.e., diabetes, obesity; and
    - Trauma-focused therapies.
    - Coordination for vulnerable children in out of home care
    - Closing the gap for Indigenous children and their families
  - *Gaps in disciplines* – whilst there are regional discussions in some disciplines to work towards a single service delivery model, paediatric gaps are still present across the region in:
    - Psychology;
    - Occupational Therapy;
    - Physiotherapy;
    - Speech Therapy;
    - Complementary play specialists;
    - Social work;
    - Dermatology; and
    - Ophthalmology.
  - *Pathways* – there are multiple pathways into the service each with its own eligibility criteria. This creates inefficiencies and delays in access to services for the consumer.

- **Service model enhancement**
  - Paediatric HITH is underdeveloped. There is enormous opportunity to enhance and develop this service;
  - Whilst it is expected that the SC4RC program will increase the use of telehealth across the region, this can be further enhanced with the use of telehealth for inpatient and unplanned hospital presentations;
  - Ballarat's ED does not always have access to a dedicated paediatrician emergency physician. A dedicated resource would reduce the need for unnecessary hospital admissions by increasing the rate of discharge directly from the ED;
  - The transition from paediatric to adult management can be challenging for patients and families. There is a need to further strengthen pathways and processes to ensure patients and their families are well supported during this phase;
  - There is need to strengthen for paediatric HDU support together with management and stabilisation of critically unwell children; and
  - Paediatric ambulatory services including acute and subacute specialist clinics are not co-located, detracting from convenience, and coordinated service provision for patients and families.

Proposed key developments

It is proposed that Grampians Health:

- Self-sufficiency be increased marginally for paediatric services from 73% to 75% and that both Horsham and Ballarat campuses provides all the additional self-sufficiency for the region;
- Develop a single integrated paediatric service that includes common vision and goals, common model of care, enhanced coverage of the region with available paediatric services, and staff rotations for specialists and nurses;
- Provide for three HDU beds/cots at Ballarat for paediatrics (section 11.20);
- Continue to develop the SC4RC model of service delivery increasing the use of telehealth to increase capacity and capability;
- Recruit a second paediatrician at Horsham and consolidate nursing capability, including through increased focus on expanding the nurse practitioner workforce;
- Work towards having 24-hour Paediatric Emergency Physician availability at Ballarat;
- Explore opportunities to expand home-based care for paediatric patients including HITH and palliative care;
- Increase the use of telehealth to ensure that paediatric patients and their families have access to consultations in a timely way regardless of where they live in the region;
- Explore opportunities to provide more comprehensive paediatric pathways to care including outpatient clinics, inclusive of allied health and nursing to provide true multidisciplinary care. Ambulatory paediatric services should optimally be co-located to promote service coordination and responsiveness to patients and families. This is a need across the region but particularly in Horsham;
- Prioritise the development of paediatric clinics from the following: Diabetes, Behavioural Development, Continence, Obesity and Allergy;
- Ensure depth and breadth of the Grampians Health paediatric allied health workforce including; Psychology; Occupational Therapy; Physiotherapy; Speech Therapy; Complementary developmental play specialists; and Social work;
- Strengthen the paediatric components of service models with a focus on:
  - Palliative Care;
  - Pain (acute and chronic) pain services and the integration with Grampians Health@Home; and
  - Rehabilitation including neuro-disability and the interface with the Victorian Paediatric Rehabilitation Service (VPRS), brain injury, intellectual disability, strokes and other conditions.
- Enhance transition care pathways and processes from paediatrics to adult management to ensure patients and their families are well supported during this phase;
- Build on partnerships with the RCH to further develop collaborative service models of relevance to the region; and
- Extend outreach simulation training for paediatric acute care across the region through Ballarat's 'Simvan' with the aim of improving care and clinical outcomes.

13. Specialist Clinics

Specialist clinics provide planned, non-admitted services for people who need the focus of an acute ambulatory setting to ensure the best outcomes. Specialist clinics provide an interface between primary care services and acute inpatient services.

Specialist Clinics need to comply with all requirements of the *Specialist Clinics in Victorian Public Hospitals Access Policy*. The specialist clinic access policy is under review.

13.1.1. Current activity and market share

Table 13-1 provides a summary of the actual reported specialist contacts. There were 116,100 contacts in 2018-19, and increase of 5.2% per annum from the base of 99,700 in 2015-16. Ballarat had 88.4% of the activity. Paediatric specific clinic information is included in section 13.1.3 below.

Table 13-1: Current contacts – Grampians Health 2015-16 & 2018-19 by campus

Contacts	2015-16	2018-19	Raw Change FY16 to FY19	% Change FY16 to FY19	% Change per annum FY16 to FY19
Grampians Health	99,724	116,096	16,372	16.4%	5.2%
Ballarat Campus	88,743	102,600	13,857	15.6%	5.0%
Horsham Campus	10,981	13,496	2,515	22.9%	7.1%

Consistent with the national (Tier2) Specialist Clinic classifications, Grampians Health delivered 22 different service types as outlined in Table 13-2. Specialist clinics have increased in activity by an average of 3.9% per annum between 2015-16 and 2018-19. There were some clinic types that experienced a fall in numbers, but most core services indicate incremental increases. This was the case in stand-alone allied health clinics, cardiology, endocrinology, general medicine, obstetrics, oncology, and pre-admission clinics. These are all medicine disciplines.

The exceptions were two surgical streams, namely:

- A fall in orthopaedics of -1,939 patients, or -4.7% per annum. The fall in orthopaedics is counter-intuitive given that the demand is increasing. There are a few key factors that could be contributing to the reduction. The first is a reduced allocation of public orthopaedic clinics and patients are being seen in surgeons' rooms (with or without out-of-pocket costs), and the other being effective diversion strategies to allied health practitioners for pre-habilitation, OAHKS and GLAD services; and
- A fall in general surgery of -521 or -2.0% per annum. This may also reflect a change in surgeon preferences to see patients in private rooms.

Table 13-2: Grampians Health contacts by clinical stream

Episode Program	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change	% Change per annum
Allied Health - Stand-alone	12,551	13,451	16,778	17,011	4,460	35.5%	7.9%
Cardiology	2,498	2,571	2,415	3,687	1,189	47.6%	10.2%
Ear, Nose and Throat	2,052	2,588	2,109	2,341	289	14.1%	3.3%
Endocrinology, includes Diabetes	2,381	2,419	3,205	3,415	1,034	43.4%	9.4%
Gastroenterology	2,658	2,546	1,603	1,976	-682	-25.7%	-7.1%

Episode Program	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change	% Change per annum
General Medicine	4,848	6,129	7,186	8,430	3,582	73.9%	14.8%
General Surgery	6,708	5,873	6,036	6,187	-521	-7.8%	-2.0%
Gynaecology	5,051	4,923	5,075	5,441	390	7.7%	1.9%
Haematology		806	977	1,002			
Neurology	1,679	1,773	1,749	2,032	353	21.0%	4.9%
Neurosurgery		197	213	0			
Obstetrics	27,026	25,291	28,442	29,603	2,577	9.5%	2.3%
Oncology	10,067	10,153	10,709	11,327	1,260	12.5%	3.0%
Ophthalmology	1,525	1,319	1,458	1,727	202	13.2%	3.2%
Orthopaedic applications	455	287	211	186	-269	-59.1%	-20.0%
Orthopaedics / Musculoskeletal	11,140	9,750	9,970	9,201	-1,939	-17.4%	-4.7%
Plastic Surgery	22	4		0	-22	-100.0%	-100.0%
Pre-admission	5,072	8,421	7,389	7,680	2,608	51.4%	10.9%
Respiratory	305	715	819	548	243	79.7%	15.8%
Urology	2,146	1,916	2,066	2,385	239	11.1%	2.7%
Vascular	1,148	1,277	1,313	1,269	121	10.5%	2.5%
Wound Care	363	698	728	648	285	78.5%	15.6%
Total	**99,724**	**103,112**	**110,451**	**116,096**	**16,372**	**16.4%**	**3.9%**

Table 13-3 indicates that increases at Ballarat campus in specialist clinics was at marginally lower rate of 3.7% growth per annum. Ballarat campus provided 88.4% of the total Grampians Health specialist clinic activity in 2018-19.

Table 13-3: Contacts at Ballarat by clinical stream

Episode Program	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change	% Change per annum
Allied Health - Stand-alone	9,059	10,410	13,306	12,225	3,166	34.9%	7.8%
Cardiology	2,498	2,571	2,415	3,687	1,189	47.6%	10.2%
Ear, Nose and Throat	2,052	2,588	2,109	2,341	289	14.1%	3.3%
Endocrinology, includes Diabetes	1,337	1,347	1,922	1,903	566	42.3%	9.2%
Gastroenterology	2,658	2,546	1,603	1,976	-682	-25.7%	-7.1%
General Medicine	4,794	6,120	7,185	8,430	3,636	75.8%	15.2%
General Surgery	6,704	5,863	6,030	6,187	-517	-7.7%	-2.0%
Gynaecology	5,051	4,923	5,075	5,441	390	7.7%	1.9%
Haematology		806	977	952			
Neurology	1,679	1,773	1,749	2,032	353	21.0%	4.9%
Neurosurgery		197	213	0			
Obstetrics	24,607	23,140	26,177	27,175	2,568	10.4%	2.5%
Oncology	9,403	9,314	9,863	10,318	915	9.7%	2.3%
Ophthalmology	1,525	1,319	1,458	1,727	202	13.2%	3.2%
Orthopaedics / Musculoskeletal	11,140	9,750	9,970	9,201	-1,939	-17.4%	-4.7%
Plastic Surgery	22	4		0	-22	-100.0%	-100.0%
Pre-admission	2,712	5,678	4,921	4,926	2,214	81.6%	16.1%
Sub-Acute Ambulatory Care Services (SACS)	29	5		0	-29	-100.0%	-100.0%

Episode Program	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change	% Change per annum
Urology	2,146	1,916	2,066	2,385	239	11.1%	2.7%
Vascular	1,148	1,277	1,313	1,269	121	10.5%	2.5%
Wound Care	179	587	618	425	246	137.4%	24.1%
Total	**88,743**	**92,134**	**98,970**	**102,600**	**13,857**	**15.6%**	**3.7%**

Table 13-4 provides specialist clinic activity at Horsham campus. There were nine different clinic types provided. Horsham provided 11.6% of the total specialist clinic activity for Grampians Health, increasing by 5.3% per annum. Horsham activity over time was more volatile as might be expected. The largest clinics were for allied health, pre-admission, obstetrics, endocrinology, and oncology they accounted for 92.5% of all specialist clinic activity.

Table 13-4: Contacts at Horsham by clinical stream

Episode Program	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change	% Change per annum
Allied Health - Stand-alone	3,492	3,041	3,472	4,786	1,294	37.1%	8.2%
Endocrinology, includes Diabetes	1,044	1,072	1,283	1,512	468	44.8%	9.7%
General Medicine	54	9	1	0	-54	-100.0%	-100.0%
General Surgery	4	10	6	0	-4	-100.0%	-100.0%
Obstetrics	2,419	2,151	2,265	2,428	9	0.4%	0.1%
Oncology	664	839	846	1,009	345	52.0%	11.0%
Orthopaedic applications	455	287	211	186	-269	-59.1%	-20.0%
Pre-admission	2,360	2,743	2,468	2,754	394	16.7%	3.9%
Respiratory	305	715	819	548	243	79.7%	15.8%
Wound Care	184	111	110	223	39	21.2%	4.9%
Total	**10,981**	**10,978**	**11,481**	**13,496**	**2,515**	**22.9%**	**5.3%**

An important consideration with respect to access to specialist clinics are the waiting times by specialty and the ratio of new appointments to review appointments, per clinic.

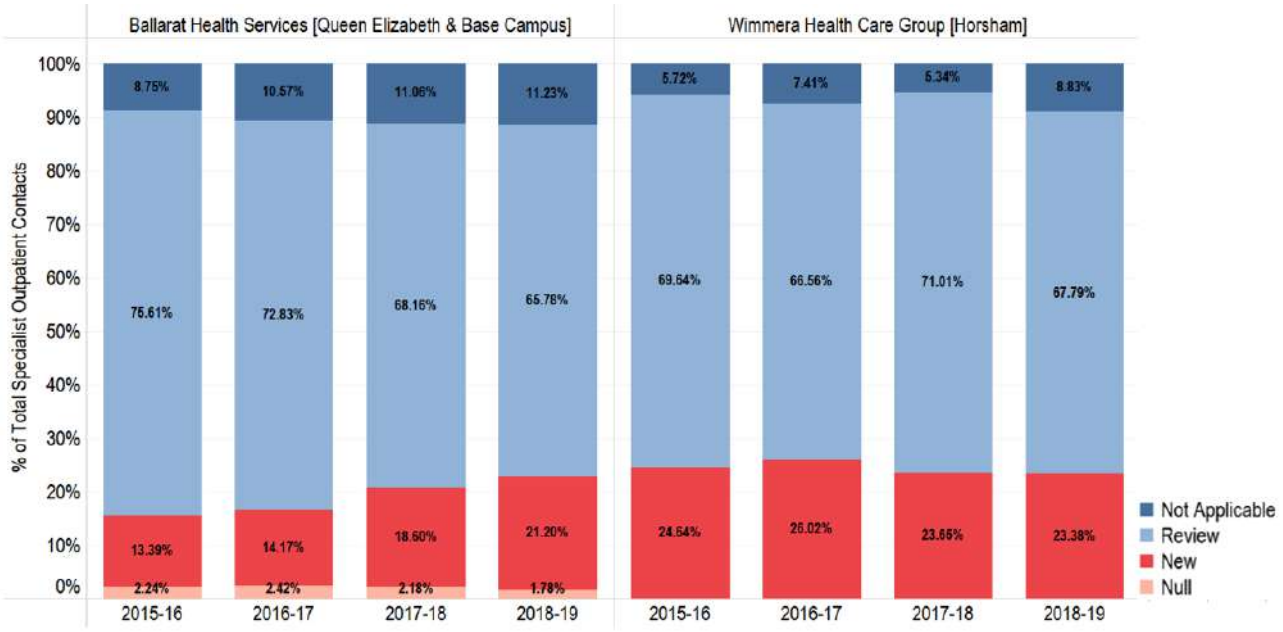
13.1.2. New and Review Patients

The New:Review ratio is provided in Figure 13-1. This indicates that:

- For Horsham the ratio for new patients is relatively high at between 23% and 26% between 2015-16 to 2018-19; and
- The ratio for new patients is much lower at Ballarat, operating between 13% and 21% with clear improvement over time.

Changing the ratio is an important and immediate measure to improve access. However, it is also necessary for specialist to have confidence in referring to primary care providers that can appropriately manage the condition. This is an important strategy consideration.

Figure 13-1: Percentage of total specialist outpatient contacts by new vs review FY16-FY19



13.1.3. Specialist clinic wait times

Time-series analysis was undertaken for Ballarat and Horsham campuses' specialist clinic wait time data for the last two years. This is based on data summitted to the Victorian Agency for Health Information.[73]

It should be noted that data for some specialties are included within other departments. Examples are rheumatology and renal medicine clinics which are reported within the larger departments. Whilst these data are not specifically identified in this analysis, feedback from Ballarat indicates that these clinics have growing wait times – particularly for the new clinic of renal medicine which after 18 months of operation now has a 9 month wait.

A further data reporting issue is that patients who have not been offered an appointment are not captured in this data.

Wait time analysis – routine first appointments

As shown in Table 13-5, there are seven specialties for which there was an increase in median wait times for a routine appointment at Ballarat campus in January-March 2022:

- Cardiology, 143 days in Jan-Mar 2022, an **increase** from 76 days in Jan-Mar 2021;
- Endocrinology, 126 days in Jan-Mar 2022, an **increase** from 109 days in Jan-Mar 2021;
- General Medicine, 57 days in Jan-Mar 2022, an **increase** from 42 days in Jan-Mar 2021;
- Gynaecology, 122 days in Jan-Mar 2022, an **increase** from 83 days in Jan-Mar 2021;
- Ophthalmology, 1,298 days in Jan-Mar 2022, an **increase** from 290 days in Jan-Mar 2021;
- Plastic surgery, 91 days in Jan-Mar 2022, an **increase** from 36 days in Jan-Mar 2021; and
- Urology, 90 days in Jan-Mar 2022, an **increase** from 82 days in Jan-Mar 2021.

73. VAHI, Specialist Clinics, https://vahi.vic.gov.au/reports/victorian-health-services-performance/specialist-clinics

For Horsham, the largest increase and longest wait time was for General Medicine which had a 100-day median wait time in Jan-Mar 2022.

Table 13-5: Routine first appointments – median wait time (days), Jan-Mar 21 to Jan-Mar 22, Ballarat and Horsham campuses

Specialties	Grampians Health - Ballarat		Grampians Health - Horsham	
	Jan - Mar 2021	Jan - Mar 2022	Jan - Mar 2021	Jan - Mar 2022
Internal medicine				
Cardiology	76	**143**		
Endocrinology	109	**126**	7	11
Gastroenterology	85	84		
General Medicine	42	**57**	*	**100**
Haematology	74	62	3	6
Neurology	121	91		
Oncology	39	29	3	5
Respiratory			6	3
O&G				
Obstetrics	8	10	1	1
Gynaecology	83	**122**		
Procedural				
ENT	182	62		
General Surgery	110	44		
Ophthalmology	290	**1,298**		
Orthopaedics	442	121		
Plastic surgery	36	**91**		
Urology	82	**90**		
Vascular	118	103		
Other				
Allied health	83	40	23	35
Wound care	*	7		
All specialties	**60**	**51**	**23**	**27**

Wait time analysis – urgent first appointments

In the case of urgent specialist clinic appointments at Ballarat campus, there were eight specialties with wait times for urgent first appointments that exceeded 20 days in Jan-Mar 2022:

- Cardiology, 26 days in Jan-Mar 2022, an **increase** from 22 days in Jan-Mar 2021;
- Endocrinology, 21 days in Jan-Mar 2022, an **increase** from 9 days in Jan-Mar 2021;
- Gastroenterology, 23 days in Jan-Mar 2022, a **decrease** from 24 days in Jan-Mar 2021;
- General Medicine, 22 days in Jan-Mar 2022, an **increase** from 18 days in Jan-Mar 2021;
- Neurology, 35 days in Jan-Mar 2022, a **decrease** from 49 days in Jan-Mar 2021;
- Ophthalmology, 21 days in Jan-Mar 2022, an **increase** from 17 days in Jan-Mar 2021;
- Urology, 29 days in Jan-Mar 2022, an **increase** from 15 days in Jan-Mar 2021; and
- Vascular, 29 days in Jan-Mar 2022, an **increase** from 11 days in Jan-Mar 2021.

At Horsham campus, all urgent specialist clinic appointments had a wait time of less than 8 days in Jan-Mar 2022.

Table 13-6: Median wait times (days) for urgent specialist clinic appointments, Jan-Mar 21 to Jan-Mar 22, Ballarat and Horsham campuses

Specialties	Grampians Health - Ballarat		Grampians Health - Horsham	
	Jan - Mar 2021	Jan - Mar 2022	Jan - Mar 2021	Jan - Mar 2022
Internal medicine				
Cardiology	22	**26**		
Endocrinology	9	**21**	4	2
Gastroenterology	24	**23**		
General Medicine	18	**22**		
Haematology	26	13	*	*
Neurology	49	**35**		
Oncology	10	**16**	*	1
Respiratory				
O&G				
Obstetrics	3	3	2	*
Gynaecology	12	14		
Procedural				
ENT	19	12		
General Surgery	13	18		
Ophthalmology	17	**21**		
Orthopaedics	9	9		
Plastic surgery	22	20		
Urology	15	**29**		
Vascular	11	**29**		
Other				
Allied health	29	14	6	7
Wound care				
All specialties				

13.1.4. Paediatric specialist clinics

There has been a substantial increase (7.2% per annum) in the number of paediatric (0-17 years) patient attendances at specialist clinics over the last five years, increasing from 7,287 to 8,965. This increase is driven by the increase at Ballarat campus (10.4% per annum increase) with a reduction in paediatric patient attendances (-6.5% per annum) at Horsham.

Table 13-7: Specialist clinics for paediatric patients, FY16 to FY19

Service / campus	2015-16	2018-19	Raw Change FY16 to FY19	% Change FY16 to FY19	% Change per annum FY16 to FY19
Grampians Health	**7,287**	**8,965**	**1,678**	**23.0%**	**7.2%**
Ballarat	5,695	7,663	1,968	34.6%	10.4%
Horsham	1,592	1,302	-290	-18.2%	-6.5%

13.1.5. Demand projections

Table 13-8 provides the projected demand for specialist clinics. The projection to 2036-37 indicates an average annual increase of 1.9% per annum, or an increase of 46,400 to 162,500 contacts. Almost all of the projected increase will be at the Ballarat campus. The projections are mainly based on the continuing historical trend for clinics. It is recognised that there are significant limitations to access for clinics and the CSP would be looking to increase access in this service. On this basis, it is expected that the projected increase is a conservative estimate.

Table 13-8: Projected Contacts by campus to 2036-37

Contacts	2036-37	Raw Change FY19 to FY37	% Change FY19 to FY37	% Change per annum FY19 to FY37
Grampians Health	162,464	46,368	39.9%	1.9%
Ballarat	148,571	45,971	44.8%	2.1%
Horsham	13,893	397	2.9%	0.2%

13.1.6. Current and emerging issues and future directions

The overwhelming issue for specialist clinics is *Service Gaps and Poor Access*. **This was one of the most significant areas for service development for Grampians Health**.

- Accessing specialist clinics is a major barrier to timeliness of care. Anecdotally, waiting times to get an appointment for some specialist clinics can be measured in years, not months. Demand is managed by triaging referrals and queueing. Overall, the paucity of available clinics is a structural weakness of the current health care system.

- At least 66% of clinic appointments are review patients. Whilst there will always be a high proportion of review patients for some clinic types (especially acute symptoms of complex chronic conditions), the current trend towards a reduction in the proportion of Review Patients needs to continue.

- There can be perverse incentives that keep patients on the review cycle much longer than is required due to administrative discharge processes, and the absence of a referral pathway.

- As a newly amalgamated entity, Grampians Health has an opportunity to significantly enhance local access to communities in the region through virtual specialist clinics. The technology of video telehealth is proven, although more suited to some types of clinical services than to others. It is expected that an increasing proportion of clinics are scheduled as remote/virtual clinics. Patients may need to travel to their local health service rather than to Ballarat or Melbourne for short appointments.

Proposed key developments

It is proposed that Grampians Health progressively (and demonstrably) improve access to specialist clinics, particularly for residents of the Wimmera region. Whilst the problem is well defined, the solutions are more difficult to determine. There are nevertheless four important strategies to implement, including:

- Improve the ratio of new to review patients by developing:
  - New:Review targets and timeframes that would be tailored for each clinic type;

  - Discharge processes that are simple to administer (and may be a role for the Discharge Hub discussed in Section 9.8.2);
  - Clear care pathways and expectations of the duration of visits at the commencement of the service, the same as occurs with inpatient admissions and SACS, for example;
  - Over time, having a coterie of GPs with areas of special interest in different clinical conditions who are able to clinically manage patients who may need greater support than the 'family GP' is able to provide but who no longer require specialist treatment.

- Progressively making available additional clinics, especially new video-telehealth clinics across core clinical specialties in the first instance.

- Developing more diversion clinics to allied health and nursing in lieu of specialist consultant clinics where this is appropriate.

- Judiciously establishing new MBS clinics that comply with the guidelines of privately delivered ambulatory services.

These strategies will not solve the access problem but will reduce the current access burden. The strategies would also require a 'scheduling' of priority clinic developments over time to ensure an orderly implementation.

Apart from changing the target ratios of new and review patients, it is anticipated that costs of specialist clinics will increase and would need to be funded by a combination of WASE and MBS.

14. Primary Health and Community Based Services

As discussed in Section 2.3, Grampians Health plays an important but delineated role in the provision of primary care and community health. Grampians Health services in the community are varied and dependent upon the availability of alternative services provided by other primary and community sector providers within each local community.

This section describes the current Primary Care and Community Services provided at the different campuses of Grampians Health and then considers service gaps and potential opportunities to address the service gaps.

This section also describes public dental services at Grampians Health and the opportunities for developing a regional dental service and National Disability Insurance Scheme (NDIS).

14.1. COMMUNITY HEALTH

Grampians Health community health services are almost exclusively delivered to each of the respective local *primary catchment communities,* as such there is very little consistency in the service profiles. Each campus has developed services that reflect the historical funding levels, government policy over the years, and with the aim of not duplicating existing services.

In each local primary catchment, community health is principally delivered by other community health organisations, with the exception of Edenhope. Across the Grampians Region, the main service providers in addition to Grampians Health are:

- Ballarat Community Health;
- Grampians Community Health;
- Women's Health Grampians;
- Western Community Services;
- Ballarat and District Aboriginal Co-operative;
- Budja Budja Medical Clinic; and
- Goolum Goolum Health Co-operative.

The activity data for community health services has been derived from the Community Health Minimum Data Set (CHMDS) for all campuses (2015-16 to 2018-19) as well as community-based services data from Stawell and Edenhope campuses (2019-20 and 2020-21). The services data includes:

- Community Health (funded) programs by the Department of Health;
- Community aged care services funded by the Commonwealth and State governments, and
- Community-based services delivered by specific local initiatives.

The data excludes activity delivered by the three ACCHOs as these were not reported in the CHMDS.

The reliability and completeness of the data sourced from CHMDS raises concerns about using this data as a basis for future planning of community health and community-based services. The data appears to have several shortcomings in relation to the completeness of activity capture, appropriate assignment of activity to programs, the potential double counting of some activity between programs, and the differences in data definitions impacting on comparability.

Overall, Grampians Health has a low 28.1% self-sufficiency for community health and community aged care for the Grampians region.

Ballarat Campus

Ballarat campus is one of several community health and community aged care providers in the primary catchment. Ballarat campus delivers only ~21% of the community health activity for the City of Ballarat whereas Ballarat Community Health, delivers ~75%.

Ballarat campus provides 5.3% of the total regional community health and community aged care services.

Table 14-1: Ballarat Campus – Community Health and Community aged care services market Share 2019-20

For Ballarat LGA	Service Events/Contacts									
	Audiology	Care Coordination	Counselling / Casework	Dietetics	Initial Needs Identification	Nursing	Occupational Therapy	Physiotherapy	Podiatry	Speech Pathology / Therapy
Ballarat Campus	0.0%	0.0%	6.9%	19.8%	0.0%	3.7%	59.2%	44.6%	33.4%	96.7%
Horsham Campus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%
Stawell Campus	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	25.6%	0.8%	0.0%	0.1%
Grampians Health	**0%**	**0%**	**6.9%**	**19.8%**	**0.6%**	**3.7%**	**86.4%**	**45.4%**	**33.4%**	**96.7%**
Grampians Community Health	0.0%	100.0%	89.7%	78.3%	98.0%	92.2%	0.0%	51.3%	63.4%	0.0%

Nevertheless, as indicated in Table 14-1, Ballarat campus provides significant levels of publicly funded service in speech therapy (97% reported market share), occupational therapy (86.4%) and physiotherapy (45%) for the City of Ballarat. Furthermore, Ballarat campus provides the Golden Plains LGA with a significant level of services in speech therapy (99%) and occupational therapy (80%). This would suggest that Grampian Health's role in the provision of community health service is integrally linked to other core services in subacute. This is consistent with Grampian Health's role in treatment of the more complex acute and chronic patients in a community setting.

The activity from 2015 to 2019 is summarised in Table 14-2. Activity has decreased overall by 4.9%, from 11,825 to 10,171 occasions of service. The decrease would **not** appear to reflect community-based demand. The abovementioned issues with respect to data reporting is more likely to be a key factor in the activity trend. The data reported is not impacted by COVID-19.

Table 14-2: Occasion of service for Community based services Ballarat campus 2015-2019

Service Type	Grampians Health - Ballarat					
	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change per Annum FY16 to FY19
Care Coordination	6	2			-6	-100.0%
Counselling / Casework	714	679	440	464	-250	-13.4%
Dietetics	934	634	630	963	29	1.0%
Initial Needs Identification			1			
Nursing	616	389	388	551	-65	-3.6%
Occupational Therapy	419	59	113	98	-321	-38.4%
Other				16	16	
Physiotherapy	5,205	3,872	3,134	5473	268	1.7%
Podiatry	1,579	1,674	1,482	1460	-119	-2.6%
Speech Pathology / Therapy	2,352	1,777	1,500	1146	-1206	-21.3%
Community Based Total	**11,825**	**9,086**	**7,688**	**10,171**	**-1654**	**-4.9%**

Horsham and Dimboola Campuses

Horsham community health has been part of the former Wimmera Health Care Group. The service principally operates from the main hospital campus, Arapiles House and the Alan Wolf Centre. It is essentially a 5-day a week service with district nursing on weekends. It provides a range of community and district nursing and allied health services, including:

- Programs specifically focused on Aboriginal and Torres Strait Islander community;
- District nursing;
- General health promotion programs;
- Family planning, sexual health and cervical screening through the Women's Health Clinic; and
- Social support through the Day Centre.

