Echuca Regional Health

Supporting everyone to be healthy and live well

Clinical Services Plan 2023-2033

Key Opportunities for Service Delivery

- More care closer to home
- Contemporary models of care
- Building and supporting the workforce
- Promoting equity in healthcare

Key Challenges in providing services to our region

- Increasing demand for services of a growing community
- Being appropriately self-sufficient for a health service of our type
- Ensuring equity of access to services for our community

Planned Service Changes

- Increase maternity and newborn service capability to Level 4 and 3 respectively
- Expand operating theatre capacity to improve self-sufficiency
- Enhance High Dependency Unit services towards Intensive Care capability
- Increase ambulatory care capacity

Infrastructure Implications over coming years

- Operationalise all unopened multi-day beds
- Develop a Women's and Children's Unit inclusive of a Special Care Nursery
- Develop an additional operating theatre
- Expand same day medical capacity by 3 places
- Develop a purpose-built Intensive Care Unit
- Increase ambulatory care spaces by 16 and develop a purpose-built Ambulatory Care centre.

DONALD CANT WATTS CORKE

ECHUCA REGIONAL HEALTH

Clinical Service Plan 2023 - 2033

August 2023

Echuca Regional Health

Clinical Service Plan

FINAL

August 2023

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Glossary

Term	Definition
ABS	Australian Bureau of Statistics
ACCHO	Aboriginal Community Controlled Health Organisation
ACSC	Ambulatory Care Sensitive Condition
AIHW	Australian Institute of Health and Welfare
AH	Allied Health
ALOS	Average Length of Stay
AOD	Alcohol and Other Drugs
ATS	Australasian Triage Scale
BH	Bendigo Health
CAMHS	Child Adolescent Mental Health Service
CDH	Cohuna District Hospital
CAGR	Compound Annual Growth Rate
CCF	Congestive Cardiac Failure
CEPAR	Centre of Excellence in Population Ageing Research
CHIP	Community Heath Integrated Programs
COPD	Chronic Obstructive Pulmonary Disease
CRG	Clinical Related Group
CNS	Clinical Nurse Specialist
DCWC	Donald Cant Watts Corke
DH	Department of Health
DoSA	Day of Surgery Admissions
DELWP	Department of Environment, Land, Water and Planning
DRG	Diagnostic Related Group
DVA	Department of Veteran Affairs
ECAT	Enhanced Crisis Assessment Team
ECAW	Emergency Crisis Assessment Worker
ED	Emergency Department
ENT	Ear, Nose and Throat
ERAS	Enhanced Recovery After Surgery
ERH	Echuca Regional Health
ERP	Estimated Residential Population
ESIS	Elective Surgery Information System
EUG	Executive User Group
FTE	Full Time Equivalent
GEM	Geriatric Evaluation and Management
GI	Gastrointestinal
GP	General Practitioner

GPO	General Practitioner Obstetrician
GVH	Goulburn Valley Health
HARP	Hospital Admission Risk Program
HDU	High Dependency Unit
HIP	Health Independence Programs
HITH	Hospital in the Home
ICT	Information and Communications Technologies
IPU	Inpatient Unit
KDH	Kerang District Health
KDHS	Kyabram District Health Service
LGA	Local Government Area
MH	Mental Health
MLHD	Murrumbidgee Local Health District
MoC	Model of Care
MoSD	Model of Service Delivery
MRCG	Major Clinical Related Groups
NA	Not available
NDIS	National Disability Insurance Scheme
NPWT	Negative Pressure Wound Therapy
NWAU	National Weighted Activity Unit
PAC	Post-acute Care
PHIDU	Public Health Information Development Unit
PHN	Primary Health Network
REDHS	Rochester and Elmore District Health Service
RWAV	Rural Workforce Agency Victoria
SA2	Statistical Area Level 2
SAC	Sub-acute Ambulatory Care
SCN	Special Care Nursery
SEIFA	Socio-Economic Indicator for Areas
SHDH	Swan Hill District Health
SLA	Statistical Local Area
SSU	Short Stay Unit
TBC	To Be Confirmed
UCC	Urgent Care Centre
VAHI	Victorian Agency for Health Information
VEMD	Victorian Emergency Minimum Dataset
VAED	Victorian Admitted Episodes Dataset
ViTCCU	Virtual Trauma and Critical Care Unit
VMO	Visiting Medical Officer

Acknowledgement

This Clinical Services Plan could not have been developed without the overwhelming support and enthusiasm offered by the many people involved in its development.