Table 14-3 shows that the Horsham campus delivers ~76% of the community health activity for the Rural City of Horsham and is therefore the predominant provider. Grampians Community Health is the dominant provider in care coordination and counselling services. The proportion of activity by Horsham campus for the populations of surrounding Shires is less than 10%.

Overall, the Horsham campus contributes 12.1% of the regional self-sufficiency.

Table 14-3: Horsham Campus – Community Health and Community aged care services market Share 2019-20

For Rural City of Horsham	Service Events/Contacts									
	Audiology	Care Coordination	Counselling/ Casework	Dietetics	Initial Needs Identification	Nursing	Occupational Therapy	Physio	Podiatry	Speech Therapy
Ballarat Campus	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%	0.2%
Horsham Campus	0.0%	0.0%	17.0%	83.9%	85.9%	73.8%	83.4%	94.2%	85.1%	95.9%
Stawell Campus	0.0%	0.0%	0.0%	1.6%	0.7%	0.4%	1.6%	0.8%	0.0%	0.2%
Grampians Health	**0.0%**	**0.0%**	**17.0%**	**85.5%**	**86.6%**	**74.4%**	**85.0%**	**95.2%**	**85.1%**	**96.3%**
Grampians Community Health	0.0%	100.0%	81.0%	0.0%	64.0%	0.0%	0.0%	0.0%	0.0%	0.0%

The Horsham campus provides significant level of services in all allied health and nursing, with the exception of audiology, care coordination and counselling. This seems to be symbiotic with its CRC role.

Table 14-4: Occasion of service for Community based services Horsham and Dimboola campuses 2015-2019

Service Type	Grampians Health - Horsham & Dimboola					
	2015-16	2016-17	2017-18	2018-19	Raw Change	% Change per Annum FY16 to FY19
Audiology	1				-1	-100.0%
Counselling / Casework	524	428	532	418	-106	-7.3%
Dietetics	752	828	700	527	-225	-11.2%
Initial Needs Identification	1,659	1,649	2,018	2573	914	15.8%
Nursing	530	533	592	529	-1	-0.1%
Occupational Therapy	610	532	571	541	-69	-3.9%
Other				1	1	
Physiotherapy	3,054	3,240	3,772	3597	543	5.6%
Podiatry	3,945	3,716	3,552	3399	-546	-4.8%
Speech Pathology / Therapy	2,183	2,838	2,356	2050	-133	-2.1%
Community Based Total	13,258	13,764	14,093	13,635	377	0.9%

The overall activity from 2015 to 2019 has remained relatively unchanged with minimal growth of 0.9% (377 occasions of service), from 13,258 to 13,635 occasions of service.

Stawell Campus

Stawell provides a service five days a week that includes community health, district nursing and a social support group. The district nursing service provides a wide range of specialist nursing and health support services. The social day program promotes client centred activities that assist people to remain as independent as possible.

There appear to have been a strong increase in demand for disability (NDIS) services at Stawell as brokered services from Grampians Community Health. There services have been limited by capacity to provide allied health services.

Stawell campus delivers in the order ~61% of the community health activity for the North Grampians Shire and is the largest service provider. It also has a significant role for the Pyrenees Shire at 14.7%.

Stawell provides 10.7% of the total regional community health and community aged care services.

Table 14-5: Stawell Campus – Community Health and Community aged care services market Share 2019-20

For Northern Grampians Shire	Service Events/Contacts									
	Audiology	Care Coordination	Counselling/ Casework	Dietetics	Initial Needs Identification	Nursing	Occupational Therapy	Physio	Podiatry	Speech Therapy
Ballarat Campus	0.0%	0.0%	0.2%	0.1%	0.0%	1.8%	0.0%	0.2%	0.3%	0.8%
Horsham Campus	0.0%	0.0%	0.0%	0.4%	1.7%	0.5%	0.6%	1.6%	1.8%	4.6%
Stawell Campus	0.0%	6.2%	9.3%	88.6%	70.6%	55.0%	95.4%	80.6%	95.1%	91.4%
Grampians Health	**0.0%**	**6.2%**	**9.5%**	**89.1%**	**72.3%**	**57.3%**	**96.0%**	**82.4%**	**97.2%**	**96.8%**
Grampians Community Health	0.0%	93.7%	70.6%	0.0%	14.4%	8.4%	0.0%	0.0%	0.0%	0.0%

The Stawell campus provides a significant proportion of community-based services in the Northern Grampians LGA. Table 14-5 shows that the Stawell campus delivers a high proportion of services in occupational therapy (95%), podiatry (95%), speech therapy (91%), dietetics (89%) and physiotherapy (81%).

Table 14-6: Occasion of service for Community based services Stawell campus 2015-2021

Service Type	Grampians Health - Stawell							
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Raw Change	% Change per Annum FY16 to FY21
Care Coordination	124	170	61	53		13	-111	-36.3%
Counselling / Casework	520	466	439	693			-520	-100.0%
Dietetics	1915	1186	1487	976	745	1277	-638	-7.8%
Health Promotion				3				
Initial Needs Identification	1888	1540	1664	1841			-1888	-100.0%
Nursing	1133	1129	844	665	990	1,210	77	1.3%
Occupational Therapy	795	1341	948	885	640	431	-364	-11.5%
Physiotherapy	4,320	3,085	4,151	3914	2,268	2,096	-2224	-13.5%
Podiatry	1,581	2,048	2,075	2139	1597	1208	-373	-5.2%
Speech Pathology / Therapy	1,220	1,036	1,200	1288	878	930	-290	-5.3%
Allied Health Assistant					997	1121	1121	
Diversional Therapist						96	96	
Exercise Physiologist					645	586	586	
Intake					3723	4478	4478	
Social Worker					507	628	628	
Community Based Total	13,496	12,001	12,869	12,457	12,990	14,074	578	0.8%

The overall activity from 2015 to 2019 shows minimal growth (0.8%), from 13,496 to 14,074 occasions of service. The abovementioned issues with respect to the reporting of the data is likely to be a key factor in the activity trend. The reported data from 2019-20 to 2020-21 is impacted by COVID-19.

Edenhope Campus

The Health and Wellbeing Hub operates Edenhope and District Memorial Hospital's community services including:

- District nursing;
- Social support groups;
- Chronic disease management and prevention including foot wellbeing clinics, diabetes education and exercise programs;
- Cancer support;
- Adult day centre;
- Women's Health; and
- General health promotion programs.

Some services are delivered at the Elsie Bennett Community Health Centre. In addition, it operates a General Practitioner clinic from Monday – Friday.

Table 14-7: Occasion of service for Community based services Edenhope campus 2018-2021

Service Type	Grampians Health - Edenhope				
	2018-19	2019-20	2020-21	Raw Change	% Change per Annum FY19 to FY121
Social Support Group (PAG)	7903	5861	2795	-5108	-29.3%
District Nursing	1774	1380	2321	547	9.4%
Allied Health and Therapy Services	240	88	58	-182	-37.8%
Social Support Individual	6			-6	-100.0%
Community Based Total	9,922	7,329	5,173	-4749	-19.5%

**2021 - 2022 estimates is based on part year mostly represented by appointments*

There was a total of 5,173 occasions of service for community-based services at the Edenhope campus in 2020-21, decreasing from 9,922 in 2018-19. This represents a decrease of -19.5% change in activity per annum. COVID-19 is the most likely single factor in the activity trend.

14.1.1. Current and emerging issues and future directions

- ***Role delineation.*** The mix and crossover of service provision in community health delivery results in an inherent lack of clarity in service delivery between health care providers. Effective coordination and role delineation between different providers and Grampians Health is essential to ensure an appropriate and effective focus on local community health to reduce acute and chronic presentations to hospitals and more broadly make inroads into the burden of disease in any given community. This makes partnerships and close collaboration with other service providers imperative for seamless care delivery.

- ***Access***. For all primary and community health access, the service is business hours. Increasingly, business hours will need to be extended for services that are part of a care pathway linked to patients discharged from any of the five campuses.

- ***Funding model.*** The funding model as currently structured is not able to ensure service viability through economies of scale, nor the targeting of client outcomes. This means that community health services are either cross subsidised by other funding sources and/or reduced in scope. There are limited opportunities to increase access to community health services as part of the current funding regime.

  Some community health and primary care services may be best divested to another provider and/or be enhanced by tight collaboration models that can increase scale, especially in Horsham and Ballarat.

- ***Service gaps***. A high level of unmet demand for Aboriginal and Torres Strait Islanders, women's health and NDIS services was reported in the consultations.

  This may also extend to community aged care as Commonwealth Home Care Packages are rolled out. Again, collaboration, investment or disinvestment, are all future options for each of these services.

- ***Robust data.*** The development of this CSP has highlighted the difficulties associated with using the existing data from the CHMDS and from agencies for planning purposes. Indeed, the reliance on the data for internal performance monitoring is also problematic.

- ***Infrastructure.*** The demand forecasts indicate capacity will be an issue at the three larger campuses; Ballarat, Horsham, and Stawell. In addition, the infrastructure that is currently

available is either not fit for purpose or is not suited to the contemporary service models proposed in this CSP.

Proposed key developments

It is proposed that Grampians Health look to:

- A centrepiece strategy based on **collaboration and partnerships** that reflects the relatively limited role at Ballarat and fragmented role at the western campuses of Grampians Health. The strategy is to ensure a seamless transition between service types. Collaboration and partnerships are a necessary foundation of a client-centred service delivery system.
- A directly related strategy is to ensure that there is clear **role delineation** between Grampians Health and other community health service providers that:
  - **Identify and address service gaps**. Stakeholders across Grampians Health identified many areas of service gaps. Most of these are anecdotal that cannot be validated due to the paucity of community-based data. A number of areas that were particularly highlighted include community mental health support services, alcohol and drug services, podiatry, children's disability assessment and support services, continence nursing, specific women's reproductive health services, paediatric services, strategies to ensure men present for health checks, speech therapy, amongst others;
  - Reduce **service overlap**;
  - Ensure **appropriate referrals between service providers** for clients/patients who need to transition between different levels/complexity of services consistent with the agreed roles. Two high volume areas include clients requiring primary care allied health and community nursing, as well as chronic disease management; and
  - **Role delineation** between Grampians Health and the main community health service providers is critical to a well-functioning health system.
- It will be necessary (as part of master planning) to **develop ambulatory hubs** at Ballarat, Horsham, and Stawell to better enable a change of focus away from hospital, enable contemporary service models and meet demand.
- **Support other providers** with respect to community-based initiatives that enhance health outcomes, increase health literacy, independence, and self-management.
- In collaboration with the newly established GPHU, **support public health initiatives** including lifestyle campaigns, fluoridation, amongst many other potential regional strategies that enhance health outcomes.
- **Functioning digital platforms:**
  - To **provide virtual care/support** to more rural clients and clients who find it difficult to access community services; and
  - **Support enhanced communication** between service providers, including patient-level information transfer to allow for greater integration.
- **Review funding opportunities** across Grampians Health to expand community health services to meet local area needs.

- Improve **access for first nations** people through enhanced, trusted relationships with ACCHOs, including developing/modifying pathways to care provided by Grampians Health.
- Ensure consideration is given to clients with complex disabilities and support integration with RCH.

14.2. PRIMARY CARE

The provision of primary health related programs is a shared responsibility between primary health providers and Grampians Health. Australian Health Ministers have described primary health care as 'the frontline' of Australia's health care system, encompassing a large range of providers and services across public, private, and non-government sectors'.[74] Primary health care is intended to provide equitable, high-quality services that are universally available and offer a first point of contact with the health care system in the community where people live.

In addition to Grampians Health's new role for the GPHU, there is an important ongoing role in primary health care at the western campuses of Grampians Health in relation to sustainability of medical primary care practices operated by Grampians Health at Edenhope, Stawell, and Horsham.

Horsham Campus

Read Street Medical Clinic in Horsham, a division of the former Wimmera Health Care Group, operates a five-day service from Monday to Friday.

The John Pickering Medical Centre, collocated at the Dimboola Hospital campus is a private practice. The practice supports 1.5 FTE GPs that operates Monday to Friday with local on-call arrangements to inpatients and urgent care.

The Horsham campus also provides a range of allied health services focused on primary care that are open to external/community bookings, including:

- Dietetics;
- Occupational Therapy;
- Physiotherapy;
- Podiatry;
- Speech Pathology;
- Social Work; and
- Dental and denture clinic.

Stawell Campus

Stawell campus includes the Stawell Medical Centre general practice. The service operates Monday to Friday, with after-hours services provided through the Urgent Care Centre at the Stawell Hospital. The practice employs General Practitioners and Practice Nurses and is an RACGP-accredited teaching practice. GPs from the medical centre have VMO admitting rights to the acute services of Stawell Hospital. The medical centre provides a Risk Prevention Program and is equipped to perform minor procedures and other services such as INRs, ECGs, and spirometry.

74. SCoH (Standing Council on Health) 2013. National primary health care strategic framework. Canberra: Commonwealth of Australia. Cited in Australian Institute of Health and Welfare 2014 Australia's health 2014. Australia's health series no. 14. Cat. no. AUS 178. Canberra: AIHW

Edenhope Campus

Edenhope campus supports the operation of a local GP presence. The service is provided by The Rural Doctors Medical Clinic, which operates from Nhill. The service was transferred from Edenhope and District Memorial Hospital to The Doctors Medical Clinic in April 2020.

14.2.1. Current and emerging issues and future directions

There are different issues for each of the campuses.

- ***Role.*** Each of the western campuses of Grampians Health is heavily invested in primary care, including GP practices. The effective provision of primary care and the operational sustainability will be under regular review.

- ***Workforce*** For the three western campuses of Grampians Health, delivering primary health care, and particularly primary medical care, is a significant challenge.

  The difficulties recruiting and retaining primary care health practitioners in rural areas more broadly are well documented. There were a number of workforce issues relating to the delivery of primary care services reported in consultations including:

  - Limited professional development opportunities;
  - The level of attractiveness for GPs when the on-call and other conditions of employment are compared with alternative positions;
  - The part-time FTE role allocation for primary health services at Edenhope; and
  - Lack of appropriate accommodation within the local community.

Proposed key developments

It is proposed that Grampians Health:

- Continue to **ensure primary medical services** in Horsham, Edenhope and Stawell that are viable. This is likely to mean:
  - Innovative medical support models, and planned relief arrangements, to ensure longevity to the solo GP at Edenhope;
  - Recruitment of GPs at Horsham and Stawell practices, notwithstanding the acknowledged difficulties. Various recruitment strategies have been developed with limited success. The GP services have continuing sustainability challenges. The state-wide review of GP availability to public hospitals could be an important watershed to contribute to the viability of GP rural services;
  - Training and mentoring support for anaesthetic and obstetrics training of GPs at the western campuses of Grampians Health; and
  - Developing opportunities for GPs in Ballarat and Horsham to acquire areas of specialisation in clinical areas that would enable specialists to refer specialist clinic patients back to primary medical carers.

- Proactively **collaborate with GPs in the catchment** to enable timely and informed discharge of patients. This needs to be supported by digital platforms to ensure reliable and accurate patient information is accessible.

- Work in **collaboration with other providers** in the region to extend/develop strategies to recruit and retain primary care health practitioners. Options should include joint staff appointments, local training, joint recruitment, service outreach, mentoring and professional development opportunities in the region, amongst others. This could be developed as a regional leadership opportunity for Grampians Health.

- Work collaboratively with the PHN and with the Western Vic Regional Training Organisation to strengthen the GP trainee supply pipeline in the catchment and with Rural Workforce Agency Victoria on the development of stronger strategies for GP recruitment and retention.

14.3. COMMUNITY DENTAL

Community dental services provide comprehensive public dental care to eligible populations. Public dental services are funded on the basis of activity undertaken (in the form of Dental Weighted Activity Units – DWAU). DWAU are allocated and funded by Dental Health Services Victoria (DHSV). Funding is a combination of mainly state funding supplemented by grants from the Commonwealth Government, and by access to the Commonwealth Child Dental Benefits Scheme (CDBS).

Oral health is an integral part of an individual's overall health and well-being. Poor oral health can affect individuals at all life stages, from infancy to older adulthood. It is associated with several risk factors including poor nutrition, impaired appearance and speech, social isolation, as well as chronic conditions such as diabetes, stroke, chronic pain and infection, depression (or eroded self-esteem) and cardiovascular disease.

While dental disease is largely preventable, certain disadvantaged population groups struggle to gain access to quality dental care, particularly for rural populations. Therefore, public dental services are expected to continue to be a core service for Grampians Health.

14.3.1. Activity and Capacity

In aggregate, across Grampians Health in 2020-21, there were 10,089 patients who received 24,195 treatments, including 1,903 dentures.

Ballarat Campus

2020-21 was a COVID-19 impacted year. Nevertheless, there were 8,129 dental patients receiving over 19,443 treatments (including 1,183 dentures), a rate of almost 2.4 treatments per patient. As a teaching service for 4th and 5th year dental students from Latrobe University Ballarat provided an additional 23,688 treatments by students for 6,278 visits. *It is noted that for 2018-19, which was last year unaffected by COVID-19, visits, treatment were higher than for 2019-20 and 220-21*.

The total estimated eligible population in the Ballarat catchment was 61,591 in 2021, which indicates a current utilisation rate of 13.20%. Based on a projected eligible population of 76,131 by 2036, with no increase in relative utilisation, service provision would be projected to reach 10,049 patients, assuming no change to dental health disease prevalence or waiting lists.

In 2020-21, the general waiting list is 25.4 months, the denture waiting list is 18.9 months and the priority denture waiting list 5.8 months. *Prima facie,* this represents a high level of unmet demand.

Ballarat campus offers a ***comprehensive community dental program***. Currently there are 20 dental chairs at the main clinic in Sebastopol (including 12 teaching chairs) and two chairs at Yuille St site. These chairs are supported by a dental lab, an OPG, and on-site CSSD. The clinics operate 8 hours a day, 5 days a week.

The workforce at the Ballarat campus comprises 38 FTE and 40 students.

Horsham and Dimboola Campuses

In 2020-21, there were 1,812 dental patients receiving over 4,351 treatments including 678 dentures). The total *eligible population* in the immediate Horsham and Dimboola catchment was estimated to be 13,141 in 2021 and is projected to be 13,947 in 2036. This indicates a current utilisation rate of 13.79%, marginally higher than for Ballarat. The rate of treatments per patient at 2.4 per is the same as for Ballarat.

In 2020-21 there was a general waiting list of 25 months, a denture waiting list of 9.7 months and a priority denture waiting list of 3.2 months. Waiting times remain a challenge, although they are much shorter than for Ballarat.

Currently, there are 4 dental chairs at the Horsham campus alongside a dental laboratory, and a sterilisation department within the hospital, plus a single chair clinic at the Dimboola site. The clinics operate at 7.5 hours a day, 5 days a week. The workforce comprises 9 FTE.

Stawell Campus

There is no public dental service at Stawell. Eligible clients tend to travel to Ararat (20 minutes away), to the larger population centre of Horsham (40 minutes away) or seek local dental service privately.

Edenhope Campus

In 2020-21, there were 148 dental patients receiving over 401 treatments, including 42 dentures. Edenhope offers a small and intermittent service.

Total *eligible population* is estimated to be over 50% of the population of Edenhope and surrounding areas representing an estimated 799 people and projected to reduce to 685 in 2036. There is a high current utilisation rate of 18.52%. There is no waiting list data available for Edenhope.

Currently there is a single dental chair at Edenhope operating one day a week with the support of a local private dentist. The service is not sustainable in the future.

14.3.2. Current and Emerging Issues

One of the most significant challenges for public dental in the Grampians Region is the segmented and disparate approaches of the eight separate dental services, each with its own set of challenges. With the formation of Grampians Health there are now opportunities to enhance access to dental services. Some of the identified challenges for dental services include:

- Long waitlists for general treatment of 25 months, for priority denture of 5 months and for dentures between 9 and 18 months. This is a national issue that is not confined to Grampians Health and has been further exacerbated by COVID-19.
- Lack of access to qualified and appropriately trained dental workforce (both recruitment and retention). Workforce shortages are an important cause of high unmet demand. The challenges are a paucity of trained dentists, exacerbated by a shortage of trained dentists continuing to practice in the public dental sector.
- The pace of change of treatment models for some public dental sites, including the level of productivity of public dentistry vis a vis private dental practice.
- The levels of funding not keeping pace with demand for services.
- Lack of prevention and oral healthcare education undertaken in the Grampians Health region.
- Non- fluoridation of Edenhope's drinking water.

There are some reported challenges at specific sites, including:

- Ballarat Campus
  - Practice limitations of inexperienced dental students resulting from COVID-19 restrictions;
  - Recruitment of dental teachers required to support students;
  - The practice and scale challenges of Yuille St Dental Practice in Wendouree; and
  - Variability of funding in the previous funding model across teaching clinics.
- Horsham/Dimboola Campuses
  - The workplace culture is seen as a challenge, including difficulties associated with introducing new practices that are part of most public dental practices in the state; and
  - Inefficiencies associated with scale, and limited clinical support, for the single chair clinic in Dimboola.
- Edenhope Campus
  - The current contract with private provider is ending and there is no alternative dental services in the region;
  - Difficulty finding private providers to undertake 'voucher' specific work and limited access to transportation for care out of region;
  - A significant lack of oral health literacy, promotion, and education e.g., high consumption of sugar, tobacco and alcohol;

  - A significant lack of dental care for all eligible priority care groups, e.g., little to no emergency services, no complex restorations, no endodontics, no periodontal assessments/treatments, no OPG referrals or assessments;
  - There are no reported wait lists;
  - Limited instruments and equipment; and
  - The sterilisation of equipment is overdue for review for accreditation and compliance.
- Stawell Campus
  - Not having a public dental presence in Stawell is seen by many stakeholders as a significant service gap.

Proposed key developments

The proposed developments for public dental would appear to fall into three main types, outlined in more detail below. Namely;

- Opportunities to **improve access** and reduce waiting times following the amalgamation;
- Operational opportunities that can **improve culture, efficiency, and quality practice**; and
- Broader **system-wide enhancements**.

Strategies to Improve Access

- There are opportunities for **enhancing capability and capacity**, including expansion and strengthening a *qualified dental workforce* to include oral health therapists, dental therapists, dental hygienists, dentists, and advanced training dental nurses:
  - To enable Grampians Health to develop an appropriate workforce mix to meet the needs of the eligible population across all sites; and
  - Expand the number of Latrobe University dental students and allocate them to Edenhope, Horsham and Dimboola with support and mentorship;
  - Codesign and support an *Oral Health course* at Latrobe University; and
  - Provide face-to-face and virtual mentoring and education to undergraduate and graduate dentists, as well as oral health therapists.
- Expanding the **reach of dental services** to ‘at risk’ and priority groups (such as Supported Residential Service clients, first nations people, pregnant women, CALD, homeless, intellectual disability, mental health care clients and children) by targeting referral pathways and conducting outreach visits and treatments. It is acknowledged that this strategy places stresses on a financially sustainable public dental service already under pressure. Nevertheless, the operational plans for dental should indicate how this strategy can be progressed.
- Opportunities for **flexibility and sustainability**, including:
  - Allocation/rotation of workforce and resources across all Grampians Health sites;
  - Upskilling existing staff (across all dental disciplines) including ongoing training and further education;
  - Ensuring effective succession planning for key roles;

  - Developing a sustainable public – private model mix to attract dentists to regional and rural settings; and
  - Increasing the focus on preventive based dental service priorities, including developing and delivering age-appropriate resources to prevent tooth decay and other dental disease. This includes oral health awareness and literacy programs for adults, school-based education outreach, and young mothers' programs. This activity should be undertaken in concert with the newly established GPHU.

- **Infrastructure improvement and expansion**, that considers:
  - Upgrade physical spaces and equipment at Horsham and Ballarat, including the development of efficient sites;
  - Development of a feasibility review for contemporary mobile dental vans to provide opportunities to reach under-serviced communities in Dimboola, Edenhope and other sites in Grampians Region as part of a submission to government; and
  - In partnership with Dental Services Victoria, undertake an assessment for a new dental clinic site at Stawell including whether a new Stawell site meet capital investment requirements, identify recurrent Dental Weighted Activity Units, and can operate efficiently without compromising services at other sites.

Strategies to Improve Operational Efficiency and Delivery

- Opportunities for embedding effective **operational and clinical governance** including the integration of public dental through a single management structure, common clinical governance framework, and common performance expectations for public dental services.
- Opportunities to better develop **leadership** including:
  - Identifying, developing, and supporting emerging leaders; and
  - Implementing peer review programs.
- Proactively **manage public dental services** with:
  - Regular monitoring and reporting activity, targets, budgets, team engagement/culture and community need to achieve activity targets in a financially sustained model; and
  - Ad hoc evaluations of patient outcomes as part of Value-based Health care.
- Align **evidence-based models** of care including protocols for evidence-based treatments that make best use of available funding.
- Enhance **consumer engagement, participation and involvement** in care.
- **Implement Child Dental Benefits Schedule** (CDBS) throughout Grampians Health to increase revenue.
- Increasing **access to culturally and linguistically appropriate** oral health information.
- **Improve operational efficiency** by:
  - Aligning activity/DWAU targets, budgets, processes/systems and recruitment to reduce waitlists and deliver equity in access to dental treatment and care across Grampians Health;
  - Regularly reviewing and aligning relative demand with resourcing; and
  - Demonstrating higher relative need for funding of the eligible population.

Strategies to Support System-wide Enhancements

- In the medium to longer-term, consider the negotiation of a single public dental service across Grampians Region.
- Continue to enhance community education and treatment programs to improve oral care across Grampians Health communities.
- Consider private clinics on Saturdays (including CDBS patients) at Ballarat and Horsham campuses to help reduce current waiting lists.
- Support broader public campaigns for the introduction of fluoride programs.
- Support the introduction of silver diamine fluoride programs to aged care residents, drug addicts and others.
- Further develop a dental specialist workforce within Grampians Health over the next 15 years, including prosthodontists, endodontists, periodontists, paediatric dentists, orthodontics, oral medicine specialists, special needs dentists, and oral and maxillofacial surgeons.

14.4. NATIONAL DISABILITY INSURANCE SCHEME

The NDIS provides financial support for Australians, generally aged 7 to 65 years who have a significant or permanent disability needing disability specific support to complete daily life activities. The scheme is administered by the National Disability Insurance Agency (NDIA), managed via approved plans that are co-ordinated through Local Area Co-ordinators (LAC). LACs are entities that provide client liaison and planning across a geographical region. For the broader Wimmera region (which includes the western campuses of Stawell, Horsham, Dimboola, and Edenhope), Latrobe Community Health is the designated LAC. For the Central Highlands region (which includes Ballarat), *Interreach* is the designated LAC. The new status of Grampians Health as a single entity may have a bearing on which LAC is applicable in the future.

The program is based on client-directed care, where the client determines the services received within the approved funding envelop.

Actual service provision is facilitated through (registered and unregistered) NDIS providers. Ballarat campus is a registered and active NDIS provider, as a direct service provider and for 'Capital Support – Assistive Technology 'through the *Statewide Equipment Program*. Stawell campus is also a registered and active NDIS provider. Horsham campus is a registered NDIS provider but is inactive (no activity in the three months to June 2022).

Services can be provided across 14 categories that fit into five types: consumables, therapy, health & wellbeing, assistive technology, and home modifications.

In broad terms, Grampians Health is expected to have an ongoing role in meeting the needs of NDIS clients. The key consideration is what role is best suited to Grampians Health noting that there are some roles that can be readily eliminated. Grampians Health would not seek to be a LAC, or fundholder for individual clients. Similarly, it is unlikely that Grampians Health a comprehensive provider of all NDIS service types.

It is assumed that Grampians Health State-wide Equipment Program will continue to be an active provider of NDIS 'assistive technology'. Consideration for this CSP is the extent to which Grampians Health:

- Seeks to be a general provider of health and therapy-related services; or
- Would more narrowly define its service offering for different disabilities/conditions or therapy types (such as occupational therapy); and
- Whether the Grampians Health role would differ between Central Highlands and the western campuses of Grampians Health.

As a program based on client-directed care, Grampians Health will need to be agile, and responsive to changing market conditions.

The basis on which Grampians Health will determine its NDIS role should include:

- The strategic position that Grampians would like to adopt consistent with its strategic plan;
- The breadth of therapies that should/would be needed to ensure a critical mass of services to NDIS, based on a market assessment;
- The breadth of service/therapy specialisation, based on a market (competitor) assessment;
- The specialisation across disability types, based on a market assessment;
- The scale and workforce mix/FTE of:
  - A stand-alone NDIS workforce; and
  - Synergies with staff also working across other internal programs. The level of 'planned redundancy' needed to operate in a market driven environment;
- The overall financial position and the level of any return on investment that would act as a threshold level;
- The synergies that the State-wide Equipment Program might afford;
- Partners that may be necessary;
- The management/administration and compliance costs of a registered NDIS provider; and
- An assessment of the different market conditions between Ballarat and in the western campuses.

It is proposed that Grampians Health undertakes a feasibility review that examines all identified aspects of a future role in NDIS service provision.

Many of these issues extend to community aged care through Commonwealth Home Care Packages (HCP) or their successor Support at Home. These are considered further in Section 16.2 and are likely to involve similar disciplines across the organisation. Again, collaboration, investment, or disinvestment are all future options for each of these services.

Further strategies for reducing pressure on acute patient flows as a result of NDIS are explored in Section 7.1.4 relating to Development of a Complex Discharge Referral Team and Section 10.4 of this document relating to underutilised RAC bed stock.

15. Allied Health

This section synthesises the important role played by allied health across all streams of care, from ED, to acute/subacute, RACS to specialist ambulatory and community as well as at home services. There is also an important role played by allied health services in health promotion and illness prevention.

15.1. SCOPE

The scope of allied health services currently delivered by Grampians Health is broad. Allied health comprises the following clinical disciplines:

- Physiotherapy;
- Occupational therapy;
- Exercise physiology;
- Speech Therapy/Speech Pathology;
- Audiology;
- Dietetics;
- Psychology including neuropsychology;
- Social work;
- Podiatry;
- Prosthetics and Orthotics;
- Pharmacy (separately considered in section 17.3); and
- Allied health assistants.

There are also other related functions such as interpreter services and Aboriginal liaison officers, amongst others.

15.2. ROLE AND INTER-DEPENDENCIES

Allied health services in the form of physical therapies (physiotherapy, occupational therapy, speech pathology, audiology) and other allied health including dietetics, psychology, social work, amongst others, provide clinical services that promote health, functioning and well-being. The important role of allied health spans single-disciplinary interventions, multi-disciplinary interventions, and key collaborative inter-disciplinary engagement with models of care generally and for specific patients.

Allied health professionals have a potentially significant impact on the rates of improvement, functionality, and psychological state of patients in ED, inpatients, outpatients and in community-based settings. The role of the allied health professional is potentially important to drive changes in the health care system based on innovative ways of treating and caring for patients. Allied health services are relevant across the continuum of care, from primary care to urgent/ emergency care, to acute and subacute care to home-based care.

The important role played by allied health spans both single-disciplinary health care interventions by allied health providers, to their key collaborative role in inter-disciplinary models of care.

The following examples are illustrative of their central importance of allied health practitioners' roles in either single disciplinary or multi-disciplinary models of care, but is not intended to be exhaustive:

- **Primary contact physiotherapy roles in ED settings**. This enables the assessment and treatment of patients with an identified range of musculo-skeletal injuries to have their ED treatment managed by advanced practice physiotherapists. The advantage of this model of care is that it facilitates streaming of patients within ED for streamlined management by physiotherapists working at the top of their scope of practice. It promotes an efficient and effective use of resources within ED which optimises patient flow.

- **Podiatry in community-based setting.** Podiatrists play a core role in the management and treatment of at-risk diabetes patients. Diabetes-foot clinics enable responsive, evidence-based management of vascular conditions for patients with diabetes. Podiatrists' role is crucial to supporting patients to maintain or optimise mobility and to live independently

- **Cognitive behaviour therapy in pain management clinics**. Chronic pain represents a very large and increasing burden of disease for people in the Grampians region. Psychologists are instrumental in supporting patients to use evidence-based strategies such as cognitive behaviour therapy, to improve their capability for self-management of chronic pain. In turn, this enables patients with chronic pain to be more likely to maintain or increase their level of social and economic engagement in the Grampians community. Psychologists are an integral part of the inter-disciplinary team required for evidence-based management of chronic pain.

- **Post-stroke swallowing and speech programs.** Speech pathologists play an essential role in assessing and managing patients' recovery from stroke. Managing the risks associated with the impact of stroke on patients swallowing function (dysphagia) are a key role for speech pathology. Another key role is in supporting patients with aphasia to optimise the recovery of their ability to speak and communicate through writing.

- **Nutrition advice to improve self-management of chronic conditions.** Dietitians serve a fundamental role in enhancing health literacy of patients with chronic diseases such as diabetes to reduce modifiable risk factors linked to nutrition. In turn, this promotes patients' self-efficacy, improves their prospects for managing their chronic disease and has the potential to improve health outcomes across other domains including mental illness. Dietitian interventions are essential as either single-disciplinary role – for example in a diabetes education role – or as part of an inter-disciplinary team to manage the multiple patient interventions that are relevant in management of chronic disease.

- **Cardiac rehabilitation.** Physiotherapists and exercise physiologists are essential in supporting patents in their rehabilitation and recovery from cardio-vascular acute episodes. Their role is integral to patients' ability to develop functional recovery goals that will enable their return to independent living, optimising social and economic participation in the community, and reducing their risk of future hospitalisation.

- **Home-visit assessments**. One key role that occupational therapy plays is in assessing frail elderly and other complex patients' capacity for a safe transition from hospital to home. This includes the timely provision of aids and equipment that can support patients to maintain or increase their mobility and independence together with the identification of home modifications to reduce risk and support independent living.

- **Discharge planning**. Social workers are fundamentally important in supporting responsive, streamlined care for patients who present with complex physical, mental, social and other disabilities. Whilst all healthcare professionals have a role in promoting patient-centred and efficient discharge planning, there is a key role played by social workers in more complex cases, particularly where this entails navigating complex family and carer relationships, multi-agency involvement including where there are issues relevant to NDIS eligibility, pathways to My Aged Care and resolving guardianship and medical powers of attorney, to name just a few.

- **Mental health assessments and therapies.** There are several allied health disciplines that can be involved in mental health services. The mostly widely used are psychology, social work and occupational therapy. Allied health disciplines are important to inter-disciplinary approaches to assessment and therapy that are relevant to working with patients to deliver care that addresses mental health needs of patients together with management of co-occurring physical ill-health issues.

- **Palliative care**. High quality palliative care requires a team-based approach, and for teams at the higher capability level, must include medical (led by a palliative care physician), nursing and allied health practitioners such as psychology, social work, speech therapy occupational therapy and physiotherapy together with pharmacists and also spiritual counsellors.

- **Aged care**. The Royal Commission in Aged Care has identified the importance of person-centred care for residents and ensuring that primary health care services are available that meet people's needs for maintaining and improving their health, including *both* physical and mental health. Allied health providers are a vital component of the primary healthcare team that must be available to provide responsive, person-centred care to optimise health status and functional independence to patients in aged care settings, including residential aged care and home-based settings.

Allied health services are fundamental to supporting access to high quality primary health care. Allied health services are also relevant across the continuum of care. These include high acuity settings such as ED and ICU through to lower acuity settings such as subacute care and specialist ambulatory care settings such as community rehabilitation and specialist clinics such as Falls and Balance, Movement Disorders and Cognitive Dementia and Memory Services.

15.3. CURRENT AND EMERGING ISSUES AND FUTURE DIRECTIONS

There are a range of current and emerging issues for allied health. These issues have also been identified in other sections of this CSP and are consolidated below as part of the focus on the allied health program as a discrete component of the Grampians Health service system.

- **Relatively limited engagement (other than at Ballarat) of allied health practitioners with the various models of care.** A common theme of the consultations was the relatively limited, or at least sub-optimal, involvement of allied health staff in the care of patients. This was variously described as sub-optimal patient centred care or patient outcome, relatively low level of experience by allied health practitioners available at the campus in areas requiring specialisation, and no workforce being available. This can possibly result in longer LOS and reduced patient-centred care. There was seen to be a significant opportunity for allied health to take a more active role in patient management/care.

- **Lack of allied health workforce** – The difficulties of recruiting and retaining allied health practitioners in rural areas more broadly are well documented. It is particularly challenging to recruit experienced and specialised staff to senior roles. Grampians Health is expected to continue to face challenges in the recruitment and retention of allied health staff, and the limitations of professional development and promotion opportunities.

- **Role and Enhanced scope of practice**. There is potential over the coming years for the role of several allied health disciplines to be expanded, including enhanced scope of practice. This means substituting experienced senior *credentialed* allied health practitioners to undertake some aspects of care/treatment that would otherwise be undertaken by a medical practitioner. This allows for innovative models of care.

  To provide a foundation for an expanded role for senior allied health practitioners, it is proposed to:

  - Examine the potential (new) areas where allied health professionals can have the most significant impact in improving care integration and patient outcomes (and reducing LOS) and substituting appropriate aspects of care currently delivered by medical specialists, including an expansion of the OAHKS and GLA:D programs which are currently operating at some but not all campuses. (OAHKS and GLA:D are already in place in Ballarat, GLA:D is in place in Horsham and about to commence in Stawell). Consider the expansion of models similar to OAHKS to enable other diversion pathways for high volume musculoskeletal patient conditions such as shoulder pain;
  - Ensure that the appropriate allied health professional is involved in the patient episode of care from the outset, particularly in relation to ACE, Better@Home and MAPU, which incorporate MDT care pathways (See Section 9.8);
  - There is scope to increase the recruitment and scope of practice of allied health assistants to enable more cost-effective provision of existing traditional workforce mix for GEM and rehabilitation programs; and
  - Related to the above is allied health practitioners' engagement with Criteria-Led Discharge as a potential innovation to the service model at Grampians Health campuses.

- **Underdeveloped role in health promotion and illness prevention** – Whilst there is a recognition that allied health practitioners are core players in health promotion and illness prevention, the current approach is fragmented, with separate allied health teams across different campuses. There is also the consideration (certainly for Ballarat) that promotion and illness prevention is typically the role of other health care organisations.

  Both factors limit the effectiveness of health promotion and illness prevention strategies since there is insufficient critical mass to enable joined-up, cross campus, whole of catchment strategies to managed efficiently and coordinated to ensure prioritised actions.

- **Telehealth take-up** – The uptake of telehealth has been significant since 2020. In Ballarat, approximately one-third of non-inpatient allied health consultations are conducted via telehealth, including group-based programs. However, the uptake differs significantly by professions with some professional consultations (e.g. psychology) more transferable to telehealth. Telephone is far more prevalent than video-calls, and the barriers to video-calls need to be further explored in order to optimise the uptake of telehealth.

- **7-Days a week** – Allied health services are traditionally operated during business hours, Monday to Friday. This limits the capacity for continued provision of allied health programs across weekends, creating discontinuity in models of care potentially increasing LOS, particularly affecting discharge on weekends.

- **Demonstrated effectiveness**. The importance of evidence-based practice is acknowledged by allied health and therefore, research is part of core business. Aligning with the Victorian Allied Health Research framework, dedicated research and education roles have been created in the Grampians region. These create career development opportunities and help drive improvements in evidence-based clinical care.

More than the development of positions, a priority focus is to demonstrate the effectiveness/value delivered by allied health practitioners, in the models of care and patient outcomes.

Proposed strategies

The above issues lead to the following strategies for allied health:

- **Expanded workforce to address service gaps** – An increase in the allied health workforce across all disciplines is necessary to meet the increased demand for health services and address the growing burden of disease in the Grampians region.

  It is proposed to adopt a whole of organisation approach, that systematically assesses the relative resourcing of each allied health discipline across campuses across service streams, and seniority/experience, including allied health assistants, and then assess options for innovative models that can address minimum needs in the short to medium term, including partnership arrangements with other providers, and with universities.

- **Broader scope of practice** – To increase attractiveness of career pathways in Grampians Health, there is a need to broaden the scope of practice for allied health practitioners. This includes identifying and developing advanced practice roles for allied health practitioners in areas such as, but not limited to, primary contact physiotherapy in ED, and for mental health (aligning with the Royal Commission findings). Another component of this strategy involves the increased deployment of allied health assistants within quality and safety criteria and under the delegation of allied health professionals. Some of the assistant roles are well established (e.g. physiotherapy assistant) and others have significant scope for development (e.g. dietetics, social work).

- **Professional Development.** Related to the above, develop a whole of organisation approach that allows for professional development, career advancement opportunities, and position rotation across all five campuses.

  The consultations indicated that some allied health professionals operate in professional isolation where there are only a few practitioners in their discipline or specialty. It is important that there is a professional support link that is explicit and clear based on established frameworks for allied health clinical supervision.[75]

- **Clinical Impact of allied health and Demonstrated Value.** Based on the consultations, it will be important to develop a specific (research) program. However, it will be *more important* to go beyond specific service type research programs, and focus on embedding quantitative evaluation of the relative impact of allied health services on *patient outcomes and patient flow for all services and allied health professions*. For example, this could include examining real time (activity bar coding) database for allied health and use a comparator patient cohort with no, or more limited allied health involvement.

- **Enhanced role in health promotion and illness prevention** – Allied health practitioners are integral to the development of health promotion and illness prevention strategies region-wide. There is a need to ensure a whole of organisation approach to optimise the contribution of all allied health staff from all campuses. This is relevant to ensuring coordination of scarce resources and to achieve a focus on highest priority public health interventions that can utilise the critical mass of an allied health workforce entity-wide.

75. References include: http://nrrss.sarrah.org.au/content/competency-frameworks.
http://www.sahealth.sa.gov.au/wps/wcm/connect/ad788900438bd2b689308dfd37f1549d/ASH+Clin+Super+Framework+2014.pdf?MOD=AJPERES&CACHEID=ad788900438bd2b689308dfd37f1549d

- **Increased focus on inter-disciplinary, team-based care** – This requires standardising and extending the role of allied health practitioners in inter-disciplinary, team-based care. This includes recognising and ensuring adequacy of allied health capability and capacity to support inter-disciplinary team-based care across settings such as ED, acute care including MAPU, subacute care, specialist clinics, subacute ambulatory care and community-based care to support high quality care and to increase access and patient flow.
- **Increased use of telehealth** – An expanded use of telehealth has significant potential to optimise access across the whole region to the allied health programs of care, particularly in specialist areas. This requires exploration of the enablers and barriers to telehealth, especially video-calls. Care pathways may be re-designed to include, where effective, telehealth and virtual care.
- **7-Day Services** – A future priority is to increase the extent to which Ballarat campus can operate as a genuine 7-day service and will importantly include allied health components that optimise assessments and timely patient flow.

16. Aged Care – Residential and Community

Grampians Health has a combined 632 residential aged care service (RACS) bed licences. The Ballarat sites have 444 bed licences across ten facilities and includes the 20-bed Steele Haughton specialist psycho-geriatric service. The Horsham and Dimboola sites have 112 bed licences across three facilities. Edenhope has 40 bed licences across two facilities, and Stawell has 36 bed licences managed within one facility. Details of the facilities, room configurations and maximum accommodation charges, being Refundable Accommodation Deposits (RADs) and Daily Accommodation Payments (DAPs) are shown in Table 16-1.

Table 16-1: RACS Facilities

RACS Sites			Number of beds	Room Type				RAD				DAP			
Agency	Location	Facility		Single + Ens	Single + Shared Ens	Double + Shared Ens	> than 2 beds	Single + Ens	Single + Shared Ens	Double + Shared Ens	> than 2 beds	Single + Ens	Single + Shared Ens	Double + Shared Ens	> than 2 beds
Ballarat	**Ballarat**	Steele Haughton Unit	20	20				300,000	275,000			33.45	30.66		
		Bill Crawford Lodge	30	8	8	7		350,000	335,000	250,000		39.02	37.35	27.87	
		Talbot Place	30	14		8		400,000		260,000		44.60		28.99	
	Ballarat East	Eureka Village	45	45				340,000				37.91			
		Geoffrey Cutter Centre	60	14		23		340,000		240,000		37.91		26.76	
	Sebastapol	James Thomas Court	34	23	4	3	1	330,000	315,000	340,000	330,000	36.79	35.12	37.91	36.79
		Jack Lonsdale Lodge	60	20		20		320,000		230,000		35.68		25.64	
	Wendouree	P.S. Hobson	60	14		23		360,000		260,000		40.14	28.99		
		W.B. Messer Hostel	45	45				470,000				52.40			
	Ballarat North	Hailey House	60	60				540,000				60.21			
Ballarat Total			**444**	**263**	**12**	**84**	**1**								
Horsham		Wimmera Nursing Home	50	3	4	4	11	411,000	370,000	333,000	333,000	45.82	41.25	37.13	37.13
		Kurrajong Lodge	36	36				426,000				47.50			
Horsham Total			**86**	**39**	**4**	**4**	**11**								
Dimboola		Dimboola Nursing Home	26	12	6	4		422,000	358,000	339,000		47.05	39.91	37.80	
Dimboola Total			**26**	**12**	**6**	**4**	**0**								
Edenhope		The Lakes Hostel	22	22				550,000				61.33			
		Kowree Nursing Home	18	18				550,000				61.33			
Edenhope Total			**40**	**40**											
Stawell		Macpherson Smith Residential Care	36	10	10	8		402,000	360,000	338,000		45.15	40.43	37.97	
Stawell Total			**36**	**10**	**10**	**8**	**0**								
Grampians Health Total			**632**	**364**	**32**	**100**	**12**								

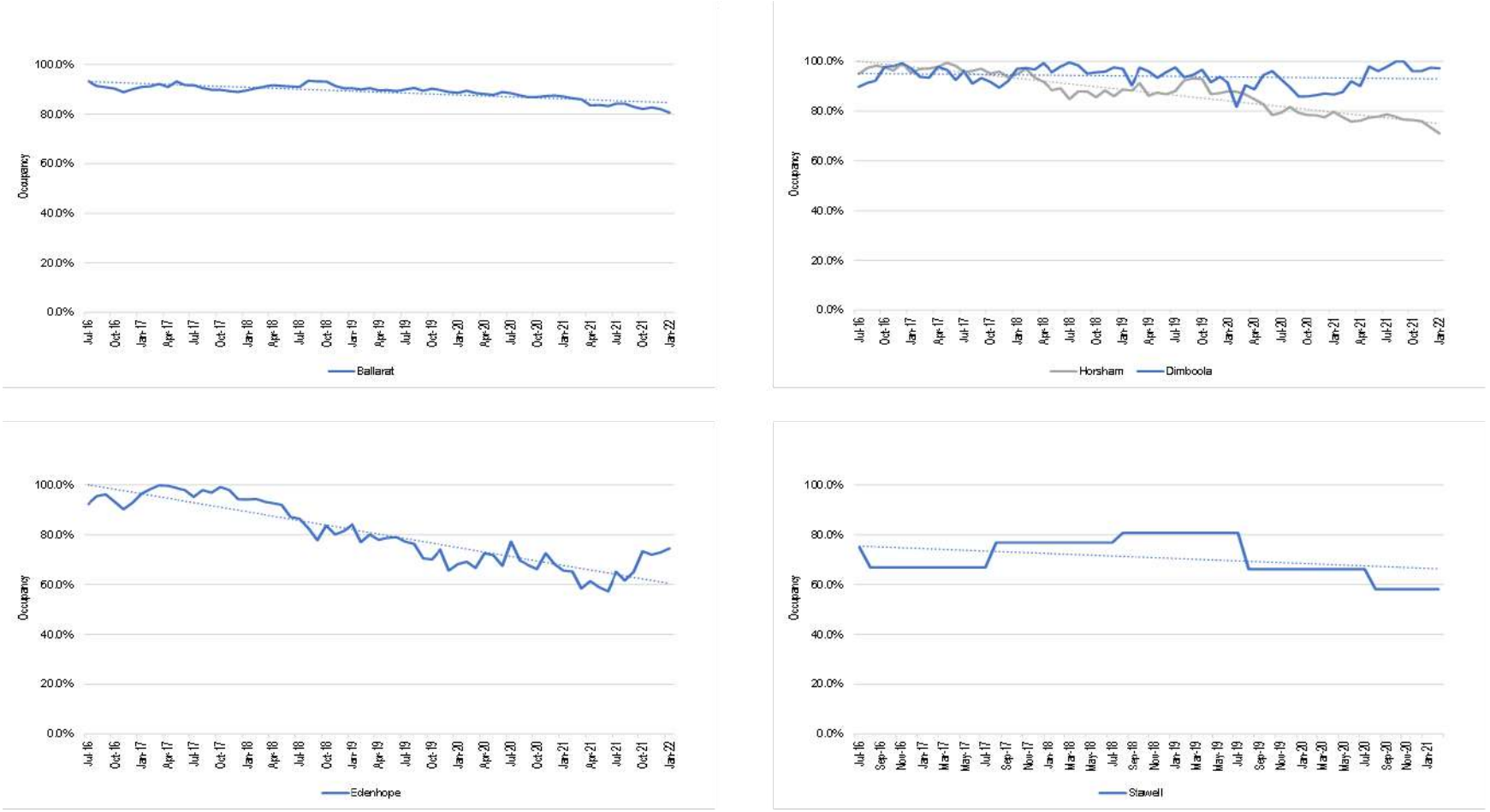
Grampians Health has 65 dementia specific beds with another 8 awaiting funding confirmation, all based in Ballarat which represents 11% of the total beds. All other sites offer dementia as a specialised service. There is variable capacity to deliver dementia specific services to the level that may be required at some sites.

16.1. CURRENT AND HISTORICAL TRENDS – RESIDENTIAL

16.1.1. RACS Occupancy

The total occupancy across the five sites for the period of July 2016 to January 2022 is shown in Figure 16-1.

Figure 16-1: RACS Occupancy – July 2016 to January 2022



Overall, occupancy at Ballarat facilities is trending down. The aggregated occupancy across the ten facilities peaked at 93% in August 2018. The declining trend commenced in November 2018 and continued until January 2022, when the occupancy reached the lowest level at 81%. There are two facilities driving the adverse impact:

- **Steele Haughton unit –** From FY17 to FY19, the facility's occupancy average was 86%. However, the rate decreased to 78% in FY20 and 74% in FY21. Low occupancy could be linked to the facility being a specialist psychogeriatric residential care service and the impacts of COVID-19.
- **Jack Lonsdale lodge –** This facility has only been operating 45 of the 60 beds since September 2016. From FY17 until FY19 occupancy averaged 92%, measured against 45 beds. However, from November 2019 occupancy started to decline and averaged 69% of these 45 open beds in FY21.

Occupancy at Horsham is principally driven by the Wimmera Nursing Home. At this facility, occupancy has decreased from 97% in FY17 to 65% in FY21. Whilst the highest impact on occupancy at the Wimmera Nursing Home was during COVID-19, there was a declining trend pre-pandemic. As presented in Table 16-1, the impacts on occupancy could be linked to the facility's high proportion (86%) of shared rooms and the increasing number of patients with moderate to severe symptoms of dementia.

Occupancy at Dimboola is relatively high. From FY17 to FY20 occupancy averaged 95%. There was a minor decline from July 2020 to April 2021 dropping the occupancy to 90% in FY21 during the COVID-19 "peak". However, occupancy rates have recovered since this time.

The occupancy at the two RACS facilities at Edenhope started to decline during FY18. The facilities had a major redevelopment commencing in August 2019 with Stage 1 involving the relocation of the 18 beds from the previous Kowree Nursing Home site to a new build adjacent to the Lakes Hostel. This stage was completed in June 2020. During the redevelopment the occupancy decreased from 95% to 71%. However, the declining trend continued in FY21 with occupancy levels averaging 65%.

Stawell's occupancy for the MacPherson Smith residential aged care facility appears to be more volatile compared to the other agencies. From FY17 to FY18 there was a decline from a low starting point of 75% to 67%. Over the subsequent two financial years, the occupancy increased to 81%. However, this level was not sustained, and the occupancy reduced to 66% during FY21.

The occupancy of respite beds has significantly decreased for Ballarat, Dimboola, and Stawell sites. The number of respite days at Ballarat sites has decreased by 22% per annum from FY17 to FY21. Dimboola's decrease is 20% over the same period and Stawell's rate decreased by 18%. On the other hand, Edenhope's respite days increased at an annual rate of 9%, while Horsham's increased by 2%.

16.1.2. RACS – ACFI Score

Residents are routinely assessed as being either High(H), Medium(M), Low(L) or Nil(N) eligible for funding against 3 domains being Activities of Daily Living (ADL), Behaviour (BEH), and Complex Health Care (CHC).

Aspex Consulting has developed a scoring matrix to measure resident complexity based on the ACFI classification for residents. A resident with an ACFI classification of HHH attracts of a score of 10.00 whilst a resident with a classification of LLL attracts a score of 2.87. There are 64 ACFI classification combinations all scored relative to the subsidy paid for each classification. This scoring index is useful in highlighting resident acuity trends and making benchmark comparisons between facilities as it eliminates the inflationary effects of the subsidy rates. A score of 8.3 or higher is considered as the benchmark for a sustainable subsidy funded relative to the expenditure incurred.

Figure 16-2 shows the aggregated ACFI complexity across the five sites between July 2016 and January 2022.

Figure 16-2: ACFI Complexity Score – July 2016 to January 2022

Ballarat's score (excluding the Steele Haughton Unit) is relatively consistent throughout the period, ranging from above 8.77 in FY17 and declining slightly to 8.42 in FY21, which remains slightly above the 8.3 Aspex benchmark. Ballarat's total score is falling at an average rate of 1.1% per annum.

Including Steele Haughton, the main driver of the decline, showing an average 5.4% per year decreased rate since FY17 from 7.67 to 6.57 in FY21. The decrease in ADL complexity has been mostly responsible for the scoring decline at the Steele Haughton unit, changing from 4.2 in July 2016 to 2.97 in June 2021.

Edenhope's score dramatically increased from 5.47 on July 2016 to 7.74 in July 2017. The increase was present at both facilities and was due to an external consultant reassessment process. However, scoring for each of the two facilities are significantly different. The Kowree Nursing Home average score since FY18 is 8.08 while the Lakes Hostel averages 6.09. Residents at the Lakes Hostel have lower levels of funding within the ADL and CHC domains compared to the Kowree Nursing Home. Overall, the scores represent the historical use of the facilities for high and low care.

Horsham's score increased at a rate of 3.6% per annum since FY17. The average score of 7.20 changed to 8.28 in FY21. The increase is mainly driven by the Kurrajong Lodge. The scoring at this facility changed by 7.6% per year from 6.01 in FY17 to 8.06 in FY21. The Wimmera nursing home score also increased from 8.05 in 2017 to 8.52 in FY21. For both facilities the levels of care increased under all three domains indicating either a mix of residents with higher and more complex care needs or an enhanced assessment process.

Stawell's score is relatively consistent, maintaining a level between 7.44 and 7.91 during the four years. Funding levels under ADL are high with a slight mix of medium and low BEH and CHC.

Dimboola's score has increased at a rate of 1% per annum since FY17 from 7.36 to 7.65 in FY21. The increase in ADL complexity has been responsible for the scoring increase.

16.2. CURRENT AND HISTORICAL TRENDS – COMMUNITY

The Home Care Packages Program (HCPs) is funded by the Commonwealth to provide long-term and comprehensive care and support services for people 65 years or older who want to live independently in their own homes.[76] Currently, approved aged care service providers work with care recipients to plan, organise and deliver these packages. The services covered by HCPs were traditionally funded as Extended Aged Care in the Home and Community Aged Care Packages.

Historically, these were funded separately from Home and Community Care (HACC) services, or the current Commonwealth funded Commonwealth Home Support Program (CHSP).

The two former programs have merged with the CHSP being for lower complexity care to form the HCP. HCPs are funded by the government and may be subsidised by the care recipient. Both payments are paid directly to the provider. The payment components are:

- Government subsidy (including supplements for specific care needs);
- Basic daily fees (Paid by the recipient);
- Income-tested care fees (Paid by the recipient when applicable) and;
- Amount for additional care and services.

76. https://www.myagedcare.gov.au/help-at-home/home-care-packages

16.2.1. HCP Levels

Currently, a recipient is allowed to select an HCP provider operating in their area based on their individual needs based on four categories of HCP with different funding levels. Recipients are assessed by an Aged Care Assessment Team which assigns a package category, based on their assessment of the client's needs, as follows:

- Level 1: Basic Care;
- Level 2: Low Care;
- Level 3: Intermediate Care; and
- Level 4: High Care.[77]

As shown in Figure 16-3, and Figure 16-4, the Level 2 package is the most utilised at Grampians Health sites whilst level 1 is the least utilised among recipients. This utilisation is consistent with the Grampians region and state-wide trends.