More than 200 people internally and externally of Echuca Regional Health participated in a broad engagement process that addressed the challenges and opportunities as discussed in the following Clinical Services Plan.

This consultation, combined with robust strategic health planning and data analysis, helped to identify a series of strategic themes that, in conjunction with the organisation's Strategic Plan, will help Echuca Regional Health to realise its purpose of 'Supporting everyone to be healthy and live well'.

ECHUCA REGIONAL HEALTH VALUES

Executive Summary

The Echuca Regional Health (ERH) Clinical Service Plan 2023 to 2033 provides a strategic perspective on health service delivery across all services.

Robust health service planning – including multi-factorial needs analysis and stakeholder consultation – has been used to identify the organisation's clinical service planning needs.

This planning provides the platform for the increase in capacity and capability of the health service so that ERH meets community needs and expectations into the future.

The ERH catchment area is experiencing unprecedented population growth.

- In 2021 the growth in the catchment population outpaced state-wide projections by in excess of 5,000 people (actual population 62,224 people / projected population 56,972).
- Recent approvals for large scale housing developments suggest that this growth is likely to continue well into the future.
- Between 2016 and 2021 annual growth in hospital admissions at ERH was 4.7 percent per annum.
- The actual rate of growth in hospital admissions is in sharp contrast to state-wide projections of 1.78 percent between 2022 and 2032.
- This Clinical Services Plan outlines key strategies for how Echuca Regional Health is planning to meet this rapidly growing demand.

Given the disconnect between the forecast and actual catchment population, as well as the sharp increase in health service demand, the current configuration of existing services is limiting the capacity of ERH to:

- Effectively meet existing demand;
- Plan to forecast community need;
- Improve the organisation's self-sufficiency;
- Develop capacity and capability; and
- Comply with the Department of Health performance requirements

This Clinical Service Plan acknowledges and celebrates organisational successes such as:

- Key service developments including emergency services, telehealth and community-based care programs;
- Partnerships with other service providers in the Loddon Mallee region;
- The medical and midwifery workforce models; and
- The evolving role of ERH as a significant educational facility for medical, nursing, allied health and non- clinical training.

Based on data, evidence and extensive stakeholder engagement, this Clinical Service Plan identifies three main challenges that ERH currently experiences in its ability to meet the needs of its catchment population.

The Clinical Service Plan addresses these challenges and identifies key opportunities for managing increasing demand and efficiently and effectively aligning ERH services with the needs of the community with a long-term outlook to 2033. In doing this, it outlines four strategic themes:

1. Contemporary Models of Care
2. Equity of access to health care
3. Safe health care closer to home
4. Building and supporting the workforce

As illustrated in the following table, these strategic themes are closely aligned with the key priorities outlined in the ERH Strategic Plan 2019-2024.

Clinical Service Plan 2023-2033 **Key Strategic Themes**	**ERH Strategic Plan 2019-2024** **Key Priorities**
1. Contemporary Models of Care 2. Equity of access to health care 3. Safe health care closer to home 4. Building and supporting the workforce	1. Innovation in Care 2. Community Integration and Collaboration 3. Reliable Safe, Person Centred Care 4. Digital Transformation 5. Talented, Capable Engaged People 6. Outer Regional Educational Leader

The strategic themes arising from the clinical service planning process and their supporting objectives have been developed to align with the challenges and opportunities that were identified through the analysis of the current situation at ERH.