Figure 16-3: Ballarat – Number of People with HCPs by Level

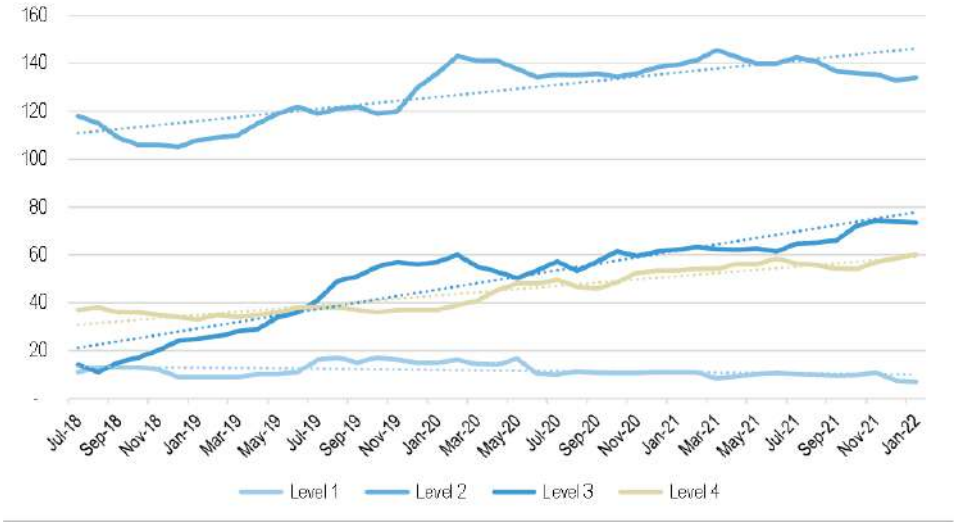
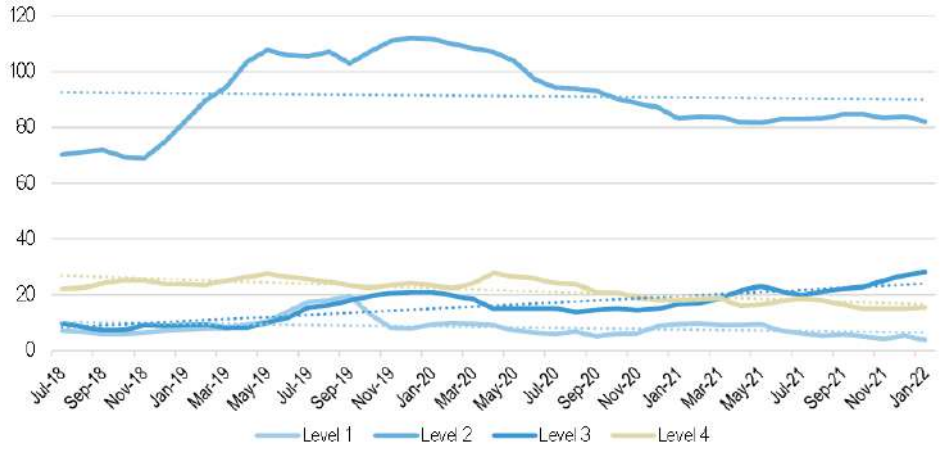


Figure 16-4: Horsham – Number of People with HCPs by Level



77. https://www.health.gov.au/health-topics/aged-care/aged-care-reforms-and-reviews/home-care-packages-program-reforms

16.2.2. Growth in HCPs

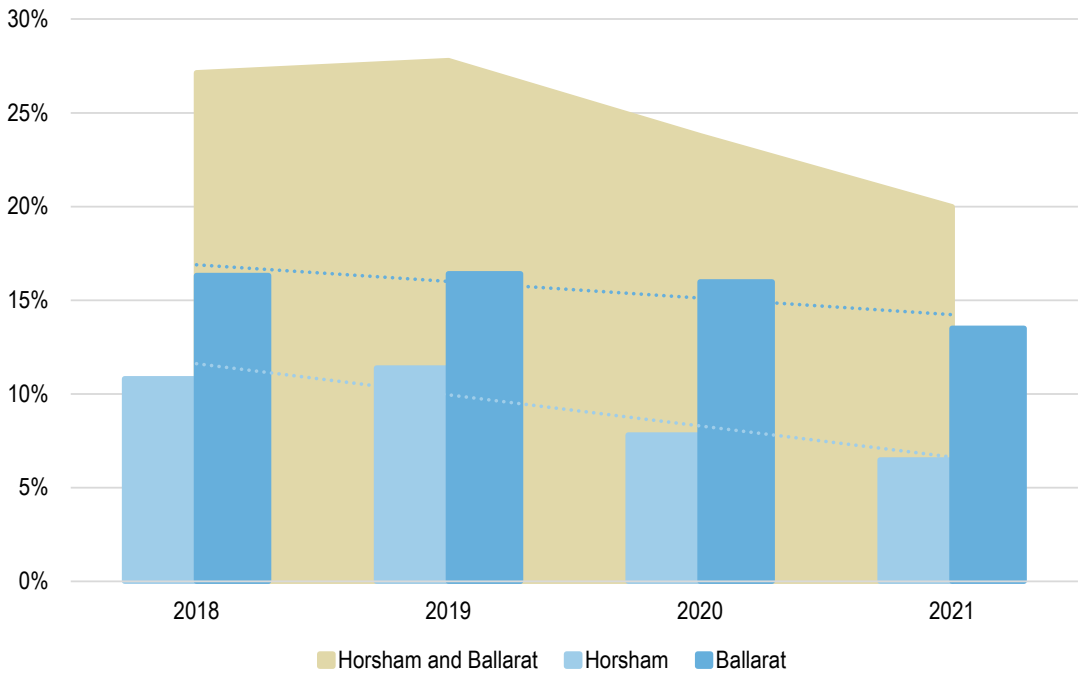
As at December 2021 there are 26 approved HCP providers within the Grampians region, including Grampians Health.[78]. As shown in Table 16-2 by the end of 2021, there were 273 people with HCPs managed by Ballarat and 131 at Horsham. The average demand for HCPs has grown at a rate of 16.5% per year since December 2018 for Ballarat Campus packages and 5% for Horsham Campus. This compares to growth of 24% across the region and growth of 31.5% across the State.

Table 16-2: Number of People with HCPs at 31 December 2021

YEAR	HORSHAM	BALLARAT	GRAMPIANS HEALTH	GRAMPIANS REGION	VICTORIA
2018	114	172	**286**	**1,054**	**23,507**
2019	165	238	**403**	**1,450**	**33,287**
2020	129	264	**393**	**1,653**	**42,218**
2021	131	273	**404**	**2,021**	**53,285**
Annual Growth	5%	16.5%	**12%**	**24%**	**31.5%**

Figure 16-5 illustrates the proportion of people in HCPs managed by Ballarat and Horsham campuses relative to the number of people in HCPs within the Grampians Region. The data indicates that the proportion of community aged care delivered by Grampians Health is reducing over time; from 27% at December 2018 to 20% at December 2021.

Figure 16-5: HCPs at Horsham and Ballarat relative to Grampians Region



78. https://www.gen-agedcaredata.gov.au/www_aihwgen/media/Home_care_report/Home-Care-Data-Report-2nd-Qtr-2021-22.pdf

Current and emerging issues and future directions

- **Market Positioning for HCPs**
  - Government policy has changed over recent years with a greater emphasis on home-based care through a series of funding packages. The policy has had a marked impact on the number of beds required in RACS facilities. It also means shorter time in RACS for a more complex cohort of residents.
  - Whilst the data indicates a 12% growth per annum in individuals receiving HCPs through Grampians Health, Grampians Health is losing market share.
  - The Commonwealth is not reducing RACS licence numbers to match this change in policy direction, resulting in pressures to maintain a viable bed-based service.
  - These two trends raise strategic questions of Grampians Health's ongoing role and level of 'investment' in the sector

- **Policy Changes – Support at home program** (consumer-directed care/services)
  - In addition to the significant but reducing market share, from July 2023 the new "Support at Home" program will replace the "Home Care Packages (HCP)", "Commonwealth Home Support Program (CHSP)", and the "Short term Restorative Care (STRC)" programs.[79].
  - Funds currently being provided directly to providers as a *package amount in advance* to be managed (brokered) will in future be ***released to pay the care provider as the services are utilised by the recipient.*** The Recipient can choose to self-manage their care, including utilising multiple providers.
  - Additional issues for Grampians Health to consider are:
    - An assessment of the current market;
    - Capability to be competitive in a private market;
    - Brokerage funds will no longer be held by Grampians Health and an "assessor" will determine what is required under the package arrangements;
    - Whether currently 'brokered' services are brought back in-house to Grampians Health to strategically reposition in the market; and
    - A different approach could be adopted for western campuses and Ballarat.

It is suggested that this could be reviewed as part of a broader feasibility review that encompasses other like services such as NDIS and "In-the-Home" services (such as Better@Home and HITH) as outlined in section 14.4.

- **Occupancy**
  - Despite projections of an increasingly older population, the occupancy at Grampians Health RACS is trending down. Whilst COVID-19 has reinforced this trend, many facilities were exhibiting declining occupancy before the pandemic impact. The strategic use of respite to provide a gateway between the HCP and RACS and Transition Care Program (TCP) are, to a degree, acting as 'buffers' to poor occupancy.

- **Market Positioning - RACS**
  - Whilst Edenhope has no RACS competition locally, all other sites have significant local competition.

79. https://www.health.gov.au/health-topics/aged-care/aged-care-reforms-and-reviews/reform-to-in-home-aged-care

- Grampians Health facilities in Horsham and Stawell and some facilities in Ballarat are not well positioned in the market, which is demanding single room accommodation. Grampians Health has 112 shared rooms accounting for 37% of its licensed beds. A further 32 single rooms share ensuites, thus approximately 42% of Grampians Health beds share bathroom facilities. Feedback from consultations identified this as a major issue.

- **Infrastructure**
  - Whilst the room configuration has been identified as important, the consultations also indicated that the aged infrastructure of Grampians Health RACS is also problematic.
  - The Aged Care Act permits the use of RADs for a range of beneficial purposes. Whilst being required to meet Aged Care Act Prudential requirements, RACS can utilise a large proportion of these balances to undertake capital works to improve their infrastructure for the benefit of residents. This allows agencies to receive a significantly higher concessional supplement, which combined with DAP payments and any interest earned on remaining RADS to repay the RAD balances over time, enables resourcing of infrastructure upgrades.
  - Grampians Health would benefit from a consolidated Aged Care Masterplan. This may include consideration of:
    - A greenfield redevelopment for Horsham RACS including purpose-built dementia facilities;
    - Opportunities for new builds to consolidate Ballarat Aged Care Beds and build Dementia Specific facilities and a purpose-built facility for younger residents requiring accommodation;
    - Refurbishment of remaining RACS facilities including Stawell to attract new residents; and
    - All dementia care facilities to be designed in conjunction with Dementia Australia.

- **Service Gaps** for those requiring dementia care, and with challenging behaviours
  - A research paper from the Royal Commission projected substantial increases in the ageing population with dementia becoming an increasing concern.[80] The need for additional support for people with special needs, including those with dementia, is one of the major issues within residential aged care. The 2021 report by the Royal Commission estimated that more than half of the people living in permanent residential aged care in 2019 had a diagnosis of one of the forms of dementia.[81]
  - With the increasing demand and given the prevalence of more qualified nursing staff within the public sector RACS, it is likely that many residents with challenging behaviour will receive a higher level of care in public facilities. Aged care staff are requiring greater training to deal with these behaviours, will often require additional assistance and are working in infrastructure that doesn't ensure better outcomes for these residents.
  - As previously identified, Ballarat has 65 dementia specific beds with an application pending for a further 8 beds. Outside of Ballarat, there are no current dementia specific beds within Grampians Health. Within the Grampians Region there is a 15-bed dementia unit based in Warracknabeal at Rural Northwest Health (RNH). Concerns were raised during consultations about the ability of RNH to appropriately staff the unit and their willingness to accept residents with significant behaviour problems.

80. https://agedcare.royalcommission.gov.au/sites/default/files/2020-09/research-paper-11-aged-care-reform-projecting-future-impacts.pdf
81. https://agedcare.royalcommission.gov.au/sites/default/files/2021-03/final-report-executive-summary.pdf

The need for a facility able to manage challenging behaviours has been identified. It is also identified that these facilities are required in all other rural regions. Horsham campus has investigated converting 12 of its existing (unoccupied) beds into a Challenging Behaviours and Dementia (Memory Support) RACS Unit, which may assist in meeting these gaps.

- **Funding – ACFI and Funding Policy Instrument Changes**
  - ACFI scores for residents from Horsham, Edenhope and Stawell indicate that the complexity and care of patients is increasing. The focus of residential aged care appears to be transitioning towards higher care requirements provided over a shorter resident longevity in the service. Given that the ACFI assessments of the various facilities have such an impact on RACS viability, and most of the campuses outside Ballarat have a generally lower than sustainable Aspex ACFI model score, this will continue to have a negative impact if it can't be resolved through further review.
  - In addition to the abovementioned ACFI issue, from the 1 October 2022 the current funding assessment tool (ACFI) will be replaced by the Australian National Aged Care Classification system (AN-ACC). While ACFI included only variable factors, in addition to a variable funding, AN-ACC incorporates a fixed and a one-off payment component. A government delegated independent assessment team will undertake the assessment of new residents who will be classified into one of thirteen classifications. The new model claims to distribute funding in accordance with the characteristics that drive individual costs up and is currently being shadowed to determine any difference in funding under the new model for RACS.
- **Workforce**
  - Consultations confirmed that having an appropriately trained workforce in sufficient numbers is an ongoing challenge across the Grampians Health facilities (and the sector in general). In addition to this, there is a long-standing perception that aged care nursing is not on a par with acute nursing, exacerbating recruitment.
  - Changes proposed by the Royal Commission into Aged Care will result in private RACS providers requiring a greater number of qualified nursing staff together with the requirement to prove nursing minutes provided to individual residents. Whilst the public system has maintained higher numbers of qualified nurses it is likely that the market will become more competitive for this scarce resource. It is also likely that the public system will need to rely more heavily on Personal Care Attendants into the future to broach this deficit, which are likely to attract industrial interest given *Safe Patient Care Act* (SPCA) requirements.
  - Aged care residents are likely to become more complex and many staff members working in aged care may not be sufficiently skilled or trained. This issue has been identified by the Royal Commission and was also raised during consultations. The required care calls for a workforce with higher capability supported by specialised nursing staff with strong acute care skills in addition to the geriatric training. The level of specialisation extends to skills and training to identify and support people living with mental health conditions and palliative care needs. The use of Nurse Practitioners in Aged care, specialised training such as Neuropsychological, and supporting staff to upskill or graduate through scholarships or sponsorships were identified as potential solutions.
  - Relationships with universities and other educational providers will be fundamental to building a workforce of the future.

- **Administration burden**
  - Continued requirements to be accredited, together with changing legislation and the impacts of the Royal Commission into Aged Care, are significantly impacting Grampians Health RACS from an administrative and quality perspective. The information systems available to manage aged care and the way they are implemented have also led to inconsistent approaches being developed and an inability to share information.
  - Areas of benefit identified during consultation included: documentation for medication models; shared access to records; ICare upgrade; and education and support.

- **Linkages with other Grampians Health programs**
  - The aged care services are not well integrated internally (Community and RACS) and organisationally (GH wide). Consultations confirmed how RACS have limited visibility and understanding of community care services provided by GH, such as HCPs.
  - Better utilisation of programs within RACS such as Residential-In-Reach will be important in order to prevent unnecessary hospital presentations. The promotion of GEM in the Home, HITH and Rehabilitation in the Home will also enable both acute and subacute beds to be more available for those with a higher complexity, preventing those receiving HCPs from needing unnecessary hospitalisation. Clever Design of HCPs should assist in preventing the need for the level of acute intervention currently experienced by the system.

Proposed key developments

It is proposed that Grampians Health look to strategically reassess its position in the residential and community aged care role, particularly in the context of a more directly competitive market, ageing infrastructure, capacity to reinvest, and changing client mix. Specific consideration be given to:

- A strategy that enhances the community-based capability and capacity to ***deliver HCPs*** (future Support at Home). The strategy would consider Grampians Health's position on marketing, market share requirements, pricing, and workforce mix. It is also expected that the strategy would embed the economies of scale offered by combining/consolidating the expanded community-based capability and capacity of other initiatives in this CSP including NDIS, HITH, and Better@Home.

- A change in service mix between under-utilised bed-based services and ***conversion to home packages***. This is a structural change that would require the support of government(s). Impacts on State RACS funding would need to be considered given the transition away from a bed-based environment to a consumer directed care environment. This may be a medium to long-term strategy.

- Develop Grampians Health as the provider of choice, promoting service models underpinned by:
  - Satisfaction of care package recipients, residents and their families. This includes the development/formalisation of characteristics of **'centres of excellence' for home-based and residential care**, and a program for the implementation of a centre of excellence in care; and
  - Demonstrated 'delayed' admission into residential aged care.

- Across Grampians Region, develop a service delivery platform that is able to progressively demonstrate delayed admission to residential options, enhanced RIR, and reduced transfers to ED/UCC from public and private RACS.

- Develop Grampians Health RACS as ***a centre of excellence*** in training in aged care, dementia, and care of clients with special needs that is broadly recognised across Australia. This would be undertaken in collaboration with a partner tertiary training entity and the respective medical faculties of the College.

- ***Flexible workforce structures*** that can:
  - Operate across residential and community settings at all campuses;
  - Develop ***consistent workforce structures/models of care*** across RACS sites that better represent the resident complexity/dependency requirements.
  - Include multidisciplinary workforce teams inclusive of nurse practitioners, allied health, geriatric, psychology, and palliative care specialists to ensure adequate care and minimises admissions to hospital.

- ***Aged Care Master planning*** for Grampians Health be undertaken which should include consideration of:
  - A greenfield redevelopment for Horsham RACS including purpose-built dementia facilities;
  - Opportunities for new builds to consolidate Ballarat Aged Care Beds and build Dementia Specific facilities and a purpose-built facility for younger residents requiring accommodation;
  - Refurbishment of remaining RACS facilities including Stawell to attract new residents; and
  - All dementia care facilities to be designed in conjunction with Dementia Australia.

- Continue to seek and receive RHIF capital funding for the aged RACS stock. Examine alternative capital investment sources including RADS, DAP payments, and an additional portion of the Concessional/Accommodation Supplement for significant refurbishment or rebuild. This does not exclude potential private financing or a Public Private Partnership where there is a demonstrated case (that would require government approval).

- Establish a 12-15 bed ***challenging behaviour and dementia unit at Horsham***. The unit would have the capacity to serve all of the western Grampians, South West and Southern Mallee regions. The unit would be fully integrated with new purpose-built facilities at Horsham campus. The new unit would need to develop the workforce skill set to be a leader in challenging behaviour models of care.

- Develop a 12-bed ***challenging behaviour and dementia unit at Ballarat***.

- Develop (notional) profiles for each RACS facility that would be required to be sustainable under the new AN-ACC funding model.

- Develop aged care ***workforce stimulation conditions*** that will strengthen the number and skill levels of nursing and allied health staff working in aged care. This may include training bursaries, support packages, and length of time bonuses.

- Create a Grampians Health Aged Care Strategy which develops an improves the link between community, residential and the broader organisation creating an “All-of-care” focus, addressing Royal Commission outcomes, considering innovation, and workforce redesign within the new environment.

17. Clinical Support Services

This section includes the analysis and discussion of key clinical support services, that are important for timely, efficient, safe and high-quality care. Clinical Support Services provided to the Grampians Health acute sites in Ballarat, Horsham, Dimboola, Stawell, and Edenhope include Pathology, Medical Imaging, and Pharmacy services.

17.1. PATHOLOGY

All pathology services across Grampians Health are currently outsourced.

- Australian Clinical Laboratory (ACL) contracts to Horsham, Dimboola and Edenhope sites with a laboratory located at Horsham campus. Horsham and Dimboola are contracted until July 2024.
- Dorevitch Pathology contracts to Stawell and Ballarat. Both Stawell and Ballarat are contracted until April 2024. The laboratories are at Ballarat and Melbourne. All Ballarat histopathology is undertaken at Ballarat.

Current and emerging issues and future directions

There is a range of issues identified in relation to pathology services which include:

- **Future direction for outsourcing Pathology –** The Department's direction for pathology services appears to be that these services be provided by a public provider. Whilst it appears that the Ballarat site has a strong relationship with its current external outsourced provider, it will be important to recognise that any significant policy change could trigger a mandate from the Department to move to a public provider.
- **Duplication and unnecessary testing** was identified as an issue across sites. Causes range from poor communication between clinicians, failure to appropriately acknowledge test ordering in medical records, clinician confidence, fear of litigation if something is missed, additional testing on patient transfer, through to complexity of viewing reporting on provider systems. This unnecessary duplication contributes to additional cost, additional clinician effort in reperforming tests, a drain on laboratory resources, potential impacts on turnaround times for results and importantly, and provides no additional benefit for the patient.
- **Histopathology process, reporting and results** – Currently, the turnaround time for histology results at campuses other than Ballarat is 24-to-48-hours. This may have implications for a developing surgical program at Horsham.
- **Incompatible Information Systems.** There are different pathology reporting systems for Dorevitch (Medway) and ACL (eResults Viewer). The duplication requires a doubling of access and risks missed results or unnecessary re-testing, especially for transferred patients.
- **Workforce.** Dorevitch indicated that maintaining a workforce that meets demand is challenging and there is increasing reliance on centralised, specialist staff in Melbourne. There is no pathologist in Horsham, which is potentially problematic with the proposed enhanced service capability at Horsham and Stawell campuses.
- **After-hours access**. It was generally acknowledged that there is difficulty in accessing pathology services after-hours across all campuses. This will become increasingly incompatible for a proposed 7-day hospital.

- **Appropriately trained workforce.** Reliance on the current iStat system requires all relevant staff to be trained in the use of this portable blood analyser.
- **Administration of multiple contract arrangements.** There are multiple contract arrangements that involve utilisation of different providers, with various contract end-dates and operating various systems across different campuses. In short, current arrangements result in a higher administration burden and create unnecessary complexity and risk in the management of multiple accountabilities.

Proposed key developments

It is proposed that Grampians Health seek to streamline points of duplication by aligning pathology contracts to a single provider when arrangements fall due in 2024. This will reduce administrative burden, reduce issues associated with patient transfers relating to interoperability of systems, eliminate incompatible systems and reduce the rate of test duplication. In negotiating new contract arrangements, specific consideration should be given to negotiating:

- Improved histology turnaround times – this would potentially require a histologist to be available on site at both Ballarat and Horsham;
- Improved after-hours access arrangements; and
- Ensure appropriate training in iStat POC portable blood analysers for Grampians Health staff who required to use these in the course of their work.

It is noted, however, that if a public health pathology provider is mandated under Departmental policy, the ability to negotiate some of these issues may prove problematic.

Additionally, Grampians Health should:

- Initiate a 'No Unnecessary Tests' program to be overseen by clinicians with the aim of avoiding unnecessary duplication involving unnecessary resources and unnecessary cost.
- Seek to implement an eMR across Grampians Health, accruing significant benefits previously discussed for various areas and is essential to safe, efficient and quality management of diagnostics services across campuses.

17.2. MEDICAL IMAGING

Current activity, context, and projected demand

All medical imaging services across Grampians Health are currently outsourced to external providers, except for Ballarat campus. For Ballarat, only the reading and reporting is outsourced.

Currently, Bendigo Radiology provides services to Stawell and Edenhope campuses, with contracts expiring on August 2022 and June 2023 respectively. Horsham is currently serviced by Healthcare Imaging (Lumus) with a contract expiring in June 2025. Keystone Imaging provides radiologist services to Ballarat with a contract also due to expire in June 2025.

Edenhope

Radiology services at Edenhope are provided by a radiographer and radiologists from Bendigo Radiology, with the radiographer attending from Hamilton twice per week. There is no service on public holidays. Edenhope currently owns a single plain X-ray machine (with SR) and a single Ultrasound unit which is used as an assessment tool, not as a diagnostic tool. There is obviously no PACS.

There are two x-ray trained ward staff (RNs) whose scope of practice is limited to limb x-rays. Importantly, urgent care and inpatients are required to travel to Naracoorte, Hamilton, or Horsham should they require an urgent x-ray.

Stawell

There is a weekly radiologist visiting service for procedures and to read-report images. Stawell uses its own radiography staff. Stawell owns:

- 1 x General x-ray digital machine;
- 1 x CT scanner;
- 1 x Ultrasound unit; and
- 1 x Fluoroscopy machine.

Stawell currently uses TeleRad for reporting, and a PACS which is likely due for replacement. Current wait times for reporting to GPs can be in excess of 48 hours.

Horsham

Horsham currently owns a Mammography Machine. All other medical imaging equipment is owned by Lumus including:

- An MRI (transportable);
- A CT Scanner;
- Three ultrasounds;
- An OPG;
- Two general X-rays (One digital);
- An Image Intensifier; and
- A Fluoroscopy machine.

All radiology staff are employed by Lumus. There is an on-site radiologist, along with radiographers and visiting echo-technologist. The waiting time for different modalities are acceptable except for interventional radiology (6 weeks).

Ballarat

Ballarat owns all equipment, including:

- An MRI (unlicensed);
- Two CTs (including one with SPECT);
- Six general x-ray machines (4 portable x-rays);
- One OPG machine;

- Eight Ultrasounds;
- Two Breastscreen Mammography machines;
- Interventional (Fluoroscopy machines); and
- Two Image Intensifiers.

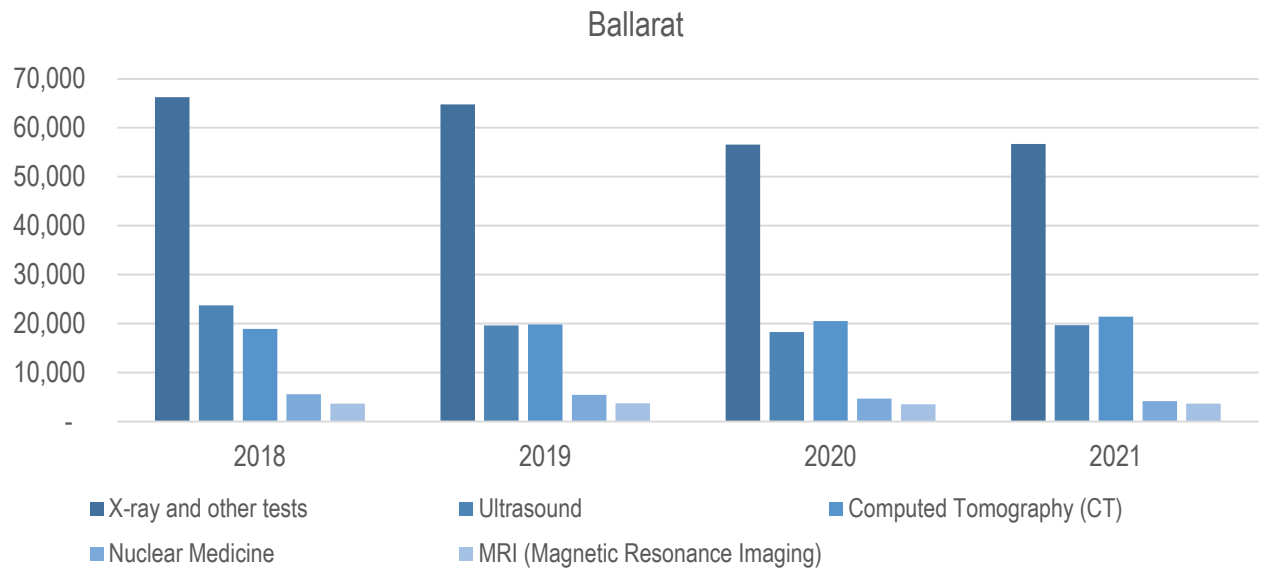
Ballarat current uses TeleRad as its PACS. Wait times for Interventional CT, Ultrasounds and MRI are 8-10 weeks.

Ballarat's new Imaging Department is commencing construction.

Activity Data

Comparative data for Ballarat, Stawell and Edenhope in Figures 17-1, 17-2 and 17-3 respectively are provided and may indicate a COVID impact. Comparative data was unavailable for Horsham and Dimboola[82]. Table 17-1shows the number of examinations during the 2021 calendar year and Table 17-2 describes the proportion of examinations across modalities.

Figure 17-1: Ballarat Campus Imaging Activity by Modality



82. Trend data for the Horsham and Dimboola campuses was not available from the private provider

Figure 17-2: Stawell Campus Imaging Activity by Modality

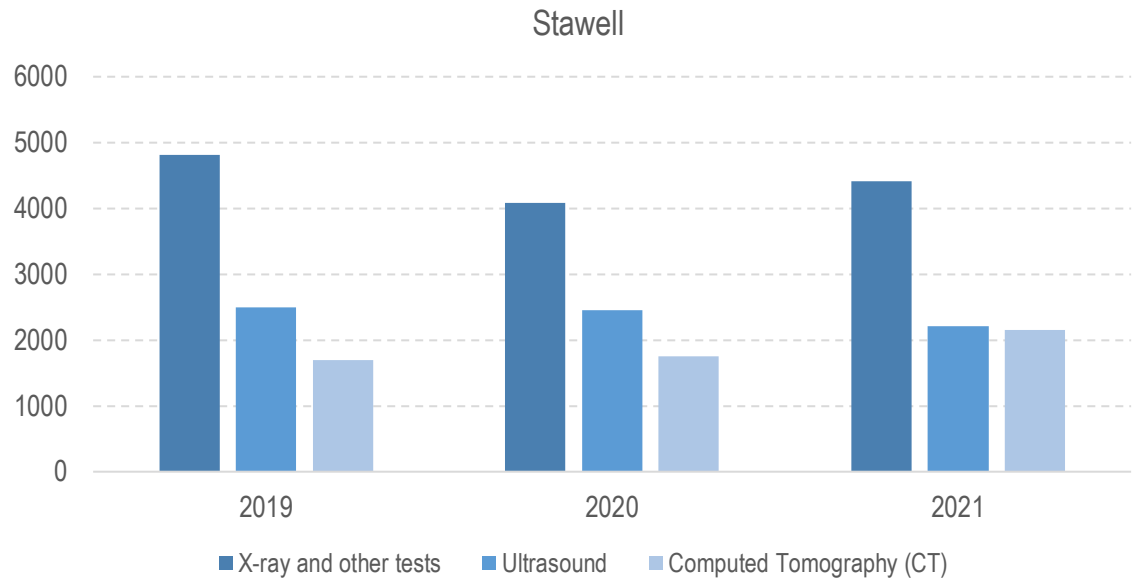


Figure 17-3: Edenhope Campus Imaging Data by Modality

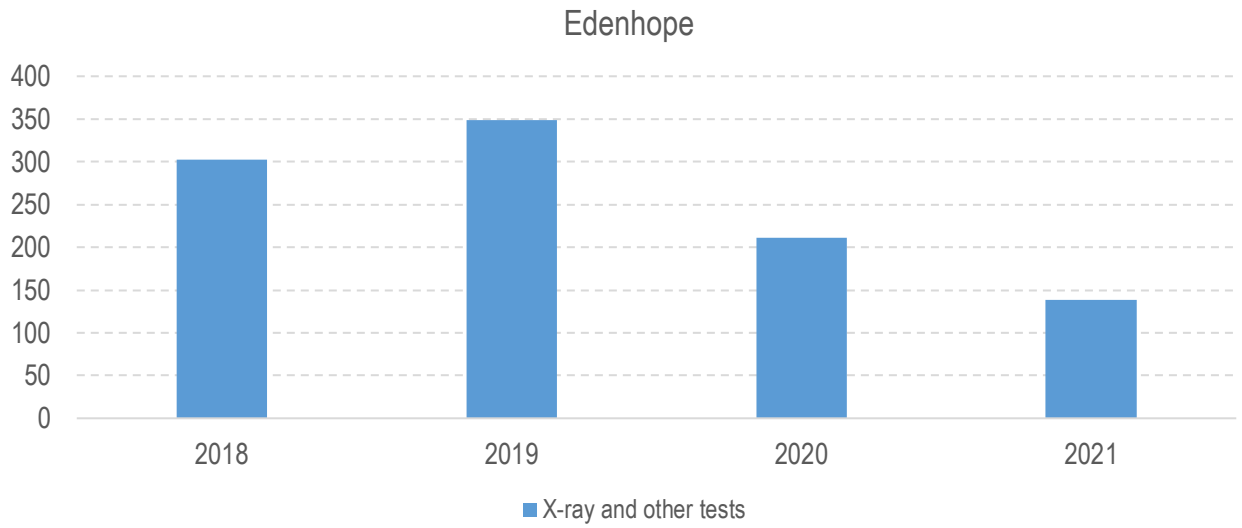


Table 17-1: Imaging Examinations by Modality 2021 Calendar Year

Campus	Ultrasound	Computed Tomography (CT)	Diagnostic radiology (Including x-ray and Fluoroscopy)	Nuclear Medicine	MRI (Magnetic Resonance Imaging)
Ballarat	19,718	21,436	56,672	4,177	3,661
Wimmera	9,704	7,760	16,355	0	2,230
Stawell	2,210	2,160	4,402	17	0
Edenhope			139		

Table 17-2: Imaging Examinations as a percentage of total examinations by Modality 2021

Campus	Ultrasound	Computed Tomography (CT)	Diagnostic radiology (Including x-ray and Fluoroscopy)	Nuclear Medicine	MRI (Magnetic Resonance Imaging)
Ballarat	18.4%	18.5%	55.4%	4.5%	3.3%
Wimmera	26.3%	21.8%	45.6%	0.0%	6.2%
Stawell	27.3%	23.0%	49.5%	0.2%	0.0%
Edenhope			100.0%		

Projected demand for Medical Imaging services would be expected to increase at the same rate as growth in inpatient, outpatient, and emergency department separations combined.

Current and emerging issues and future directions

- **Mammography services to Stawell**. Stawell has limited breast screening, being available once per year. This is not sufficiently frequent to meet demand and requires local residents to travel out of Stawell for this service.
- **Duplication of testing and unnecessary tests**. This issue was identified across sites. Causes of duplication are multifaceted and described in the Pathology section above.
- **MRI issues for Grampians Region.** Arrangements from November 2022[83] that MRIs in rural and regional Australia no longer require licensing by the Commonwealth as a prerequisite to receiving MBS funding, will be a welcome enhancement to accessing MRIs at Ballarat, and may present future opportunities at Horsham that does not rely on the 'transportable MRI'.
- **Incompatibility of Information Systems**. There are three different PACS systems operating across Grampians Health which works against seamless care, especially for transferred patients.
- **Workforce**. Maintaining a workforce to meet demand is reported to be challenging with Sonographers, Echo-Technicians, Nuclear Medicine Technicians and Breast screening staff in short supply. This is exacerbated by the lack of clinical educators.
- **Service Capacity issues.** The private imaging provider in Horsham does not bulk-bill. As such the public attend ED to avoid out-of-pocket costs, further increasing pressure on the ED.

  In Ballarat, waiting times for imaging are adding pressure on the system. The community is increasingly aware that imaging can occur more quickly if they attend ED, compounding access pressures.
- **Administration of multiple contract arrangements.** The utilisation of different providers with various contract end dates operating different system setups from various campuses creates additional administration and multiple parties to hold responsible when issues arise.

Proposed key developments

It is proposed that Grampians Health would:

- Streamline operational efficiency of medical imaging through a single contractor or undertake the service internally with outsourced reading and reporting as is the current arrangement at Ballarat. Specifically, this strategy would reduce rates of patient transfers and test duplication, and overcome PACS incompatibility.

83. https://www.health.gov.au/resources/publications/budget-2022-23-improving-rural-access-to-magnetic-resonance-imaging-mri-diagnostics

- The implications of a Grampians Health 'single contractor' or 'internal provision' may require a medical imaging procurement 'program' for Horsham campus that 'replaces' the existing equipment owned and operated by Lumus, including the 'portable' MRI.
- Review Breast Screen arrangements for Stawell to enable Stawell residents to have routine breast screen services closer to home.
- Instigate a review with the PACS provider TeleRad to determine how to most efficiently and effectively integrate Grampians Health PACS systems.
- Review Imaging structures and develop a workforce strategy that enables the best future fit for workforce attraction, retention, and training purposes. Engage appropriate education providers to assist.
- Instigate a 'No Unnecessary Tests' program to be overseen by clinicians with the aim of avoiding unnecessary patient radiation exposure and unnecessary duplication and in turn, reducing unnecessary cost.
- Seek to implement an eMR that would better manage diagnostics among other benefits.

17.3. PHARMACY SERVICES

Current Service Profile

Pharmacy services are available across the five acute sites of Grampians Health. Grampians Health participates in clinical trials, is involved in Anti-microbial Stewardship (AMS), takes carriage of drug procurement, and undertakes on-site compounding. Pharmacy at Ballarat also provides dispensing and clinical services across areas within Ballarat hospital. Currently, all the sites use the iPharmacy software and database system, but there is no integration between the different databases except for the Horsham and Dimboola campuses.

On-site pharmacy services are available at the Ballarat, Horsham, and Stawell campuses whereas Edenhope and Dimboola sites receive services from Horsham. Edenhope receives a nominal advisory pharmacy service from Horsham, which includes query solving and supply support. There are currently no electronic drug of addiction recording systems or automated dispensing cabinets at any of the sites.

Current and emerging issues and future directions

- *Information Systems Integration*. The objective would be to have a single integrated pharmacy system across Grampians Health. iPharmacy is used consistently across Grampians Health sites. There will still need to be system integration due to the different configuration of the system at each site. The integration of administration and support systems will include:
  - Accreditation
  - Medications management & Safety
  - AMS
  - Clinical Trials
  - Compounding
  - Smart Pumps
  - Therapeutics
  - Formulary Applications
  - Stock Control & other cost savings
  - Legislative Compliance
  - Charting
  - Partnered Pharmacist Medication Charting (PPMC)
  - Drug Guidelines, Protocols and other medication related GovDocs

This will be important to merge patient details. Similarly, the oncology (ARIA) information system also requires integration with pharmacy.

Impacts of implementing Drug of Addiction recording systems need to be determined. It is noted that the Ballarat site is planning to implement this system during 2022-23 FY following recent ICT Committee approval.

- *Automated Dispensing Cabinets.* As part of the consultations, it was identified that there are no automated dispensing cabinets at any of the sites. These pharmacist-loaded cabinets would normally be located at relevant POC's, generally being the ward environment, and provide a controlled means of distribution (particularly for Schedule 4 and Schedule 8 medications), by relevant nursing staff that can be automatically updated in an eMR. These would be expected to generate reduced human error in the distribution of pharmacy items, reduced mis-use of drugs, improved operational efficiency, and a more controlled outcome in terms of both recording and monitoring.
- *Robot for Ballarat pharmacy*. As part of the capital redevelopment for Ballarat, there is a new pharmacy that includes a robot. This is a relatively new element of the service model for pharmacy in Victorian public hospitals and is expected to generate reduced human error in the selection of pharmacy items, improved operational efficiency and reduced floor space.
- *Workforce.* A key challenge in the pharmacy area is attracting and retaining a suitable workforce. Sites are already facing challenges in backfilling employees during periods of extended leave. Chemotherapy expertise is a particular challenge.
- *Clinical Services.* The pharmacy service provides an essential component of multidisciplinary healthcare via clinical pharmacy services to inpatients, and other patients under the care of the health service. The future direction will be for each site to be able to offer the same standard of high quality clinical pharmacy care.
- *Coverage.* At present, the pharmacy services provide limited after-hours or weekend coverage. This creates a backlog of work for a Monday. In covering multiple campuses, it may be necessary to review on-call coverage, days of operation of service, extended hours on weekdays or redistribution of staffing to key times.
- *Growing demand for outpatient telehealth*. The traditional ways pharmacy has dispensed have been challenged during COVID-19. Programs like HITH and Better@Home will necessitate a new way of prescribing for areas such as at-home chemotherapy and other oncology services.
- *Utilisation of new technologies*. Risk, quality and efficiency drivers will necessitate Grampians Health to consider products such as Medication Electronic Decision Support Systems (EDSS), and effective integration into the eMR.
- *Education and training*. There is a need for a dedicated resource around Pharmacy Education and training. This will require the establishment of online training and time for program ramp-up. Additionally, an educator role is required across sites to ensure a consistent approach.

Proposed key developments

It is proposed that Grampians Health:

- Form a single integrated pharmacy department across all sites. This includes:
  - Common administration and a common IT platform, presumably iPharmacy; and
  - Integration the oncology information system (ARIA).
- Extended Coverage: Grampians Health should review out of hours or extended coverage with consideration to be given to staffing at peak times, 7-day coverage, and satellite support.

- Workforce Recruitment, Retention and training: Recruitment of experienced employees is a challenge. Robust in-house training for employees is required, both with pharmacy and non-pharmacy backgrounds to upskill and grow new pharmacists from within. Engaging a pharmacy training and development resource to engage across sites and set up appropriate training should be considered as part of a broader plan for recruitment, retention and training.
- Streamlined system for servicing outpatients: Work with multidisciplinary specialist clinic providers to determine an appropriate approach for servicing outpatients via telehealth and subsequent pharmacy distribution. Home chemotherapy should be considered as an early adopter.
- Seek to implement an eMR across Grampians Health. Whilst having many benefits, the management of diagnostics would be a significant outcome.
- Consider how EDSS may be effectively utilised to increase efficiency and outcomes, reduce medication risks and enhance patient safety.
- Review the impact of the pharmacy robot after 12 and 24 months of operation.
- Consider the implementation of Automated Dispensing Cabinets for enhanced controls, greater efficiency, and automatic recording of drugs administered in a patient medical record.

18. Workforce

This section provides an overview of the key challenges relating to workforce across the organisation and strategies and initiatives that have been proposed in sections 4 to 16. The proposed service developments are the basis for an organisational workforce strategy.

The capability, skill mix and engagement of the future workforce will need to be a central tenet in the ability of Grampians Health to address service demand and achieve the objectives of this CSP. Importantly, it would also deliver on its strategic commitments to:

"Grow our workforce, enhance skills and knowledge to support a high performing culture;
Support the safety, health and wellbeing of our people; and
Provide enhanced opportunities across our organisation through innovative workforce models."

18.1. A FRAMEWORK FOR WORKFORCE DEVELOPMENT

One of the broadly acknowledged 'truths' of health workforces is that recruiting and retaining health workforce is problematic, exacerbated for rural services with perceived fewer 'natural benefits' of working in rural settings. Factors that contribute to this problem include adequate income, appropriate workload, locum provision, access to specialists' advice and continuing education, career opportunities for spouse or partner, educational opportunities for children and availability of housing amongst others.

This CSP identifies the core elements that could be broadly developed as part of a workforce strategy for the organisation. The elements are identified in the context of Grampians Health being able to think more innovatively about workforce development and integration. This may include, for example:

- Developing support models for staff and their families.
- A 'grow our own' approach with programs for work experience, bursaries, payment of courses, internal career structures for all professional groups etc.
- Enrich the work environment experience. This can include, for example, professionally challenging work, research, teaching etc.
- Rotations and the concept of 'care segments'.

In effect, the issue of attracting and retaining a viable health workforce goes beyond the health service and should be owned as whole of community problem that requires a whole of community solution. Indeed, there is a general recognition that social or environmental factors associated with recruitment and retention include feeling a sense of belonging in the community, working in a family friendly environment, and having access to social networks. The importance of general living conditions, better quality of children schools, social/recreational opportunities, are often highlighted as having an influence on retention.

One particular study on the subject notes that recruitment to regional communities involved processes encompassing *"coming here", "being here", and "staying here",* and that the transition for non-locals from "being" to "staying" involved a merging of personal identity with the rural/regional place and those who tended to remain were all expressed a deep satisfaction with their *"identity-in-place".*

A further exacerbation of regional workforce shortages relates to government policies, which to date have tended to focus on medical recruitment and has failed to recognise the serious staffing shortages that persist, particularly in the allied health and nursing workforce.

Grampians Health needs to engage more broadly with each of the local communities (Ballarat, Edenhope, Dimboola, Horsham, and Stawell) including local government, business associations, schools and sporting organisations, to address specific incentives for attracting and retaining the breadth of health workforce requited to service the health service as a single entity. This includes leveraging the benefits of available through the amalgamation for professional development within the organisation including opportunities to rotate between campuses, gain additional experience professionally and in leadership roles.

18.2. GENERAL WORKFORCE DEVELOPMENT

The reliance of health systems on the availability, accessibility, acceptability, and quality of a health workforce cannot be understated. The WHO has noted that all countries "*at all levels of socio-economic development, to varying degrees, degrees of difficulties in the education, employment, deployment, retention, and performance of their workforce.*"[84]

Australia, together with most countries, has failed to invest in the education and training of health workers, and glossed over the mismatch between education and employment strategies for this essential workforce. These issues are compounded in regional and rural areas and the reliance on overseas workforce has been exacerbated due to international border closures during the pandemic. There is significant work to be done to shift the paradigm to one that invests more on a "grow your own" model as much as possible.

A positive culture of a future workforce in many ways rests on the ongoing engagement of current staff. This includes, buying into the vision of better access and quality of care to the local community, their local community. There is a strong value proposition that Grampians Health needs to:

- Develop buy-in to strategic service and workforce redesign initiatives proposed in areas including ED/UCC, mental health, Grampians @ Home, subacute, anaesthetics and ICU as well as a number of surgical streams. This could include:
  - *Co-design* of workforce roles, processes and structures including mobile teams across campuses;
  - Re-framing workforce perspectives that the department or campus in which they work is more important than the sum of the parts;
  - Consolidation and growth of *inter-professional learning and multi-disciplinary care*; and
  - Implementation/development of scope of practice competency and capability frameworks that are contemporary, flexible, and evidence-based;
- Continue to develop clinical leadership skills and attributes that transform the context and culture of care;
- Continue to develop education and training programs that both build capacity in leadership to manage change (and staff resilience). This may include effective regional leadership roles for some staff;
- Ensure that systems change is supported by the development of change management capability to maximise the effective utilisation of new (and existing) technologies; and

84. WHO Health Topics – Workforce: https://www.who.int/health-topics/health-workforce#tab=tab_1

- Embed and strengthen accountability through best practice in clinical learning environments framework.

18.3. MEDICAL WORKFORCE DEVELOPMENT

Specialist medical workforce recruitment and retention for any rural health is an ongoing challenge. Grampians Health has had some important successes in attracting medical specialists across clinical disciplines across the different campuses. The strengthening of the specialist medical workforce is important as foundation stones for developing clinical services, and meeting ongoing compliance with capability frameworks, to develop new service models, enable increased sub-specialisation and support capacity and capability uplift across the entire health service and meet future demand. All challenges cannot be addressed simultaneously, and priority will need to be given to the highest need areas.

The enhancement of the medical workforce is a combination of planned workforce priorities, and opportunities that may present periodically. It is therefore proposed that an organisation wide *medical recruitment and retention plan* be developed for the next five years. This would identify the workforce needed to develop and support each campus and other regional health services and support the requirements of the proposed Regional Surgical Framework to be developed. Key areas to be considered in this plan include (but are not necessarily limited to):

- Increasing the number ED registrars and HMOs at Ballarat and Horsham;
- Recruitment of specific medical staff to a dedicated virtual regional ED model of care;
- Recruitment of specialist medical staff and a director of emergency at Horsham;
- Increasing support for GP presence at Edenhope particularly on holidays and during out of hours periods if the GP is away;
- Significantly increasing the psychiatric workforce, both the number of clinical specialists and continue to build the number of registrar positions to cope with the estimated increase in bed-based but particularly community services across the region;
- Strategies to increase the cardiology workforce of the short, medium, and longer term;
- Improved access to endocrinology medical specialists and access to specialist trainees;
- Increasing the number of gastroenterology specialists and Improved access to gastroenterology for Horsham and Stawell;
- Strategies to provide locum relief for general physicians across Grampians health including GP VMOs at Stawell and Edenhope;
- Increased number of neurologists and enhanced stroke registrar coverage after hours at Ballarat campus;
- Increasing the number respiratory medicine physicians at Ballarat;
- Development of a dermatology specialist workforce;
- Recruitment of a second rheumatologist at the Ballarat campus;
- Development of an addiction medicine workforce at Ballarat to service the entire catchment region;
- Succession planning for the replacement of around half of the subacute specialist workforce over the next 5-10 years;
- Increasing the number of general surgeons at Horsham campus to also service Stawell and Nhill;
- Succession planning and enhancement of the ENT surgical workforce across the region;
- Enhanced number of registrar training positions in gynaecology;
- An increased number of ophthalmologists;

- An increase in orthopaedic surgeons across the region, particularly at Horsham;
- An expansion of plastic surgery at Ballarat either through direct employment or enhanced regional partnership arrangements;
- An increase in the number of urologists to Ballarat campus and at Horsham campus;
- A progressive increase in the number of vascular surgeons over time;
- An increase in the anaesthetics workforce both, specialists ant GPAs;
- ICU specialists at Horsham;
- Enhancing neonatal expertise at Ballarat;
- Increased primary medical care across all campuses, particularly Edenhope; and
- Recruitment of dentists to be available at Horsham, Dimboola, Stawell, and Edenhope

18.4. NURSING AND MIDWIFERY WORKFORCE PLAN

As for medical workforce, it is proposed Grampians Health develop a whole of organisation *nursing workforce plan* to be consistent with this CSP. This will mean developing/tailoring specific strategies for each of the clinical streams and workplace settings for nursing and midwifery consistent with technical nursing competencies required and nurses operating in the community at a higher clinical capability and to operate more independently. There will be several priority clinical areas to develop a greater role for clinical nurse specialists, nurse practitioners as well as nurse assistants, might include (but again not limited to):

- Increasing use of nurse practitioner roles in the ED and other specialty areas such as gerontics, palliative care, oncology, renal disease, paediatrics, mental health amongst others;
- Ongoing training and upskilling of staff for the UCC at Stawell and Edenhope (e.g., in relation to urgent care, nurse-initiated analgesia and interpretation of simple out of hours x-rays in collaboration with medical colleagues at other locations across the region);
- Increasing the number of mental health nurses and NPs to cope with escalating demand for mental health services including telephone triage and community clinical services;
- Access and flow coordinators for patients entering the Grampians health hospitals from emergency departments;
- Recruitment and retention strategies for interventional cardiology trained nurses and nurses who are qualified in ICU and CCU patient management;
- Increasing expertise the neonatal nursing workforce and exploring the role of neonatal nurse practitioners to support the transition to a 7 day hospital;
- More advanced practice nurses in neurology, and a stroke nurse coordinator at the Ballarat campus;
- Expansion of the renal dialysis nursing workforce at Horsham;
- Expanding the number of available nurses to operate in theatre environments;
- Specialist ICU nursing staff at Horsham;
- Increase in the number of midwifery nurses at Horsham; and
- Increased capability of paediatric specialist nurses at Horsham.

18.5. ALLIED HEALTH WORKFORCE PLAN

As with medical and nursing workforce, it is proposed that a *specific plan for allied health practitioners be developed for the allied health workforce* across Grampians Health.

An allied health workforce plan would assist with strategic recruitment and retention to serve the needs of Grampians Health across each campus. Consideration should be given to partnerships in recruitment that may also assist other health services and community-based providers for the benefit of local communities. The plan would target specific disciplines and clinical areas where there is greatest potential for allied health professionals to have the most significant impact on improving care, integration of care and patient outcomes, including diversion/substitution and reducing length of stay. Key priorities for the allied health workforce plan might include:

- An overall increase in allied health workforce across all disciplines across the Grampians region;
- Increasing use of allied health and extended allied health scope of practice roles in the ED at Ballarat and at Horsham;
- An increase in the number of psychologists, social workers, and occupational therapists to help manage the increase in mental health services required across the region;
- Increasing development of multidisciplinary models of care to manage mental health in both hospital and especially community environments across Grampians catchment region;
- Consideration to co-appointment of allied health staff across different service sectors such that fractional appointment at Grampians Health is undertaken in addition to community-based positions – to make better use of available workforce, encourage skills growth and knowledge development, and to promote the capacity to manage clients across the continuum of care;
- Allocating specific workforce positions to promote patient access and flow into and throughout the Grampians Health service system – this may include access and flow coordinators in the ED for patients who are likely to return home, and for patients identified to have more complex discharges form existing inpatient units;
- Recruitment and retention strategies for radiographers and cardiac technicians;
- Strengthening the dental workforce to include oral health therapists, dental therapists, dental hygienists, and advanced training dental nurses;
- Significant strengthening and succession planning for the residential aged care workforce across the region;
- Strengthening of the pharmacy workforce, particularly in relation to backfilling for after hours and weekend coverage and periods of extended leave; and
- Examining opportunities to increase the number of Sonographers, Echo-Technicians, Nuclear Medicine Technicians and Breast screening staff.

18.6. PEER AND VOLUNTARY WORKFORCE

Attention also needs to be devoted to developing a formal plan for the recruitment, training, development, and support of non-clinical workforce to assist in patient management. Whilst initially this may focus upon clinical areas such as mental health, the volunteer and peer worker models of patient support may then be extended to other areas (e.g., management of chronic disease in the community, and some community based subacute services).

19. Partnerships

"Look beyond the walls."

Over recent years there have been important developments that strengthen networks, alliances, and partnerships between public health providers. To a lesser extent, that has also occurred between public health providers, and private and not-for-profit health providers.

The Department's view on partnerships is articulated in *the Victorian Health Priorities Framework 2012-2022: Rural and Regional Health Plan,* which states:

> "Developing **collaborative relationships with a range of health service providers in a regional centre and across the wider regional area** is important. These relationships support coordinated and integrated services for people accessing services across a regional area." [85]

Grampians Health has a unique opportunity to reappraise existing relationships and consider new partnerships. This is about what partnerships to forge that develops the best value for patients and for the system. More important than this, Grampians Health can look to mould how a partnership would ideally look.

There are four levels of partnerships required to deliver the strategies in this CSP:

- Partnerships with consumers;
- Internal Grampians Health partnerships;
- Intra-regional partnerships; and
- Out-of-region partnerships.

These are described below, building on the strategies that underpin this CSP.

19.1. PARTNERSHIPS WITH CONSUMERS

Effective partnerships with consumers are the foundation stone for the CSP. Every clinical strategy has at its core, a focus on delivering patient-centred care. More broadly, the aim of the CSP is more ambitious – it aims to anticipate the care needs of the whole catchment and to develop strategies to improve population wellbeing and health status. Illness prevention and health promotion represent a critically important focus for this CSP. This 'lens shift' to a population-level necessitates that Grampians Health must develop strong partnerships with a cross-section of organisations to address the social determinants of health.

At an individual consumer level, Grampians Health's comprehensive suite of clinical services across the care continuum rely on their effectiveness for strong patient involvement as partners in their own health care. Digital health strategies that put patients at the centre of their own care – which empower their self-management and build health literacy – will further advance this partnership with consumers in their own care.

85. Victorian Department of Health – Victorian Health Priorities Framework 2012-2022, Rural and Regional Health Plan (2011) – pp 13-14

19.2. INTERNAL GRAMPIANS HEALTH PARTNERSHIPS

The success of the CSP is integrally linked to the strength of partnerships between all clinical streams and between all campuses across Grampians Health. At its core, this recognises that the whole is greater than the sum of the parts. The CSP has recommended a suite of strategies through which an organisation-wide focus will advance the critical mass of services, supported by organisation-wide enablers including ICT, workforce, and integrated models of service delivery.

The CSP has emphasised the need to develop organisation-wide structures that can act as mechanisms for integrative care. For example, the CSP advocates that services across the region work together to develop a cohesive regional surgical framework. Other examples include:

- Providing the basis for a critical mass of ***specialist medical services*** in a range of medical and surgical specialties that can be made available to the region on an outplacement, outreach, or virtual basis;
- Providing the basis for mentoring and clinical supervision for ***allied health*** solo practitioners in the region; and
- Providing ***nurse*** mentoring and 'nurse leadership', as well as clinical rotations, clinical training for undergraduate and post-graduate opportunities, amongst other supports

19.3. INTRA-REGIONAL PARTNERSHIPS

The Grampians Region Health Service Partnership builds upon the opportunities for service integration and whole of region service responsiveness. To the extent that all health care services within the region can effectively and safely deliver services to their local community, this yields direct benefits to the population and system-wide benefits. It reduces the requirement for patients to travel to larger hospital campuses such as Horsham and Ballarat for low acuity services by enabling service access locally.

The CSP has identified service delineation as a prerequisite for effective partnerships with health services within the region. Having explicit role delineation with partners – typically based on clinical capability or specialisation – reduces inter-organisational tension, enables faster and more consistent referrals and clinical information, and reduces duplication.

Strengthening intra-regional partnerships also requires a focus on supporting strategies to consolidate and expand primary care services, particularly GP services in the catchment. Primary care services are the cornerstone of the Grampians health system. These services are fundamental to effective illness prevention and in enabling consumers to seek care locally and improve their health literacy. To this end, partnerships are fundamental with the entities that have responsibility for influencing primary care service development including the Grampians PHN and GP training organisations.

Importantly, partnerships are also required with all GP clinics and other primary healthcare organisations within the region involved in direct care delivery. Grampians Health needs to work in partnership with all primary care providers to maximise the role played by the primary care sector to enable patients' access to safe and effective care close to home. Digital health strategies will be vitally important elements of this partnership, to ensure information flow is seamless between acute and primary care providers; to promote communication platforms for shared care; and to support patient and provider navigation of evidence-based care pathways.

A strong vibrant GP system is also fundamentally important to provide the community-based, step-down care required by patients following an acute care episode. For patients with chronic conditions, including cancer, dementia and mental ill-health, effective primary care services are essential for secondary prevention – strengthening patients' self-efficacy in managing their conditions and lifestyle and optimally to prevent exacerbation of conditions.

Effective partnerships with the community-based service sector are also relevant to ensuring a more connected service system that can provide seamless and person-centred care. A key example related to the work required in mental health seeks to ensure that Grampians Health is proactive in engaging with the community-based services and responsive to intersectoral mental health service providers to ensure consistency and connectedness for this vulnerable cohort.

19.4. OUT-OF-REGION PARTNERSHIPS

Although a strong focus of the CSP is enhancing the capability of the regional health services to deliver a higher proportion of health care services locally, there are necessary referrals to metropolitan regions that reflect the flow of patients for more complex health care services, particularly quaternary services and services delivered on a state-wide basis. There are strong relationships in place for several clinical service streams that this CSP requires be further strengthened into the future including those with Austin Health, the Melbourne Health, the Royal Children's Hospital, and Barwon Health to name a few.

Additionally, the CSP requires a further strengthening and increase in Grampians Health workforce, across medical, nursing, and allied health domains. This requires effective relationships with training and education organisations. For advanced registrar training, the requirement for Grampians Health to further build its medical workforce will be vitally dependent on proactive relationships with metropolitan hospitals and with specialist colleges to ensure accredited training positions can be sustained and expanded.

19.5. PARTNERING WITH EDUCATION PROVIDERS AND MEDICAL COLLEGES

The range and breadth of clinical education required to ensure a vital and viable health workforce requires health services to engage with a range of educational and training organisations. The development of a sustainable workforce requires engagement, and in some cases tailoring, of training to meet the workforce requirements of Grampians Health.

There are also inherent risks associated with this include the requirement to manage the variation in the quality of education across the range of providers, and the potential workload associated for health services if there are significant differences in the training models across educational organisations.

To this end it is proposed that Grampians Health develop a **single workforce training program for each broad workforce stream** (medical, nursing, allied health, peer workforce) to be consistently delivered by the different educational organisations and training bodies with which it engages.

It is also suggested that these programs are developed consistent with the Victorian Governments *Best Practice Clinical Learning Environment Framework* and underpinned by the key elements of best practice therein[86].

86. Department of Health and Human Services - https://www.health.vic.gov.au/education-and-training/best-practice-clinical-learning-environment-bpcle-framework

It is noted that Framework identifies six key characteristics of high-performing learning environments as depicted in Figure 19-1. The most pertinent characteristic in this instance is number 4, effective health service-education provider relationship.

Figure 19-1: Characteristics of high-performing learning environments

20. Clinical Governance and Risk

The *Victorian Clinical Governance Framework* (VCGF) notes that clinical governance is not about compliance rather it is the accountability of an organisation for continuous improvement, safe-guarding standards, and the creation of an environment conducive to providing high quality care. Clinical governance has been described as a structural innovation fundamental to building good organisational culture. The Framework goes on to identify actions taken by "high performing health services to achieve great outcomes" which include:

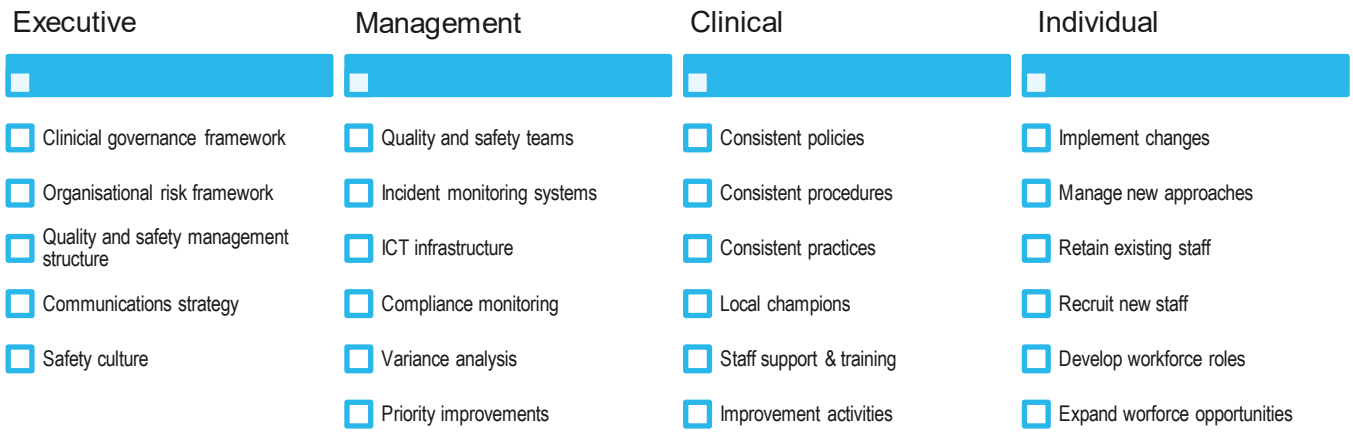
- A vision for the future – that is clearly communicated, specific and quantifiable goals for improving care
- Consumer partnerships – where the consumer is at the centre of care and viewed as a critical partner in the design and delivery of healthcare
- Organisational culture – that prioritises fairness and where staff are supported, and their wellbeing prioritised
- Continual learning and improvement – where staff are provided with opportunities and encouraged to further their skills qualifications
- Clinical leadership – that involves strong, transparent, supportive and accessible leaders who fosters a culture of learning, accountability and openness, with strong clinical engagement
- Teamwork – where staff are supported at all levels of the organisation by skilled management
- Quality improvement – that prioritise and establish methods and data to drive and design actions to improve safety and quality[87]

> "To err is human, to cover up is unforgivable, and to fail to learn is inexcusable."
>
> Sir Liam Donaldson
> World Health Organization
> Envoy for Patient Safety

The amalgamation provides a catalyst and a unique opportunity to revisit and renew clinical governance and organisational culture across the new entity. There is internal momentum to engage; to standardise policies, procedures, and practices; and to innovate. The consultations indicate the need for a sequence of steps to standardise clinical governance arrangements across the organisation and these are outlined in Figure 20-1. Whilst these steps are presented as a list, it is recognised that they function as a cycle whereby the success of executive activities is constantly re-appraised in the light of successes achieved by management, clinical practice changes, and the levels of support and development provided to individual staff. As such, this cycle is constantly reviewed and renewed in the light of evidence that emerges across the organisation.

87. Safer Care Victoria – Delivering high-quality healthcare, Victorian clinical governance framework, June 2017

Figure 20-1: Stages of integration of quality systems at Grampians Health



Executive level activities

At an executive level, now that senior leadership positions have been finalised, the organisational focus will need to shift to finalising a *local clinical governance framework* that is consistent with the VCGF but addresses the unique needs of Grampians Health. This would include reviewing the Risk Management Framework in accordance with regulatory requirements.

A quality and safety management structure will need to be finalised across all campuses as would a communications strategy. Importantly, the executive will also be primarily responsible for setting and maintaining an enterprise-wide safety culture by continuing to develop and expand a range of current and proposed initiatives that encourage the delivery of high-quality care and promote a no-blame culture of continuous quality improvement.

Management level activities

One of the key challenges to implementing a strong culture of clinical governance, quality and safety is recognised to be the utilisation of different incident monitoring systems across the organisation. Pre-amalgamated campuses have been using different versions of either RiskMan or VHIMS to report incidents and adverse events. Whilst more centralised systems of notification for more serious incidents appears to be working across the organisation, Grampians Health's capacity to investigate incidents and adverse events will continue to be hampered until such time as one single incident management system is rolled out to all sites.

Additional challenges will be how to best use the many performance metrics and other indicators for the purposes of enhancing quality of care.

Clinical and professional activities

At a clinical level there is still work to be done in standardising policies, procedures, and clinical practices across the organisation. In short, the development of single clinical units across the campuses will be a short-term challenge. Examples exist of better practice across the organisation in areas such as regional Morbidity and Mortality meetings, but these have not been generalised to all clinical streams and participation by staff continues to be on a voluntary basis.

21. Infrastructure

This section describes:

- The demand projections and the impact on future infrastructure requirements. The requirements are expressed as required points of care (POCs). Demand projections have been undertaken using the Department of Health supported forecasting tools, including the:
  - Inpatient Projections Model (IPM). The current IPM uses 2019-20 as the base year; and
  - The Emergency Projections Model. The current model uses 2018-19 as the base year.
- The demand projections for inpatient and community mental health services are based on the National Mental Health Planning Tool. The Department of Health is currently determining the basis for demand projections for mental health services in the context of the Royal Commission into Mental Health Services and therefore, the projections in this CSP may change. There are two main drivers of the mental health demand projections namely the prevalence of mental health in the community, and the level of intensity of services expected to be provided to eligible mental health patients.
- A consolidation of the main strategies identified throughout the CSP impact on the future development and configuration of infrastructure for acute health

It is important to note that infrastructure projections have not been undertaken for general community health or community aged care services due to the paucity and reliability of the data available.

21.1.1. Demand Projections and POCs

Acute and Subacute Inpatient Projections

The CSP includes two types of projections. *The first is the Baseline Demand Projections* that strictly applies the IPM. These projections are for acute subacute and mental health services at a DRG levels in five-year increments. The IPM projections implicitly have the market share for all health services, and self-sufficiency for any given catchment (population grouping). The projected separations have applied the average inlier bed-days for the respective DRG. The bed-days are converted to beds/chairs and other POCs using benchmarks for the types of services.

The *second type of projections* are scenario models. These projections use the same approach as the IPM, except to change *market share* (for one or more health services) or change *self-sufficiency* as it might apply to a catchment population. The scenarios are intended to reflect expected changes/strategies that would not have been included in the baseline model. The scenario project activity to 2041-42 in five-year intervals and for each campus.

There are three main scenarios considered in relation to capital infrastructure redevelopment:

- ***Baseline Demand Projections*** using the Department of Health's Inpatient Forecasting Model and the Emergency Department Model. Scenario 1.

- ***An 'Uplift Model'*** that enhances self-sufficiency in the region (Scenario 2), which modifies the Baseline Projections. Scenarios that increase the self-sufficiency rates (by MCRG/DRG) is a net sum gain and therefore reduces projected activity from one or more health services. To illustrate, a 1.5% increase in maternity self-sufficiency in the broader Wimmera region would see a reduction in activity at other health services that are attracting this activity out-of-region, in this case from Western District Health Service as the main destination of the Wimmera patient outflow.
- Scenario 3 assumes ***an organisation-wide change in model of care*** that substantially increases HITH. *Scenario 3 POCs use the Scenario 2 uplift projections as the base.*

The analysis is summarised in Table 21-1. The projections for acute and subacute indicate an additional ~200 POCs across Grampians Health. (Note that the projected POCs exclude ED, Stage 1 and 2 recovery beds/trolleys, and the medi-hotel).

The most significant reason for the substantial increase in POCs is the IPM baseline demand projections (Scenario 1), which increases POCs from 525.5 in 2019-20 to 667.3 by 2036-37, or an increase of 141.8 POCs. The Scenario 2 uplift increases POCs by a further 75.3 POCs. The self-sufficiency uplift is then used as a base to deflate POCs due to enhanced HITH and Better@Home, which is ~20 multi-day stay beds.

Table 21-1: Scenario Summary of Projected Acute, Subacute and Mental Health Inpatient Points of Care by Campus – 2019-20 and 2036-37. Excludes ED.

CAMPUS	EXPECTED BASE POCS	SCENARIO 1 – BASELINE PROJECTIONS	SCENARIO 2 – SELF-SUFFICIENCY UPLIFT	SCENARIO 3 – SELF-SUFFICIENCY UPLIFT DEFLATED FOR HITH & @HOME	VARIATION
	2019-20	2036-37	2036-37	2036-37	
Ballarat	406.0	539.5	595.2	585.1	179.1
Dimboola	2.8	2.7	2.7	2.7	-0.1
Edenhope	4.8	4.6	4.6	4.6	-0.2
Horsham	84.3	85.5	106.4	99.3	15.0
Stawell	27.6	35.0	33.7	33.7	6.1
Total	525.5	667.3	742.6	725.4	199.9
Difference Between Scenarios	-	141.8	75.3	-17.2	199.9

Ballarat campus has a net 179.1 POCs, which is POC growth by 44% growth. It is also 89% of the expected Grampians Health growth. Horsham has a net increase of 15 POCs mainly driven by the proposed change in role and enhancement of acuity at Horsham campus. POCs at Horsham are lower than might be anticipated as there is an expectation of more efficient use of existing POCs. Stawell has a modest net increase of 6.1 POCs. This is also due to an expected improved efficient use of existing POCs particularly for chemotherapy. At Stawell there is also a change in the mix and configuration of acute beds that reduce Multi-Day Stay (MDS) and increase Same-Day Stay (SDS) capacity. It also includes an additional operating theatre or day endoscopy suite at Stawell.

Table 21-2 outlines in detail the Baseline Projection POCs and the Scenario POCs for ED, acute, subacute, and mental health inpatients, in five-year increments.

There are two particular issues to highlight for the projected POCs:

- **Dialysis chairs** at Ballarat for 2036-37 are 15.7. This excludes consideration of 'training and respite' chairs for home dialysis and when home equipment fails. Hence, there is potential to increase the capacity to around 18 chairs as part of any community hub that includes dialysis (and chemotherapy).
- **The Scenario 3 HITH substitution impact** results in a 'saving' of general inpatient beds. The substitution impact is based on a LOS of three days for acute and seven days for subacute patients. It should be noted that the impact could be greater if same day conditions (such as same day medical oncology and dialysis were to be included from the estimates). In aggregate there is a substitution impact of ~20 beds. The estimates comprise:
  - For Ballarat, approximately 13 POCs by 2036-37, which is the difference between Scenario 2 and Scenario 3 in Table 21-2. There are 10 acute and 3 subacute beds;
  - For Horsham, approximately 7 POCs by 2036-37, comprising 6 acute and 1 subacute POC; and
  - For Stawell and Edenhope there are no HITH substitution impacts.

  The estimates are for 2036-37 and therefore assume an average of 8% of acute multi-day stay inpatients as the mid-point of the early 6% identified by the Health Department as a target, and the 10% identified as the longer-term target. Subacute average 30%. However, there is no material impact at 25% or 35% of multi-day stay separations.

  As identified in Section 8, the main areas for development for HITH could include:
  - Paediatrics;
  - Respiratory and/or sleep apnoea;
  - Chronic pain management;
  - Uncomplicated post-delivery obstetrics;
  - Chemotherapy/medical oncology;
  - Uncomplicated cardiology;
  - Post-surgery recovery such as colorectal surgery, non-subspecialty surgery, urological surgery, gynaecological surgery, orthopaedic surgery, and vascular surgery etc;
  - Post operative infections and sequelae;
  - GEM and rehabilitation;
  - Urinary tract infections;
  - Red blood cell disorders;
  - Septicaemia;
  - Skin grafts;
  - Rheumatology; and
  - Skin Ulcers, amongst others.

Table 21-2: Grampians Health Baseline and Scenario Model Points of Care by Service Type and Campus

Campus and Bed Type	2021 Operational POCs	Scenario 1 - Baseline Demand Projections						Scenario 2 - Self-Sufficiency Uplift Model (Scenario 1 as the Base)						Scenario 3 - Self-Sufficiency Uplift Model Deflated by HITH & Better@Home (Bed Reductions)					
		PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42
Ballarat																			
Emergency Department Spaces	27	41.0	48.0	56.0	63.0	69.0	77.0	41.0	48.0	56.0	63.0	69.0	77.0	41.0	48.0	56.0	63.0	69.0	77.0
Cardiovascular Laboratories	2	0.0	0.3	0.6	0.6	0.6	0.6	0.0	0.3	0.6	0.6	0.6	0.6	0.0	0.3	0.6	0.6	0.6	0.6
Operating Theatres	6	5.5	5.7	6.3	6.8	7.2	7.7	5.5	5.7	6.3	6.8	7.2	7.7	5.5	5.7	6.3	6.8	7.2	7.7
Procedural / Endoscopy	2	0.9	0.9	1.0	1.2	1.3	1.4	0.9	0.9	1.0	1.2	1.3	1.4	0.9	0.9	1.0	1.2	1.3	1.4
Labour Delivery Room (LDR)	5	5.0	4.9	5.2	5.5	5.8	6.0	5.0	4.9	5.2	5.5	5.8	6.0	5.0	4.9	5.2	5.5	5.8	6.0
Acute Support Totals	42	52.4	59.8	69.2	77.1	83.9	92.6	52.4	59.8	69.2	77.1	83.9	92.6	52.4	59.8	69.2	77.1	83.9	92.6
Renal Dialysis	12	11.3	11.2	13.0	14.3	15.7	16.7	11.3	10.8	12.6	13.9	15.3	16.3	11.3	10.8	12.6	13.9	15.3	16.3
Day Chemotherapy & SD Medicine	20	8.7	11.6	14.7	16.7	18.5	20.3	8.7	11.6	14.7	16.7	18.5	20.3	8.7	10.5	13.3	16.5	18.5	18.0
Day Surgery	33	65.7	70.2	73.5	76.6	79.2	81.4	65.7	70.2	73.5	76.6	79.2	81.4	65.7	70.2	73.5	76.6	79.2	81.4
Other	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Undifferentiated Medical/Surgical	141	103.9	122.6	130.1	145.0	159.4	171.3	103.0	159.4	175.4	187.3	198.5	208.0	103.0	153.4	168.6	179.6	190.0	198.7
	227	189.4	215.5	231.3	252.5	272.8	289.7	188.6	252.0	276.2	294.4	311.5	326.0	188.6	244.9	268.1	286.6	303.0	314.4
Emergency Department Short Stay	12	4.3	8.0	9.6	10.6	11.6	12.5	4.3	7.3	8.7	9.6	10.4	11.2	4.3	9.7	11.6	12.8	13.9	15.0
Maternity	16	19.0	16.2	17.2	18.2	18.8	19.4	19.0	15.2	16.1	17.0	17.6	18.1	19.0	15.5	16.1	17.0	17.6	18.1
Paediatric	19	8.8	10.0	9.7	9.9	10.4	11.0	8.8	9.8	10.2	10.2	10.6	11.1	8.8	9.3	9.7	9.7	10.1	10.6
Neonatal	12	9.6	8.4	8.3	8.5	8.8	9.2	9.6	8.0	7.9	8.0	8.4	8.8	9.6	6.4	6.3	6.4	6.7	7.1
Intensive Care Unit	12	12.0	8.8	9.6	10.2	10.8	11.4	12.0	12.5	13.1	13.6	14.2	14.8	12.0	12.5	13.1	13.6	14.2	14.8
Coronary Care Unit		0.0	3.3	3.5	3.6	3.8	3.9	0.0	3.3	6.0	6.0	6.0	6.0	0.0	3.3	6.0	6.0	6.0	6.0
Acute GEM/MAPU	9	0.0	4.0	15.0	15.0	15.0	15.0	0.0	3.9	15.0	15.0	15.0	15.0	0.0	3.7	15.0	15.0	15.0	15.0
Mental Health - Adult Acute	43	18.4	21.9	24.8	26.9	28.6	30.4	18.4	21.9	24.8	26.9	28.6	30.4	18.4	21.9	24.8	26.9	28.6	30.4
Mental Health - Aged		5.2	17.1	24.2	26.4	27.3	28.2	23.1	30.5	33.0	34.1	34.0	35.0	23.1	30.5	33.0	34.1	34.0	35.0
Mental Health CAMHS		0.4	1.8	2.1	2.3	2.4	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	123	77.7	99.4	124.0	131.6	137.6	143.6	95.2	112.3	134.8	140.4	144.8	150.4	95.2	112.8	135.6	141.5	146.1	151.9
Ballarat Inpatient Acute Total	392	319.5	374.7	424.5	461.2	494.2	525.9	336.1	424.0	480.1	511.9	540.2	569.0	336.1	417.4	472.8	505.2	533.0	558.9
GEM/Restorative Care	24	34.4	31.0	37.2	42.3	48.3	52.8	34.4	36.5	45.0	50.9	57.6	62.8	34.4	35.7	44.0	49.7	56.2	61.3
Rehabilitation	30	26.1	29.2	33.3	36.3	39.2	41.3	26.1	26.8	36.2	38.9	41.4	43.1	26.1	26.3	35.4	38.0	40.4	42.0
Palliative Care	11	12.9	10.8	13.4	14.8	16.3	17.4	12.9	10.2	12.5	13.8	15.2	16.2	12.9	9.8	12.0	13.2	14.5	15.5
Mental Health (Steele Haughton)	10	5.5	8.3	9.5	10.1	10.5	10.8	5.5	7.9	8.9	9.5	10.0	10.2	5.5	7.9	8.9	9.5	10.0	10.2
Ballarat Inpatient Subacute Total	75	78.9	79.3	93.4	103.5	114.3	122.3	78.9	81.3	102.6	113.1	124.1	132.3	78.9	79.6	100.3	110.5	121.1	129.0
BALLARAT Total	467	398.4	454.0	517.9	564.8	608.5	648.2	415.0	505.4	582.7	625.0	664.2	701.3	415.0	497.0	573.2	615.6	654.1	688.0

Campus and Bed Type	2021 Operational POCs	Scenario 1 - Baseline Demand Projections						Scenario 2 - Self-Sufficiency Uplift Model (Scenario 1 as the Base)						Scenario 3 - Self-Sufficiency Uplift Model Deflated by HITH & Better@Home (Bed Reductions)					
		PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42
Edenhope																			
UCC Places	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Renal Dialysis	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medical/Surgical	18	**6.7**	**3.8**	**3.8**	**3.7**	**3.6**	**3.3**	**6.7**	**3.8**	**3.8**	**3.7**	**3.6**	**3.3**	**6.7**	**3.8**	**3.8**	**3.7**	**3.6**	**3.3**
EDENHOPE Total	21	**7.7**	**4.8**	**4.8**	**4.7**	**4.6**	**4.3**	**7.7**	**4.8**	**4.8**	**4.7**	**4.6**	**4.3**	**7.7**	**4.8**	**4.8**	**4.7**	**4.6**	**4.3**
Stawell																			
UCC Spaces	3	2.3	2.5	3.0	4.0	4.0	4.0	2.3	2.5	4.0	4.0	4.0	4.0	2.3	2.5	4.0	4.0	4.0	4.0
Operating Theatres	1	0.7	0.8	0.9	0.9	1.0	1.0	0.7	1.3	1.4	1.4	1.5	1.5	0.7	1.3	1.4	1.4	1.5	1.5
Labour Delivery Room (LDR)	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acute Support Totals	5	3.0	3.3	3.9	4.9	5.0	5.0	3.0	3.8	5.4	5.4	5.5	5.5	3.0	3.8	5.4	5.4	5.5	5.5
Day Oncology and SD Medicine	11	11.9	9.0	10.4	11.0	11.4	11.4	11.9	9.3	10.7	11.3	11.7	11.7	11.9	9.3	10.7	11.3	11.7	11.7
Day Surgery	6	8.8	7.4	7.9	8.2	8.4	8.5	8.8	7.4	7.9	8.2	8.4	8.5	8.8	7.4	7.9	8.2	8.4	8.5
Undifferentiated Medical/Surgical	24	11.2	9.6	9.0	9.0	9.2	9.1	11.2	11.2	11.4	11.6	12.1	12.1	11.2	11.2	11.4	11.6	12.1	12.1
Stawell Inpatient Acute Total	41	**34.9**	**29.3**	**31.1**	**33.1**	**34.0**	**34.0**	**31.9**	**27.9**	**30.0**	**31.1**	**32.2**	**32.3**	**31.9**	**27.9**	**30.0**	**31.1**	**32.2**	**32.3**
STAWELL Total	46	37.9	32.6	35.0	38.0	39.0	39.0	34.9	31.7	35.4	36.5	37.7	37.8	34.9	31.7	35.4	36.5	37.7	37.8
Dimboola																			
Undifferentiated Medical/Surgical	4	2.3	2.8	2.7	2.7	2.7	2.7	2.3	2.8	2.7	2.7	2.7	2.7	2.3	2.8	2.7	2.7	2.7	2.7
DIMBOOLA Total	4	2.3	2.8	2.7	2.7	2.7	2.7	2.3	2.8	2.7	2.7	2.7	2.7	2.3	2.8	2.7	2.7	2.7	2.7

Campus and Bed Type	2021 Operational POCs	Scenario 1 - Baseline Demand Projections						Scenario 2 - Self-Sufficiency Uplift Model (Scenario 1 as the Base)						Scenario 3 - Self-Sufficiency Uplift Model Deflated by HITH & Better@Home (Bed Reductions)					
		PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42	PoCs 2015-16	PoCs 2019-20	PoCs 2026-27	PoCs 2031-32	PoCs 2036-37	PoCs 2041-42
Horsham																			
Emergency Department Spaces	**7**	9.0	12.3	12.6	12.8	13.1	13.3	9.0	12.3	12.6	12.8	13.1	13.3	9.0	12.3	12.6	12.8	13.1	13.3
Operating Theatres	**2**	1.5	1.3	1.2	1.2	1.2	1.2	1.5	1.3	1.2	1.2	1.2	1.2	1.5	1.3	1.2	1.2	1.2	1.2
Procedural / Endoscopy	**1**	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.6	0.6	0.6	0.6	0.5	0.3	0.6	0.6	0.6	0.6	0.5
Labour Delivery Room (LDR)	**2**	1.3	1.2	1.0	1.0	1.0	0.9	1.3	1.3	1.2	1.1	1.0	1.0	1.3	1.3	1.2	1.1	1.0	1.0
Acute Support Totals	**12**	**12.1**	**15.1**	**15.2**	**15.4**	**15.6**	**15.8**	**12.1**	**15.4**	**15.6**	**15.7**	**15.9**	**16.0**	**12.1**	**15.4**	**15.6**	**15.7**	**15.9**	**16.0**
Renal Dialysis	**4**	2.2	2.5	2.5	2.6	2.7	2.6	2.2	2.5	2.5	2.6	2.7	2.6	2.2	2.4	2.5	2.6	2.7	2.6
Day Chemotherapy & SD Medicine	**13**	5.8	5.2	5.9	6.4	6.7	6.8	5.8	6.2	6.4	6.9	7.4	7.8	5.8	6.2	6.4	6.9	7.4	7.8
Day Surgery	**18**	16.0	12.2	11.6	11.5	11.4	11.0	16.0	12.2	11.6	11.5	11.4	11.0	16.0	12.2	11.6	11.5	11.4	11.0
UndifferentiatedMedical/Surgical	**36**	29.5	35.7	34.9	35.2	35.8	35.6	29.5	41.0	47.9	49.8	51.7	51.8	29.5	35.4	41.8	43.6	45.1	45.1
Emergency Short Stay	**0**	0.0	0.0	0.0	0.0	0.0	0.0	0	0.1	1.0	1.1	1.2	1.1	0	0.1	1.0	1.1	1.2	1.1
Maternity	**6**	4.8	4.4	3.8	3.5	3.3	3.2	4.8	4.6	4.0	3.7	3.5	3.3	4.6	4.0	3.7	3.5	3.5	3.3
Paediatric	**6**	1.4	1.1	1.0	0.9	0.8	0.8	1.4	1.0	1.1	1.0	1.0	1.0	1.4	0.9	1.0	1.0	0.9	1.0
Neonatal	**4**	0.9	1.2	1.1	1.0	0.9	0.9	0.9	1.2	1.1	1.0	0.9	0.9	0.9	1.2	1.1	1.0	0.9	0.9
Intensive Care Unit	**5**	5.0	3.7	3.8	4.0	4.1	4.1	5.0	4.0	4.2	4.3	4.5	4.5	5.0	4.0	4.2	4.3	4.5	4.5
Inpatient Acute Total	**92**	65.5	66.0	64.5	65.1	65.7	64.8	65.5	72.8	79.7	82.0	84.2	84.0	65.3	66.5	73.3	75.5	77.6	77.3
GEM	**4**	8.1	7.7	8.0	8.3	9.0	9.3	8.1	7.3	8.8	9.8	11.1	12.0	8.1	7.1	8.6	9.6	10.8	11.7
Rehabilitation	**0**	7.5	7.2	7.1	7.3	7.6	7.7	7.5	6.9	6.7	6.9	7.2	7.3	7.5	6.7	6.6	6.7	7.0	7.1
Palliative Care	**1**	0.8	0.6	0.7	0.7	0.7	0.7	0.8	0.6	0.9	1.0	1.1	1.1	0.8	0.6	0.8	0.9	1.0	1.1
Inpatient Subacute Total	**5**	**16.3**	**15.5**	**15.7**	**16.3**	**17.2**	**17.7**	**16.4**	**14.8**	**16.4**	**17.7**	**19.4**	**20.5**	**16.4**	**14.5**	**15.9**	**17.2**	**18.9**	**19.9**
HORSHAM Total	**109**	**93.9**	**96.6**	**95.4**	**96.7**	**98.5**	**98.3**	**94.0**	**103.0**	**111.6**	**115.4**	**119.4**	**120.5**	**93.9**	**96.3**	**104.8**	**108.4**	**112.3**	**113.2**

ED Projections

The demand modelling for the EDs in Grampians Health is provided in Table 21-2. For Ballarat campus, the current approved capital program for ED increases capacity from 27 POCS to 45 POCs; a substantial increase. This CSP extends the time horizon to 2036-37 for ED and projects 69 POCs projecting from the existing service model.

For Horsham campus, the projections increase POCs from the current 7 POCs to 13 POCs; almost doubling.

Mental Health Projections

In relation to mental health infrastructure and POCs, the Department of Health is currently refining the demand modelling for mental health inpatient and community services. The following POC estimates are based on the national mental health demand projections and may not represent a final methodology for new POCs for mental health in the Grampians Region. The two main bases for mental health modelling for community services consistent with the national model. There is the demand modelling based on *prevalence* of mental health in the population, and then there is increased *intensity* (or service uplift) of service provision of the eligible population.

The modelling indicates baseline projections for:

- *Acute adult inpatient* POCs will increase from the existing 23 acute inpatient beds to 29 beds in 2036-37. The modest increase is due in part to the underutilisation of the existing beds;
- *Acute aged inpatient* POCs will increase from the existing 20 beds to 27 beds;
- The '*mother and baby' service* has 5 POCs (in addition to the above beds) and are not likely to change over the course of the CSP.
- *Community mental health* POCs will increase significantly. There are two main components of the demand projections; population prevalence of mental health, and service intensity.
  - ***Baseline prevalence*** indicates that the 2019-20 activity of ~113,000 occasions of service will increase to 163,000 occasions of service by 2036-37. The baseline estimate assume that the service model will not materially change the underlying utilisation rate on which the 113,000 occasions are based.
  - The change in ***service intensity***, which represents a service model change, lifts the projected demand to ~300,000 occasions of service per annum; close to doubling of the projected baseline rate at 2036-37, and more than 3.7 times the current activity level.
  - The demand projections combining prevalence and intensity of service results in an indicative 73 POCs, 4 POCs at each of Horsham and Ararat for adult community mental health; and 65 POCs at Ballarat, which is an aggregation of the following service types:
    - Access and Triage: 8.49 POCs;
    - Aged community mental health: 6.20 POCs;
    - Adult MHS: 28.84 POCs;
    - CCU Community: 0.59 POCs;
    - Clozapine Shared Care: 1.57 POCs;
    - Court Liaison: 0.13 POCs;
    - Post-Discharge Support: 0.02 POCs;

- Forensic Clinical Specialist: 0.31 POCs;
- Infant and Child: 7.50 POCs;
- Perinatal community mental health: 0.64 POCs; and
- Youth community mental health: 10.54 POCs.

21.1.2. Consolidated Infrastructure strategies

The demand projections indicate substantial increased capacity will be required for Grampians Health. The service development requirements proposed in the CSP also indicate that there will be significant changes to service models (models of care), which means that the existing infrastructure may not be suitable to deliver the expected level of patient services.

Therefore, it is proposed that:

- ***Master planning*** be undertaken for the Horsham, Edenhope, and Stawell campuses, and that the specific initiatives proposed for each campus be considered in the master planning.

  Of particular note for master planning, it will be strategically important to incorporate the vision for the Stawell and Horsham campuses that uplifts the capacity and capability of community-based services to enable services closer to home, meet increased local demand and enable contemporary models of care. This requires a ***newly developed community hub*** at both sites. Indicatively, the community hub would have as much of the ambulatory services that are provided including primary care, acute (HITH) and subacute ambulatory (PAC, Better@Home, TCP etc), GPs, community mental health, and potential collocation of other Stawell and Horsham based community services providers.
- The master plan for Ballarat be expanded in the context of a new major ***integrated community health services hub facility*** that further develops a hub off-campus. The new integrated community hub would accommodate:
  - A satellite dialysis service;
  - A satellite chemotherapy service;
  - The substantial increase in clinical community mental health service;
  - Acute and subacute community-based services (for HITH and Better@Home);
  - Community aged care, TCP and NDIS services;
  - Community palliative care;
  - Selected specialist clinics;
  - Selected community rehabilitation and CRC activity;
  - Public health and health literacy services;
  - Clinical support services such as medical imaging, pharmacy, and pathology; and
  - Provision to collocate with other community service providers and spaces that engage and connect with the Ballarat community.

In the context of improving access and care in the most appropriate setting, infrastructure considerations need to assess the nature of the development for a Medi-hotel proposed at Horsham, Stawell and increased capacity at Ballarat. In a similar vein, there needs to be early consideration of staff accommodation facilities at all campuses that should be available for rotating staff and travelling surgical teams at the different campuses to remove obvious obstacles to implementing new models of service delivery across the organisation.

22. Digital Transformation

22.1. CONTEXT

The role of ICT in health (eHealth) has evolved from being an important part of delivering health care to an *essential platform* for delivering health care. ICT has driven the progressive development of health services over the last decade or more, including changes of care delivery since the onset of the COVID-19 pandemic. As service models evolve and business intelligence becomes more critical to the success of health service, effective and efficient ICT systems become increasingly critical.

Digital transformation involves the integration of digital technology into all areas of a business or organisation. It involves a fundamental change in how an organisation operates and delivers services. Importantly, it must also be recognised that it requires a major change in how individuals within the organisation function to deliver services. Digital transformation is essential to the survival of all modern organisations, whatever the sector, and is crucial to delivering accessible healthcare particularly in environments that are geographically disadvantaged, and recruitment of workforce is challenging.

The success of many of the changes and models of care proposed throughout this CSP are reliant on an integrated and robust ICT system. Early investment in appropriate ICT infrastructure is critical to accruing the benefits of digital transformation which include:

- Better consumer experience;
- Operational agility;
- Culture and leadership;
- Workforce enablement; and
- Digital technology integration.

22.1.1. National context

The recognition of the centrality of ICT for high-quality healthcare is reflected in Australia's National Digital Health Strategy[88] with sets out this vision:

> *'Better health for all Australians enabled by seamless, safe, secure digital health services and technologies that provide a range of innovative, easy to use tools for both patients and providers.'*

The benefits outlined by the Australian Digital Health Agency from well-executed digital health strategies include:

- Prevention of adverse drug events, reduction of medical errors, improvement in vaccination rates, better coordinated care and better-informed treatment decisions;
- Sustaining a more efficient health system, through less time searching for patient data, reduction of avoidable hospitalisations, and reduced duplication of pathology tests and x-rays which inconveniences patients and increases the cost of healthcare.
- Improved healthcare availability and patient experience by putting the patient at the centre of their healthcare, and keeping people out of hospital; and

88. Australian Digital Health Agency, Safe, seamless, and secure: evolving health and care to meet the needs of modern Australia,

- Improved access to healthcare for people living in rural and remote areas of Australia; protecting the national digital health infrastructure and secure the personal health information of Australians.

22.1.2. Victorian context

In the Victorian context, the Department of Health's Digitising Health Strategy[89] aligns closely with the national strategy. It emphasises enhanced use of health information and related technologies to support the delivery of a 'person-centred system. The strategy's six building blocks envisage digital health driving the following priorities:

- Preventive health and early intervention;
- Digital clinical systems;
- Person-centred health and wellbeing;
- Clinical grade integration;
- Applied health research, education, and analytics; and
- Shared clinical information.

To advance this strategic agenda, the Victorian Digital Health Roadmap[90] aims to:

- Improve health service resilience against technology outages and cyber-attacks;
- Reduce the risks to patient safety associated with paper-based care processes;
- Embed patient-centred care by joining up healthcare records;
- Create more options for people to use home-based and virtual care, and care closer to home; and
- Give consumers access to their own healthcare information.

Five programs of work are relevant to the Digital Health Roadmap, as outlined in Figure 22-1.

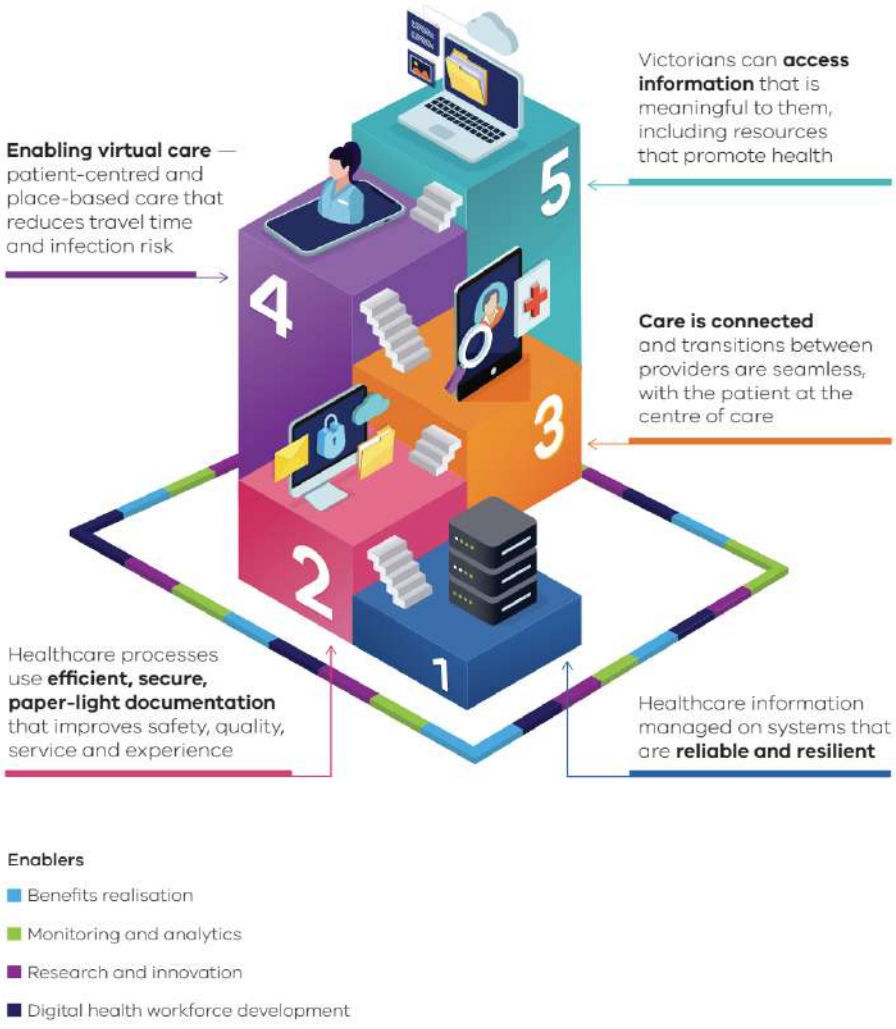
22.1.3. Grampians context

Health services that have come together as Grampians Health were already part of the Grampians Rural Health Alliance (GRHA). To date, the Alliance has worked to upgrade ICT infrastructure, improve cybersecurity, and create a shared digital record across all health services. It is anticipated that on the back of the amalgamation there will be greater opportunity greater innovation and collaboration on a range of:

- Clinical initiatives that enables real-time access to clinical data, real-time patient management and monitoring at the bedside and in patient's homes, timely patient referrals, virtual clinics, amongst other services; and
- Non-clinical initiatives including data analytics and reporting to further enhance quality and safety for Grampians Health.

89. Department of Health and Human Services. (2016) Digitising health: how information and communications technology will enable person-centred health and wellbeing within Victoria, Victorian Government, Melbourne
90. Victorian Department of Health, Digital Health Roadmap, https://www.health.vic.gov.au/publications/victorias-digital-health-roadmap, accessed 16 June 2021

Figure 22-1: Five programs of work, Victorian digital health roadmap



22.2. GRAMPIANS HEALTH ICT PRIORITIES

In the context of the vision and initiatives outlined in this CSP, the focus for Grampians Health ICT priorities for the next five to ten years must also align with the Victorian Digital Health Roadmap priorities. This means advancing the following digital health priorities:

- Healthcare information managed on systems that are reliable and resilient;
- Healthcare in paper-light, efficient, and securely documented to improve safety, quality, services, and experience;
- Continuity of care is securely enabled and Grampians residents are supported in their journey across settings and providers;
- Better@Home and HITH is enabled through telehealth and virtual care that is patient-centred, reducing travel time and infection risk;

- Grampians residents can access information that is meaningful to them, including resources that promote health.

Specific strategies that are relevant to advancing the digital health roadmap in the Grampians Health context are summarised below.

22.2.1. EMR

Two foundational strategies that are proposed are the implementation of an electronic medical record (eMR) across Grampians Health sites together with the introduction of a new and common Patient Administration System (PAS). An eMR Business Case was submitted in late 2021 for consideration.

This strategy represents a threshold change that will deliver three main benefits:

- **Safety and quality**
  - Comprehensive digital solutions serve as an enabler for clinical change and workflow practices. This streamlines fragmented workflows created by multiple systems and sources of information and will result in direct improvements to patient safety and quality by:
    - Facilitating improved communication between healthcare providers;
    - Assisting with medication safety, tracking, and reporting;
    - Creating common, continuous, and coherent workflows supported by technology; and
    - Promoting quality of care through optimised compliance with clinical guidelines and standards.
  - Improvements in the communication between healthcare providers and timely access to clinical information results in improvements in the continuity of care, reduced waiting times, and improved decision-making.
- **Service improvement**
  - Service improvement benefits contribute to clinician productivity through increasing their time to care for the patient by reducing administrative overheads.
  - Benefits included in this category are:
    - Reduced time performing unnecessary functions;
    - Reduced time searching for information;
    - Reduced time retrieving paper and digital records;
    - Improved turnaround time for pathology and radiology results; and
    - Improved throughput and better utilisation of facilities such as: beds; theatres; and high value medical equipment.
  - These improvements release capacity for other clinical activity. It increases organisation capacity, resulting in improved patient flow and greater volume of services delivered without a commensurate increase in resources volumes.
- **Sustainable healthcare**
  - Some of the eMR benefits will result in cost reductions. For example, the implementation of efficient and standardised diagnostic order sets will deliver cost savings. They also contribute to improvements to safety and patient experience. Patients will be exposed to fewer tests which carry an element of risk (e.g., radiation exposure), are invasive in nature (e.g., Blood test), or involve costly consumables such as medications.

- Cost savings will also be realised through the elimination of paper records which removes physically storage and transportation costs.
- Revenue optimisation may be achieved through ensuring improved coding accuracy of items within a diagnosis-related group (DRG).

Key strategies include:

- Consideration of the previously submitted eMR Business Case as a critical dependency to tackling scale, service integration, new models of care, and other issues identified in the CSP.
- Consideration of a digital platform that better enables access and flow of patients, such as the digital control tower options identified in Appendix 1. The concept of the Coordinating Hub is often referred to as a 'Control Tower' that tracks an actively manages patient flow in real time like 'managing take-offs and landings' in a hospital context. Real-time individual patient schedules, real time anticipatory patient flow, and enable work arounds where necessary, for the patient journey from ED, wards, operating theatres and discharge. A *Coordinating Hub* is designed to be the heart of patient flow for the core functions of a hospital for the *prediction, response and management of the ebbs and surges in Patient Flow Activity* across Grampians Health.

22.2.2. Virtual care

This strategy has the following components:

- Increasing the role of virtual care so that care closer to home is the default where it is safe and supported by patient and client preference. This includes:
  - **Real time remote patient interaction and remote monitoring** of patients in their home, as well as enhanced clinical team coordination and supply chain management;[91]
- High quality 'tele-presence' technology (and virtual teaching and training) to be undertaken from almost any setting. Important priority areas are extending:
  - **Virtual** specialist clinics;
  - **Remote medical *specialist consultation-liaison*** and professional advice services in particular to support:
    - Care which can be provided remotely, for identified conditions, to rural patients in Horsham, Stawell and Edenhope without their transfer to Ballarat campus or metropolitan specialist facilities; and
    - The proposed developments in ED/UCC responsiveness including establishment of a Virtual ED and in making mental health more broadly accessible.
- **Digitally enhanced inpatient care** that includes:
  - Enhanced care processes for admitted patient cohorts in Grampians Health services through enhanced care, infection risk reduction, and improved patient experience.
- These components of **virtual** care should be supported by an overarching framework for designing and implementing excellent virtual care which addresses:
  - Documentation, Integration, Best Practices, and Support.[92]

91. Conley J et al. Technology-enabled Hospital at Home: Innovation for Acute Care at Home, New England Journal of Medicine – Catalyst: Innovations in Care Deliver, Vol. 3 No. 3 | March 2022, DOI: 10.1056/CAT.21.0402
92. Offodile AC et al. April 2022, A Framework for Designing Excellent Virtual Health Care, Harvard Business Review.

22.2.3. Consumer access and engagement

The aim of this strategy is to support Grampians Health consumers to increasingly interact digitally with Grampians Health campuses and other health care providers. The longer-term goal is that patients will be able to book appointments online and access their own health information.

Key strategies include:

- Enabling the ***timely referral and 'booking'*** *for patient appointments* between health services providers on discharge or transfer of patients, including GPs.

22.2.4. Connecting care

The strategic objective of ICT enabled connected care is to securely enable continuity of care to support Grampians Health consumers in their journey across health settings and providers. Key strategies include:

- ***Transfer of clinical information*** to better integrate care. This includes safe data sharing that enables information to transcend organisational boundaries (interoperability of systems), including GPs and referrals and with community and primary health care organisations. This facility will support improved clinical decision-making, organisation of care and outcome measures that focus on the individual rather than an episode of care.
- ***Improved transparent reporting*** *of standards and patient outcomes* from existing frameworks, such as patient reported outcomes (PROs), for example, consistent with departmental policy.
- ***Internal connectivity between units***. The intention is to invest in integrated information systems that improve the patient experience, and improve productivity and business systems including:
  - Intra-Grampians Health patient information flow for 'transferred' patients;
  - Electronic real-time bed management system; which is supported by
  - An enhanced data warehouse capability.
- ***Improved Business Intelligence*** *and internal management support systems* that capture activity data, resources, and patient outcomes, in order to have the necessary 'evidence-base' to demonstrate effectiveness and quality and safety outcomes.
- **Shared care models** with community-based healthcare providers including GPs.
- Simple ***discharge summaries*** for GPs.

There are elements of many of these initiatives already exist. However, what will be important is the broadening of the ICT platform and embedding efficient use of ICT into common practices to garner the operational efficiency that can be generated across the amalgamated entity through effective use of ICT.

23. Teaching, Training and Research

23.1. A LEARNING HEALTH SYSTEM

In order for Grampians Health to be *"a trusted, progressive and innovative leader of regional and rural healthcare"* it must adopt the mantel of a learning health system. In effect, a system which integrates internal data and local experience with external evidence, to better inform future practice for the benefit of patients and staff.

Learning Health Systems are characterised as[93]:

- Having leaders who are committed to a culture of **continuous learning and improvement**.
- Able to systematically gather and **apply evidence in real-time to guide care**.
- **Employing IT methods** to share new evidence with clinicians to improve decision-making.
- Able to **promote the inclusion of patients** as vital members of the learning team.
- Having the **ability to capture and analyse data and care experiences** to improve care.
- Those that **continually assess outcomes, refine processes and training**, to create a feedback cycle for learning and improvement.

Figure 23-1: Learning Health Systems[94]

23.1.1. Teaching and Training

An important factor in the success of future delivery of health services in regional Victoria is the development and 'embedding' of teaching and training as a process of continuous learning for Grampians Health. As the major health service within the region, Grampians Health has a key role to proactively engage in teaching and training. Prior to the amalgamation, Ballarat Health Service had considerable involvement with University of Melbourne, Deakin University, Latrobe University and Australian Catholic University (ACU) in relation to clinical training placements.

93. Agency for Healthcare Research and Quality, About Learning Health Systems - https://www.ahrq.gov/learning-health-systems/about.html
94. Ibid

These relationships need to be further developed and expanded to ensure that each campus benefits from the relationship and in the stated objectives of both teaching institutions to foster regional students and "grow a regional health workforce".

Accordingly, a guiding principle for the new organisation should entail ensuring that teaching and training become core functions of the (current and) future role of Grampians Health.

Over the next ten years there are several strategic areas for Grampians Health to pursue with respect to teaching and training:

- Become **a centre for excellence in training of rural practitioners** in areas of primary care medicine, nursing, and allied health. Specifically, Grampians Health could leverage current arrangements with university affiliates to develop and implement post-graduate generalist training programs in rural and regional health. This approach would also reinforce recruitment and retention of staff across the health service consistent with the philosophy of "grow your own workforce".
- Continue to **expand the number of medical specialist training positions**, particularly in areas of growing demand (e.g., mental health).
- Develop an **increasing number of extended scope of practice positions** for nursing and allied health staff.
- **Increase the level of training of clinical supervisors and expand the number of clinical placements** undertaken by medical, nursing, and allied health students across all areas of the health service to assist with current workforce pressures.
- Extend the level of **participation in professional transition to practice programs** (e.g., for new graduate medical and nursing staff).
- **Expand current staff development and training opportunities** to include other community service providers, encourage professional networking across the region, and promote interest in shared positions between Grampians Health and other organisations.
- Consider developing or **participating in an undergraduate workforce employment program** offering residential aged care, portering, and other clinical support positions to nursing, allied health and/or medical undergraduates (with requisite training to be credited towards their undergraduate studies where appropriate and relevant).

Additionally, Grampians Health could examine the feasibility of a future digital or virtual reality surgical simulator for Grampians Health. This is becoming more common practice of larger health services to facilitate local training as part of workforce upskilling and retention strategies. Simulators are also being used for preoperative warm-up training that is reportedly beneficial to surgical performance.[95]

23.2. RESEARCH

Grampians Health also has a role in leading research and innovation across a range of areas related to rural and regional health service delivery. Opportunities will range depending on clinical stream but could encompass participating in clinical trials in collaboration with other health services and teaching institutions, to testing new interventions and models of service delivery through use of new modalities and technologies.

95. da Cruz JAS, Dos Reis ST, Cunha Frati RM, Duarte RJ, Nguyen H, Srougi M, Passerotti CC. Does Warm-Up Training in a Virtual Reality Simulator Improve Surgical Performance? A Prospective Randomized Analysis. J Surg Educ. 2016 Nov-Dec;73(6):974-978. doi: 10.1016/j.jsurg.2016.04.020. Epub 2016 May 24. PMID: 27233673.

Although a range of research activity is currently being undertaken by Grampians Health, in particular at the Ballarat campus, it is currently not cohesively undertaken at across the Ballarat, let alone Grampians Health as a single entity. An integrated and coherent approach to research would be a foundation stone if research is to be used as an important 'value-proposition' for engaging and recruiting staff, and for building the reputation of Grampians Health as a centre of excellence.

It is proposed that a Grampians Health Research Office be established that would:

- Stocktake current research initiatives;
- Facilitate networking and knowledge sharing opportunities between research practitioners;
- Promote and support opportunities for research, particularly research that is targeted at and located within more rural and remote areas of the catchment;
- Co-ordinate or otherwise provide upskilling opportunities in research skills for interested staff;
- Develop and maintain research liaison and partnership with affiliated universities or jointly with other health services;
- Assist with local human research and ethics committee submissions; and
- Assist in the sourcing of and application for research grant opportunities by the organisation.

After establishing a research office presence and network of researching clinical staff and links with affiliate universities, Grampians Health research office might consider starting to form an organisational research agenda focusing upon key issues that impact the population catchment including but not limited to:

- Domestic violence;
- Mental health and suicide prevention;
- Reproductive health (including teenage pregnancy);
- Women's health issues particular to rural and regional women;
- Chronic disease management;
- Ageing in regional and rural communities;
- Models of community/peer/voluntary health support;
- Public health and population screening for specific health conditions; and
- Generalist regional, rural and remote health practitioner skills, training and development.

24. Consolidated Strategies by Campus and Entity

This section collates the main strategies previously proposed across each of the service streams for the Ballarat, Edenhope, Horsham, and Stawell campuses and consolidates important areas that need to be approached as an integrated organisation.

24.1. EDENHOPE CAMPUS

Edenhope can continue to operate as a small rural health service. This means that core services will stay the same, including the provision of urgent care, acute inpatients, residential aged care, and community health services. The strategies for Edenhope, discussed below propose preserving existing vulnerable bed-based services but also look to options that improve *access and sustainability* of services at Edenhope, particularly for community-based services, specialist outpatients, and 'recovery closer to home', amongst others.

However, as Grampians Health consolidates as an integrated organisation, there is scope to explore a *different future* for Edenhope; that is a more innovative and responsive role, within the broader organisation, which could include:

- Converting Edenhope campus to a *multipurpose service* (MPS); or alternatively
- Considering an innovative, integrated *health and social service centre* that provides a more holistic service to the local community.

An MPS option would require a medium to longer-term engagement with, and commitment by, both the Commonwealth and State governments to convert Edenhope to an MPS under the Commonwealth program and the Health Services Act by the state government. There are clear benefits to the community of Edenhope that can provide for better integrated health and aged care services, developing services that are a priority for Edenhope that would not otherwise be possible under the current funding regime. In effect, the aims of the MPS program are to provide:

- Improved access to a mix of health and aged care services that meet community needs;
- More innovative, flexible and integrated service delivery;
- Greater flexibility in the use of funding and/or resource infrastructure within integrated service planning. This would include service substitution of RACS beds for community packages;
- Improved quality of care for the local community; and
- Improved cost-effectiveness and long-term viability of services.

An alternative option within the current legislative framework is to examine transitioning the campus to an integrated health and social service centre. This option would seek to broaden the role of the Edenhope campus to accommodate:

- Modified health services such as community aged care packages;
- Disability services including specialised role for NDIS;
- Community amenities and social support services beyond the traditional health and community services such as collocated programs for income support, housing and food insecurity and assistance with utilities and transportation; and
- Community-based and/or voluntary programs such as a social support navigation service, youth centre, social network groups, amongst others.

In effect, both of the above options represent a paradigm shift in role, from a its traditional 'hospital' base with curative therapy, to one that also extends to wellbeing and community benefit. It has the potential to redefine its role to be "the heart of the community".

In the interim, the main strategies proposed for the Edenhope campus include:

- Developing a sustainable GP service model that would include provision for structured leave, clinical support outreach and social inclusion programs.
- Clinical consultation advice for urgent care patients – including video-conferencing – from an enhanced Horsham ED, or from Ballarat ED.
- The development of an ACE program for acute inpatients.
- Increased remote/virtual access to specialist outpatient clinics. Of note are a chronic pain management service, rheumatology service, cardiology service.
- More accessible surgery to be provided at Horsham.
- Exploration of chemotherapy at home service.
- Development of Medi-hotel and staff accommodation at Edenhope.
- Availability of dental services on a periodic basis, particularly for school children.
- Development of increased clinical capability and capacity of community-based services and exploring the development of HITH.
- A community mental health service.
- A master plan for the site (excluding residential aged care) that reflects new contemporary service models.
- Reliable baseline digital capability including:
  - An eMR that will facilitate communication amongst the various Grampians Health campuses and provide a necessary means of engendering organisational coherence and support;
  - Electronic medical prescribing; and
  - Remote real-time clinical monitoring and treatment.
- Providing direct patient navigation service for Edenhope patients.
- Community mental health consultations.
- A palliative care inpatient and expanded community service.
- Specialist consultation to the UCC.

24.2. STAWELL CAMPUS

Stawell campus is expected to have a role change as well as service reconfiguration that better reflects the changing requirements of the local Stawell community. The vision for Stawell is a contemporary and sustainable health service resulting in a greater range of services, and a higher level of acuity and complexity of services that are safely delivered from new facilities. The vision for Stawell is dependent on the increased capability at Horsham.

This will be made possible through enhanced clinical capability of the local and visiting workforce and enhanced (hard and soft) infrastructure. Specifically for Stawell, key strategies include:

- Development of Stawell as a specialist centre for day procedures, particularly for ophthalmology, endoscopy, gynaecology, and general surgery. This will require the provision of a second day procedure theatre.
- Consideration of GEM/rehabilitation services, including specialist HIP services at Stawell. Other identified services include chronic pain and rheumatology service.
- Development of an inpatient palliative care service.
- Community mental health services, including consistent and timely access to consultation-liaison services.
- Development of increased clinical capability and capacity of community-based services.
- Enhanced access to specialist clinics from Stawell and virtual clinics, particularly noting cardiology, paediatrics, women's health, respiratory and orthopaedics.
- A capital master plan that includes:
  - A second day procedure theatre and a reconfiguration/mis of fewer multi-day beds and more same day beds;
  - Palliative care, GEM and rehabilitation MDS beds;
  - Residential aged care;
  - The UCC;
  - A new integrated community health building that would collocate the GP practice, chemotherapy, HITH and Better@Home, specialist clinic consultations, community mental health, and other spaces for local community groups and volunteers.
- The development of visiting staff accommodation.
- The development of a medi-hotel, consistent with the role of a centre for day surgery that will include drawing patients from a wider catchment including Ballarat.
- Enhanced sustainability of the GP practice, and the maintenance of the GPAs.
- A site for the proposed Centre of Excellence for medical Generalist training.
- Increased remote/virtual access to specialist outpatient clinics.
- Capability for videoconferencing and provision of clinical advice and management of UCC patients from Ballarat or Horsham ED.
- A no 'out-of-pocket' cost attendance for urgent care presentations policy.
- The development of service system navigator roles.
- 'Recovery closer to home' program.
- Exploration of a local breast-screen service.

24.3. HORSHAM CAMPUSES

It is expected that Horsham is likely to experience the most proportionally significant impacts in the CSP. In general, the objective is to reverse the trend of declining access and capability at Horsham and restore and further enhance the range and acuity of clinical services delivered at Horsham, which in turn improves service access and capability to Stawell and Edenhope campuses. Developing sustainable models of medical specialists and specialist nursing will be a cornerstone of the revitalisation of Horsham campus. Horsham will require new infrastructure and supportive digital transformation to maximise the potential for service development.

The enhanced capability at Horsham is major factor in enhancing self-sufficiency for the broader Wimmera region population.

Specifically, key strategies will include:

- Enhanced clinical capability to manage more complex patients in ICU as expected. This is likely to include locally resident anaesthetists.
- Full integration of the Horsham ED with Ballarat ED, which increases the clinical capability at Horsham requiring fewer patients to be transported to Ballarat or retrieved to Melbourne. There is expected to be FACEMS at Horsham to add to the current range of ED physicians.
- The development of a small SSU.
- Introduction of an ACE program, and over time a small AMU/MAPU.
- The development of a 4-6 bed acute mental health service as an integrated unit of the regional mental health service.
- The substantial increase in the provision of community mental health services. This includes local accessibility of C-L.
- Integration with the Wimmera community mental health support hub.
- A local pharmacotherapy program.
- Within a regional surgery framework that provides for outreach surgery at Nhill and Stawell, development of:
  - A sustainable core of four general surgeons, which would be a mix of at least two locally resident in Horsham and no more than two surgeons on rotation to Horsham from Ballarat;
  - A sustainable core of two orthopaedic surgeons, preferably located in Horsham with relief from Ballarat;
  - A sustainable core of specialist anaesthetists, supported by GPAs;
  - More frequent and sustainable visiting surgery sessions from Ballarat specialists. This may involve a full operating theatre team travelling to Horsham (and Stawell) as might be clinically appropriate. This is expected to provide for level 4 surgery from Horsham; and
  - Support an expanded rotation of visiting surgical specialists including ENT, gynaecology, and urology.
- A more sustainable core of local specialist physicians including general physicians, a geriatrician, a second paediatrician, neurologist, and potentially other specialists. The plan is to develop and maintain Horsham as a level 4 clinical capability service.
- Enhance the range and clinical capability of community-based health services. This includes a HITH program.

- Progressive development of locally delivered specialist clinics, and additional virtual clinics. All of the core specialities were identified as priority developments. These would need to be staged as part of planned roll out.
- Development of a more accessible services though the local service navigator roles.
- An expanded Horsham-based community palliative care team.
- Digital transformation technologies including an eMR and real-time patient monitoring and clinical management for remote patients.
- Exploration of:
  - A Lung Function and Rapid Access Lung Lesion service; and
  - Public cardiology assessment and testing service.
- Development of a master plan for Horsham that would include the above initiatives. Of particular note is the development of:
  - An integrated community hub that will include the GP practice, acute and subacute community services, community aged care, specialist clinics, community mental health services, and provision of engaging local community service providers;
  - The redevelopment of residential aged care and the establishment of a 12-15 bed challenging behaviour and dementia (memory) unit;
  - An expansion of the POCs excluding mental health for:
    - ED increase of six POCs to 13 POCs; and
    - Acute and subacute beds increase by approximately 12-15 POCs, most for subacute.

24.4. DIMBOOLA CAMPUS

There is no role change for Dimboola. It will continue to operate with its existing core services including urgent care, a small acute capacity and residential aged care. The main change will be:

- Enhanced access to virtual clinics at Horsham or Ballarat.
- Establishing an ACE program.
- Increased capability to manage more complex patients/clients in the community.
- An eMR and digital transformation technology that enables real-time remote patient monitoring and management and better connects Dimboola with the other Grampians Health campuses.
- Enable videoconferencing and provision of clinical advice and management for UCC patients and Ballarat or Horsham ED.

24.5. BALLARAT CAMPUSES

This section collates the main strategies previously proposed across each of the service streams for the Ballarat Campus.

The CSP charts a course for a progressive increase in Ballarat's capacity and capability over the next decade across all clinical streams. This reflects Grampians Health role as a regional provider and an expectation that an increased proportion of clinical services, including more complex tertiary services, will be available locally in the region and in particular at the Ballarat.

Through the consolidation and enhancement of Grampian Health's regional role as a tertiary services provider, Ballarat campuses will also develop strong links with all other campuses across Grampians Health to support increased capability and local availability of health services across the catchment. Access and flow strategies will promote more timely and responsive access to services across the continuum. The key strategies pertinent to Ballarat include:

- Strengthening the range and extent of relationships with quaternary health services in Melbourne.
- Enhancing the ED service to provide timely and responsive consultation-liaison and support to other Grampians Health ED and UCCs in the first instance and developing the service to provide a broader regional service. This will entail:
  - ***Development of a virtual regional emergency model*** to enable direct real time clinical management by Ballarat physicians of remote patients at Horsham ED and Stawell and Edenhope UCCs. This will require the progressive enhancement of the clinical team at Ballarat.
  - **Allied health and multidisciplinary team approach** to care together with care navigators within the ED to improve patient flow and responsiveness to the increasing numbers of complex presentations including those related to aging, substance misuse and family/sexual violence incidents.
  - **More active in-reach from mental health and AOD specialists** to improve access to mental health consultation-liaison and treatment services provided within the ED environment (including the Short Stay Unit).
- Strengthening its role in mental health and accept its **pivotal role in the revitalisation and innovation** in the strategic positioning of the Grampians AMHS, including how services will ensure greater connectivity between mental health and the broader health and social support system. Specific strategies will include:
  - Developing an *operational and clinical governance framework.*
  - Enhancing access and support services.
  - Developing an effective crisis response service.
  - Expanding Consultation-Liaison services to enable virtual support from Ballarat to all other campuses, the non-Grampians Health services and GPs.
  - Establishing specialist Child and Adolescent and Young Adult service streams.
  - Developing proactive community treatment capacity and capability.
  - Developing client-facing service navigation and support tools.
  - Building workforce capacity and capability.
- Increasing regional self-sufficiency from 87% to 90% by 2036-37 for internal medicine by increasing capacity and capability.
- Ensuring self-sufficiency of clinical cardiology is maintained at 91%, and that interventional cardiology is increased from 73% to 85% over the next five years. This will include:
  - Consolidation of cardiology services from Ballarat campus as an integrated cardiology department that combines clinical cardiology, interventional cardiology, diagnostic cardiology, CCU, specialist clinics, on-call roster, telehealth, cardiology at home and cardiac rehabilitation;
  - Expanding the Ballarat cardiology workforce to manage the increasing demand pressures including specialist clinics;
  - Provision of telehealth support to Horsham, Stawell, Edenhope, and Ararat; and
  - Consideration be given to the formation of a dedicated CCU, separate from the ICU.

- Improve patient access and flow for general medicine through:
  - Development of a MAPU or AMU at Ballarat (in the first instance) to deliver rapid and patient-centric assessment and care/treatment; and
  - Increased medical and surgical acute ward capacity to recognise the additional range of sub-specialty patients that are treated under the 'bed card' of general medicine physicians.
- Review of specialist clinics at Ballarat campus to:
  - Improve the ratio of new to review patients;
  - Progressively making available additional clinics, especially new video-telehealth clinics across core clinical specialties in the first instance;
  - Develop more diversion clinics to allied health and nursing in lieu of specialist consultant clinics where this is appropriate; and
  - Judiciously establishing new MBS clinics that comply with the guidelines of privately delivered ambulatory services.

24.6. WHOLE OF ENTITY STRATEGIES

The following areas need to be considered as those of a single entity, where the benefits of integrated action and effort accrue benefits to the entire organisation, as well as to the parts that make up the whole.

24.6.1. Access and Flow

To develop an exemplar service for safe and efficient patient access and flow. This is a medium to long-term initiative that requires a sustained commitment.

One early strategy involves effective integration of the services of the five campuses to **enhance access** to health services. This includes establishing entity-wide service development opportunities that would not otherwise be possible as four separate entities, including priority service initiatives, such as specialist clinics by telehealth, staff rotations, consultation support from the Ballarat, amongst others identified in this CSP. Other access and flow initiatives include:

- Significantly enhanced community-based service capability and capacity.
- Developing a medium to long-term implementation plan for a genuine 7-day service at Ballarat.
- Developing a Discharge Referral Team for complex patients – at Ballarat in the first instance and across all campuses over time.

24.6.2. Hospital in the Home

It is proposed that there is potential for a further and significant development of HITH as an important strategy that aligns with enhanced patient-centric care. The HITH program needs to broaden access enabled by increased clinical capability and integration supported by ICT systems and processes across all campuses.

Of particular relevance to Ballarat, a re-invigorated HITH program would have the following characteristics:

- HITH would target 6% of all acute separations by 2025, and then 10% by around 2028. This should apply to all campuses with an initial focus on Ballarat and Horsham.

- A scale of operation at Ballarat sufficient for a dedicated community-based medical, nursing and allied HITH team.
- Close clinical connection between HITH and ED, MAPU, acute medical and surgical wards, subacute wards and specialist clinics which would be supported by robust clinical protocols and referral pathways to link with GP and other providers.

24.6.3. Subacute

The following initiatives are designed to strengthen and extend the current service base, across all Grampians Health sites:

- Develop contemporary Models of Care with respect to higher complexity patients being clinically managed at home. This means that significant expansion of Better@Home programs for rehabilitation and GEM. It is proposed that within 3 years, 25 of the current inpatient GEM and rehabilitation bed-days be delivered in home.
- Develop an ACE program at all campuses (including Ballarat and Horsham) to enable specialist medical, nursing, and allied health service models to enhance functional recovery, prevent and manage delirium as well as behavioural and psychological symptoms of dementia (BPSD), and provide care pathways to support timely discharge with an increased focus on care at home. At Ballarat, this would build on the Acute-on-GEM model.
- Develop *partnerships* between geriatric medicine and other clinical streams including mental health and geriatric oncology.
- Ensure Ballarat subacute services have appropriate access to *interventional pain management* expertise.
- Through partnerships with metropolitan hospitals, increase Ballarat's capability (including through workforce, infrastructure, and equipment) to provide *rehabilitation for more complex patients* including rehabilitation for younger persons aged under 25 years; and Upper limb amputee rehabilitation.
- Transition the *Voluntary Assisted Dying Program* to community-based GPs at Ballarat.
- Build the capacity and capability of the HIP program to manage increased demand program development to enable more complex subacute patients to be clinically managed in the community through Better@Home.

24.6.4. Surgical and Procedural

The overarching strategy for surgical services is to increase regional self-sufficiency from 69% to at least 76% over the next decade. The CSP outlines three models for this increase to be achieved:

- Local surgery by a local (resident) surgeon and surgical team.
- Travelling surgical teams - clinical teams would travel from the Ballarat campus to Horsham and Stawell (or Ararat and Maryborough) to deliver the necessary level of clinical capability not otherwise possible at the local hospital.
- Centralising some surgery at Ballarat - this may include thoracic surgery, paediatric surgery, neurosurgery, and complex vascular, upper-GI, ENT, and gynaecology. Complex patients with an ASA of 3-5[96], many co-morbidities and/or bariatric patients.

96. American Society of Anaesthesiologists' Physical Status Classification System is used to assess and communicate a patient's pre-anaesthesia medical co-morbidities. ASA 1 are healthy patients, ASA 2 are patients with mild systemic disease, ASA 3 are patients with severe systemic disease, ASA 4 patients have severe systemic disease which is a constant threat to life, and ASA 5 are moribund patients who are not expected to survive without the operation.

24.6.5. Intensive care

- The Ballarat ICU will increase capacity and capability to operate at a level 3.
  - The demand analysis for Ballarat indicates the need to an 11 bed ICU equivalent, plus four HDU beds (totalling 15 beds). The analysis makes no provision for flex bed capacity. The projected demand for a coronary care unit is up to six beds. These estimates are to 2036-37 but are virtually the same for 2031-32. The demand estimates have implications for the current combined ICU-CCU facility, given the clinician consultations. The key considerations are *demonstrating* that a:
    - 15 bed facility can operate with acceptable efficiency; and
    - Six bed CCU could be operationally integrated as part of a cardiology ward (along with other lower acuity telemetry beds).
  - It is expected that some of the identified issues that weaken a joint model, such as a more specialised workforce of nurses, clinical culture, and staff recruitment and retention challenges, would strengthen both models of care.
  - In the medium to longer-term, intensive care is proposed to operate as a single unit between Ballarat and Horsham, including the potential for joint appointments, which means that the Ballarat ICU and CCU medical and nursing specialists would be clinically networked to support the Horsham ICU. There would also be opportunities for rotation of staff between the two sites.
  - Paediatric HDU - As part of future capability enhancements at Ballarat in the medium-term, strengthen provision for paediatric HDU, with networked links to the Royal Children's Hospital and the Monash Paediatric ICU. This means future proofing capital redevelopments to provide for an 18-bed facility that would have 3 purpose designed paediatric beds.

24.6.6. Women's and Children's

Obstetrics services will be delivered at Ballarat and Horsham campuses.

- The Ballarat campus will play a lead role in the development of a single maternity service delivered across inpatient sites and antenatal services. Key attributes of relevance to Ballarat campus include developing:
  - A Midwifery Group Practice continuity of model of care;
  - A Maternal Fetal Medicine Unit at Ballarat; and
  - A specific Aboriginal Maternity Service that can provide culturally sensitive care for Aboriginal women and their families.
- An innovative group midwifery model be developed at Horsham.
- Neonatal services – The overall strategy is to:
  - Increase self-sufficiency marginally for neonatology services from 82% to 85%;
  - Integrate neonatal services as a single unit across Grampians Health, with common protocols and procedures, and provision for rotation of medical and nursing staff;
  - Recruit a staff neonatologist for Grampians Health.
- Paediatrics – The overall strategies is that self-sufficiency be increased marginally for paediatric services from 73% to 75%. This would entail:
  - Developing a single integrated paediatric service;
  - Work towards having 24-hour Paediatric Emergency Physician availability at Ballarat;

- Exploring opportunities to expand home-based care for paediatric patients including HITH and palliative care;
- Exploring opportunities to provide more comprehensive paediatric pathways to care including outpatient clinics, inclusive of allied health and nursing to provide true multidisciplinary care. Ambulatory paediatric services should optimally be co-located to promote service coordination and responsiveness to patients and families;
- Prioritising the development of paediatric clinics from the following: Diabetes, Behavioural Development, Continence, Obesity and Allergy;
- Ensuring depth and breadth of the Grampians Health paediatric allied health workforce including; Psychology; Occupational Therapy; Physiotherapy; Speech Therapy; Complementary developmental play specialists; and social work;
- Strengthening the paediatric components of service models with a focus on palliative care; pain (acute and chronic) pain services and neuro-disability.
- Enhancing transition care pathways from paediatrics to adult management to ensure patients and their families are well supported during this phase;
- Building on partnerships with the RCH to further develop collaborative service models of relevance to the region; and
- Extending outreach simulation training for paediatric acute care across the region through Ballarat's 'Simvan' with the aim of improving care and clinical outcomes.

24.6.7. Community health, primary care and public dental

The following Grampians Health-wide strategies are relevant to Ballarat campus:

- Focus on collaboration and partnerships as a necessary foundation of a client-centred service delivery system.
- Ensure that there is clear role delineation between Grampians Health and other community health service providers.
- Support other providers with respect to community-based initiatives that enhance health outcomes, increase health literacy, independence and self-management.
- Support public health initiatives including lifestyle campaigns, fluoridation, amongst many other potential regional strategies that enhance health outcomes.
- Innovative and functioning digital platforms to provide:
  - Virtual care/support to more rural clients and clients who find it difficult to access community services;
  - Digital platforms should also support enhanced communication between service providers, including patient-level information transfer to allow for greater integration.
- Review funding opportunities across Grampians Health to expand community health services to meet local area needs.
- Improve access for first nations people through enhanced, trusted relationships with ACCHOs, including developing/modifying pathways to care provided by Grampians Health.
- Primary care strategies include:
  - Developing opportunities for GPs in Ballarat to acquire areas of specialisation in clinical areas that would enable specialists to refer specialist clinic patients back to primary medical carers;

- Proactively collaborating with GPs in the catchment to enable timely and informed discharge of patients;
- Working in collaboration with other providers in the region to extend/develop strategies to recruit and retain primary care health practitioners; and
- Working collaboratively with the PHN and with the Western Vic Regional Training Organisation to strengthen the GP trainee supply pipeline in the catchment and with Rural Workforce Agency Victoria on the development of stronger strategies for GP recruitment and retention.

24.6.8. Allied health

- Expanded workforce to address service gaps – An increase in the allied health workforce across all disciplines is necessary to meet the increased demand for health services and address the growing burden of disease in the Grampians region.
- Broader scope of practice – To increase attractiveness of career pathways in Grampians Health, there is a need to broaden the scope of practice for allied health practitioners.
- Professional Development. Related to the above, develop a whole of organisation approach that allows for professional development, career advancement opportunities, and position rotation across all five campuses.
- Clinical Impact of allied health and Demonstrated Value. Develop a specific (research) program that quantitatively evaluates the relative impact of allied health services on *patient outcomes and patient flow*.
- Enhanced role in health promotion and illness prevention – Allied health practitioners are integral to the development of health promotion and illness prevention strategies region-wide. There is a need to ensure a whole of organisation approach to optimise the contribution of all allied health staff from all campuses. This is relevant to ensuring coordination of scarce resources and to achieve a focus on highest priority public health interventions that can utilise the critical mass of an allied health workforce entity wide.
- Increased focus on inter-disciplinary, team-based care.
- Increased use of telehealth – An expanded use of telehealth is an important future priority to maximise access across the whole region to the allied health programs of care.
- 7-Day Services – A future priority is to increase the extent to which Ballarat campus can operate as a genuine 7-day service and will importantly include allied health components that optimise assessments and timely patient flow.

24.6.9. Aged care services

It is proposed that Grampians Health would look to strategically reassess its position in the residential and community roles in aged care, particularly in the context of a more directly competitive market, aged infrastructure, and capacity to reinvest, and changing client mix. Specific strategies relevant to the Ballarat campus include:

- Developing a business case that enhances the community-based capability and capacity to *deliver HCPs* (future Support at Home) programs.
- Developing a business case that examines a change in service mix between under-utilised bed-based services and *conversion to home packages*.
- Developing Grampians Health RACS as *a centre of excellence* in training in aged care, dementia, and care of clients with special needs that is broadly recognised across Australia.

- Flexible workforce structures.
- Aged Care Master planning for Grampians Health.
- Continuing to seek and receive RHIF capital funding for the aged RACS stock.
- Developing a 12-bed *challenging behaviour and dementia unit at Ballarat*.
- Developing (notional) profiles for each RACS facility that would be required to be sustainable under the new AN-ACC funding model.
- Developing aged care *workforce stimulation conditions* that will strengthen the number and skill levels of nursing and allied health staff working in aged care. This may include training bursaries, support packages, and length of time bonuses.
- Creating a Grampians Health Aged Care Strategy which develops an improves the link between community, residential and the broader organisation creating an "All-of-care" focus, addressing Royal Commission outcomes, considering innovation, and workforce redesign within the new environment.

24.6.10. Clinical support services

- Pathology - It is proposed that Grampians Health seek to streamline points of duplication by aligning pathology contracts to a single provider when arrangements fall due in 2024.
- Imaging - Streamline operational efficiency of medical imaging through a single contractor or undertake the service internally with outsourced reading and reporting as is the current arrangement at Ballarat. Specifically, this strategy would reduce rates of patient transfers and test duplication and overcome PACS incompatibility.
- Pharmacy - Form a single integrated pharmacy department across the sites. This includes:
  - Common administration and a common IT platform, presumably iPharmacy; and
  - Integration the oncology information system (ARIA).
  - Extended Coverage: Grampians Health should review out of hours or extended coverage with consideration to be given to staffing at peak times, 7-day coverage, and satellite support.
  - Workforce Recruitment, Retention and training: Recruitment of experienced employees is a challenge. Robust in-house training for employees is required, both with pharmacy and non-pharmacy backgrounds to upskill and grow new pharmacists from within. Engaging a pharmacy training and development resource to engage across sites and set up appropriate training should be considered as part of a broader plan for recruitment, retention and training.
  - Streamline systems for servicing outpatients.

A1. Access & Flow Supporting Information

This section provides an overview of one of the solutions for enhanced patient access and flow described in Section 7. It is illustrative of the type of internal 'Control Tower' (Coordinating Hub) systems that are in place or are being introduced at other hospitals, both internationally and in Australia. It is effectively a journey board on steroids that can include individual patient schedules, provide real time anticipatory patient flow, and enable work arounds where necessary, for the patient journey. A *Coordinating Hub* is the heart of patient flow for the core functions of a hospital for the *prediction, response and management of the ebbs and surges in Patient Flow Activity* across Grampians Health.

This next generation strategy for efficiency and effective patient flow has been introduced at other hospitals, and Grampians Health staff have undertaken exploratory visits to hospitals in Australia to explore its potential. One example is the Gold Coast University Hospital *Coordination Hub* that can track a patient through the ED (and from enroute ambulances) to discharge, through operating theatre, wards, and other potential services, whilst managing access to inpatient beds and scheduled care demand. There is also a *1300 Complex Discharge Hotline* for clinicians within Gold Coast Health complex patient discharges.

The concept is an electronic Coordinating Hub, often referred to as a 'Control Tower' that tracks an actively manages patient flow in real time like 'managing take-offs and landings' in a hospital context. The concept is entirely consistent with the digital transformation envisioned as a key enabler for Grampians Health.

This has been developed at the **Johns Hopkins Hospital Baltimore** which is briefly described below and has been operating since 2016. The Capacity Command Centre was created to manage the flow of patients, in *periods of crisis as well as normal times*. On the wall at the front of the Command Centre are a dozen large digital screens tracking real time patient movements:

- One screen forecasts occupancy rate for beds across inpatient units
- A green light signal open beds, yellow cautions near capacity and red signals stop
- Staff can see the exact number of beds waiting to be cleaned and prepared for the next patient
- Another screen shows the number of surgeries in progress in each operating room
- Another screen shows a live camera view of people seated, standing or pacing in the ED waiting room, and in triage and in cubicles.

https://www.gehccommandcenter.com/videos/the-johns-hopkins-capacity-command-center-enhancing-hospital-operations-since-2016

A2. Appendix 2 – Consolidated ALOS and RLOS, 2019-20

Table A2-1: ALOS and RLOS by MCRG

MCRG Description	ALOS					RLOS				
	GH	BHS	EDHS	SRH	WHG	GH	BHS	EDHS	SRH	WHG
Breast Surgery	3.0	3.1		3.0	1.9	109.8%	109.9%		150.0%	104.8%
Cardiothoracic Surgery	9.4	9.4				87.1%	87.1%			
Chemotherapy & Radiotherapy	1.0	1.0		1.0	1.0	100.0%	100.0%		100.0%	100.0%
Clinical Cardiology	3.4	3.3	3.8	2.2	4.0	91.2%	85.8%	155.3%	79.7%	106.5%
Colorectal Surgery	7.4	7.9		2.0	5.2	95.1%	94.8%		131.2%	96.7%
Dentistry	1.0	1.0			1.0	101.6%	102.2%			100.0%
Dermatology	2.2	2.6	3.0	1.0	2.0	77.6%	82.2%	95.2%	44.2%	74.2%
Diagnostic GI Endoscopy	1.4	1.6		1.0	1.2	69.4%	73.4%		58.1%	61.5%
Dialysis	1.0	1.0			1.0	100.0%	100.0%			100.0%
Drug & Alcohol	2.4	2.6	3.0	2.2	2.0	83.7%	91.5%	98.6%	91.1%	68.3%
Ear, Nose & Throat	1.4	1.3	3.1	1.4	1.4	89.3%	86.6%	132.4%	110.3%	87.8%
Emergency Medicine	1.0	1.0			1.0	49.7%	49.7%			65.4%
Endocrinology	2.4	2.5	1.3	1.3	2.5	88.6%	91.1%	58.5%	56.9%	91.6%
Extensive Burns	5.5	6.4			1.0					
Gastroenterology	2.2	2.1	2.5	2.0	2.5	77.6%	74.4%	89.7%	75.1%	93.5%
GEM	19.4	19.3		10.7	22.4	332.7%	341.2%		216.3%	317.2%
General Medicine	2.5	2.2	9.4	2.8	3.0	101.3%	90.3%	282.8%	127.4%	107.0%
General Surgery	3.3	3.5	2.4	2.3	3.1	105.1%	103.8%	116.9%	87.4%	111.6%
Gynaecology	1.3	1.3	1.0	1.2	1.4	85.8%	86.0%	66.7%	68.0%	96.2%
Haematology	1.5	1.6	1.8	1.1	1.7	59.7%	58.7%	90.0%	56.9%	64.2%
Head & Neck Surgery	2.0	2.0		1.0	1.9	121.6%	121.7%		100.0%	123.7%
Immunology & Infections	4.3	4.6	15.8	2.3	4.1	87.1%	88.5%	327.9%	77.3%	81.8%
Interventional Cardiology	3.0	3.0			1.5	95.3%	95.6%			56.3%
Mental Health	21.3	21.3				493.0%	493.0%			
Neurology	2.4	2.3	2.4	2.3	2.7	81.2%	78.8%	86.6%	88.4%	88.8%
Neurosurgery	2.6	2.5	1.8	2.8	2.7	96.7%	92.9%	78.7%	158.0%	101.3%
Obstetrics	2.6	2.6	1.5	1.5	2.4	91.4%	90.0%	111.9%	101.1%	96.4%
Oncology	3.6	3.3	11.0	5.7	5.9	103.2%	97.9%	310.1%	128.2%	129.8%
Ophthalmology	1.0	1.2	1.5	1.0	1.0	99.1%	101.6%	93.8%	99.5%	96.3%
Orthopaedics	3.5	3.5	15.4	2.9	4.1	96.9%	88.1%	314.8%	100.9%	122.5%
Palliative Care	12.4	12.8			7.7	239.6%	248.3%			144.8%
Plastic & Reconstructive Surgery	1.6	1.7		1.1	1.3	69.2%	67.5%		76.4%	73.0%
Psychiatry	2.0	1.9	8.5	2.5	4.0	103.7%	103.9%	254.0%	60.9%	104.3%
Qualified Neonate	5.5	6.3			2.9	97.2%	101.7%			73.7%
Rehabilitation Sub Acute	24.3	25.2			20.7	410.8%	435.2%			329.3%
Renal Medicine	3.1	2.9	14.3	2.4	4.0	88.3%	86.2%	251.5%	76.0%	90.1%
Respiratory Medicine	3.5	3.3	4.7	3.2	4.5	88.3%	84.3%	160.6%	97.0%	102.5%

MCRG Description	ALOS					RLOS				
	GH	BHS	EDHS	SRH	WHG	GH	BHS	EDHS	SRH	WHG
Rheumatology	3.1	3.2	2.0	3.2	2.9	76.8%	77.9%	71.4%	85.4%	73.1%
Tracheostomy	38.8	38.8				140.2%	140.2%			
Unallocated	8.0	8.9			5.3	82.6%	85.4%			71.8%
Unqualified Neonate	2.2	2.1			2.7	64.2%	61.6%			81.0%
Upper GIT Surgery	3.8	3.9		1.7	3.4	103.0%	107.5%		52.6%	94.3%
Urology	1.8	1.8	1.5	2.2	1.6	97.5%	97.4%	93.3%	108.8%	97.2%
Vascular Surgery	6.0	5.8	28.0	6.0	7.7	96.9%	91.6%	301.1%	244.9%	140.2%

Table A2-2 below, provides ALOS and RLOS for summary areas not covered under MCRGs.

Table A2-2: Summary ALOS and RLOS (Acute Internal Medicine, All Surgery Procedural Services, HITH and Paediatrics) 2019-20

Category	ALOS					RLOS				
	GH	BHS	EDHS	SRH	WHG	GH	BHS	EDHS	SRH	WHG
Acute Internal Medicine (including chemo & dialysis)	1.9	1.9	6.4	1.7	2.1	89.9%	87.8%	209.5%	88.1%	94.6%
Surgery Procedural Services (All)	2.6	2.8	4.5	1.6	2.3	94.3%	93.5%	175.6%	88.3%	98.5%
HITH	16.4	15.5		19.0	20.1	240.0%	215.1%		441.9%	378.1%
Paediatrics*	1.5	1.5	1.4	1.0	1.3	70.8%	70.6%	77.7%	86.3%	69.7%

* *Paediatrics data is included in the ALOS and RLOS figures by MCRG in Table A2-1 and are thus excluded in this table so as they are not double counted. Paediatric ALOS and RLOS have been separately calculated and discusses in Section 12.3 and are presented as specialty specific rates in Table A2-2.*