As the Clinical Services Plan reviews the challenges and opportunities faced by ERH over the next ten years, it identifies key areas which must be addressed, including:

1. Maternity, neonatal and paediatric services.
2. Medium complexity surgical specialities.
3. Critical care services including the Emergency Department (ED) and High Dependency Unit (HDU) / Intensive Care Unit (ICU) services.
4. Ambulatory based services.

The success of future improvement programs is dependent on complementary planning for the impact on key service enablers:

- Workforce;
- Service partnerships;
- Infrastructure and assets;
- Investment in technology, and
- Quality and safety.

Unprecedented population growth, increasing self-sufficiency and the provision of a greater breadth and volume of services closer to home will drive a need for ERH to extend key infrastructure by 2033, including:

- Operationalising 23 existing acute multi-day inpatient beds;
- Developing a Women's and Children's Unit;
- Increasing the existing sub-acute provision by 8 beds;
- Developing an additional operating theatre and supporting infrastructure;
- Expanding the Same Day Medical Capacity by 3 places;
- Development of a purpose built HDU with capability to increase to an ICU service when required; and
- Increasing the current ambulatory care by 16 spaces.

The forecasted infrastructure requirements consider key changes in service delivery, including:

1. The development of a discrete Women and Children's Unit, inclusive of birth suite, inpatient beds and Special Care Nursery (SCN), to cater for the increase to a Level 4 maternity service and Level 3 neonatal service and expanded paediatric services.
2. The development of an enhanced HDU with capability to increase to an ICU service will facilitate an increase in self-sufficiency as patients will be able to access higher acuity care without needing to be transferred to another facility.
3. An expansion of operating theatre capacity to support increased surgical activity and the development of a Rapid Access Surgical Hub.

   These initiatives will enable greater levels of self-sufficiency for high throughput, low to medium complexity surgical specialities, including gynaecology, ear, nose and throat (ENT), ophthalmology, endoscopy and orthopaedic surgery.

Furthermore, it will provide capacity for emergency birthing and strengthen ERH's positioning to transition to a Level 4 maternity and Level 3 neonatal service.

4. The development of a purpose-built Ambulatory Care Centre will facilitate the consolidation and expansion of the ambulatory care-based services that are essential to ERH in managing the future demand of the catchment population, enabling better care at home and successfully realising the organisational purpose of: support everyone to be healthy and live well.

The prospective increase in service capability is discussed throughout the Clinical Services Plan and summarised in Table 2 Points of Care, pages 65-6.

1. About Echuca Regional Health

1.1 About Echuca Regional Health

Echuca Regional Health (ERH) is located within the regional town of Echuca, on the banks of the Murray and Campaspe Rivers in northern Victoria. The New South Wales (NSW) border town of Moama is adjacent to Echuca on the northern side of the Murray River. Echuca is the administrative centre and largest town in the Shire of Campaspe.

Echuca lies within traditional Yorta Yorta country. The town's name is a Yorta Yorta word meaning "meeting of the waters".

ERH is a major provider of public health services, as well as health education and training.

ERH is designated as a 'sub regional health service' by the Victorian Department of Health (DH) and is governed by an independent board. It was established in 1882, and the hospital has been delivering health services to its community on its current site for over 140 years.

ERH Services

ERH offers a comprehensive range of acute, sub-acute, community and aged care services. The wide array of services includes:

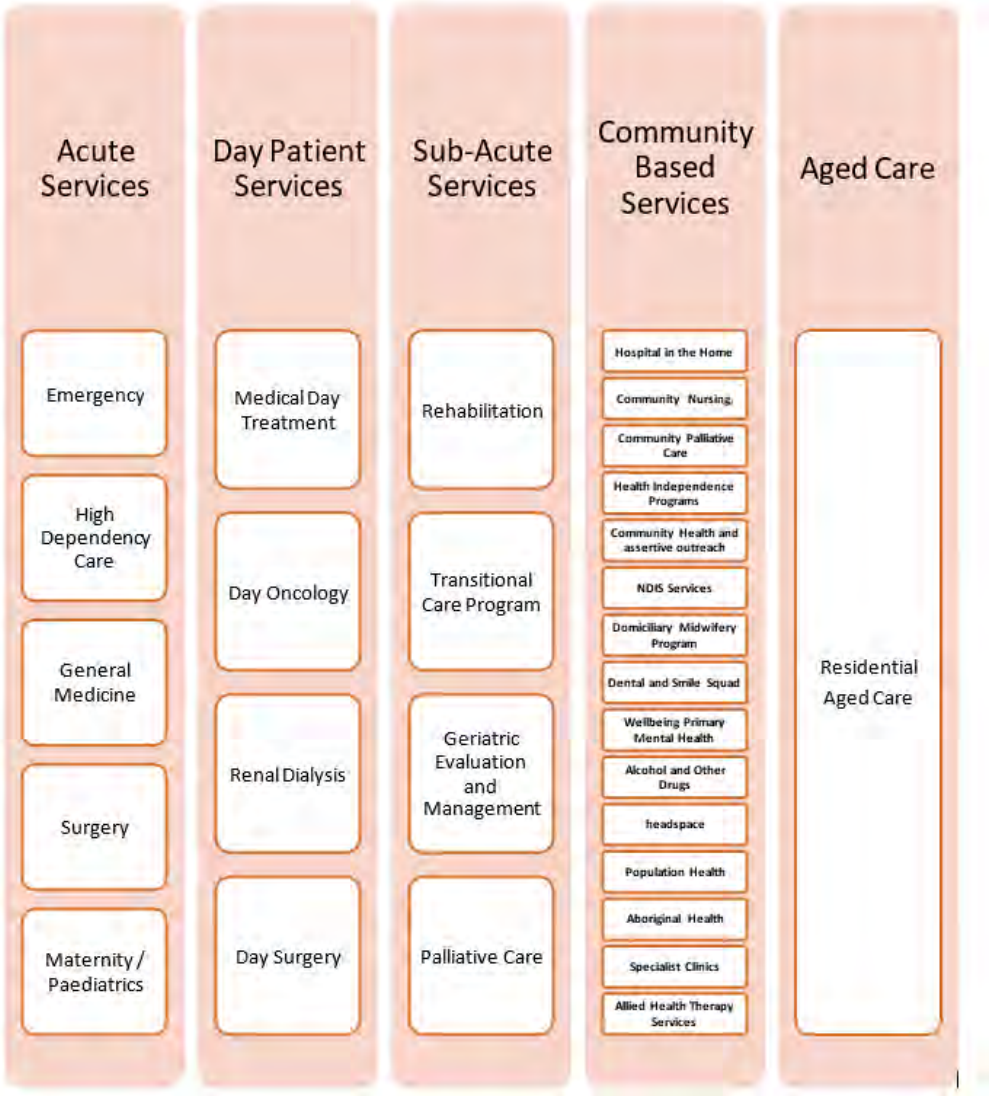


Figure 1 Clinical Services provided at ERH

ERH Catchment

ERH services the Campaspe Shire, which encompasses an area of 4,518 square kilometres, and the cross-border Murray River Council, with an area of 11,865 square kilometres. Campaspe Shire is located in Victoria's Loddon Mallee Region, 208km north-west of Melbourne.

Townships in Campaspe Shire include Echuca, Kyabram and Rochester. The estimated population in 2021 was approximately 38,735.

Murray River Council is located along the southern border of NSW, with an estimated population of 12,850 in 2021. Approximately 53 per cent of the Murray River Council population reside in Moama.

Townships in the shire of Murray River include Moama, Barham, Mathoura, Moulamein, Murray Downs, Tooleybuc and Wakool.

The health service catchment covers 25,139 square kilometres and is defined by:

The Victorian Statistical Local Area (SLAs) of

- Echuca;
- Kyabram;
- Lockington – Gunbower;
- Rochester; and
- Gannawarra (excluding Kerang).

The NSW SLAs of

- Moama;
- Deniliquin; and
- Deniliquin Surrounds.

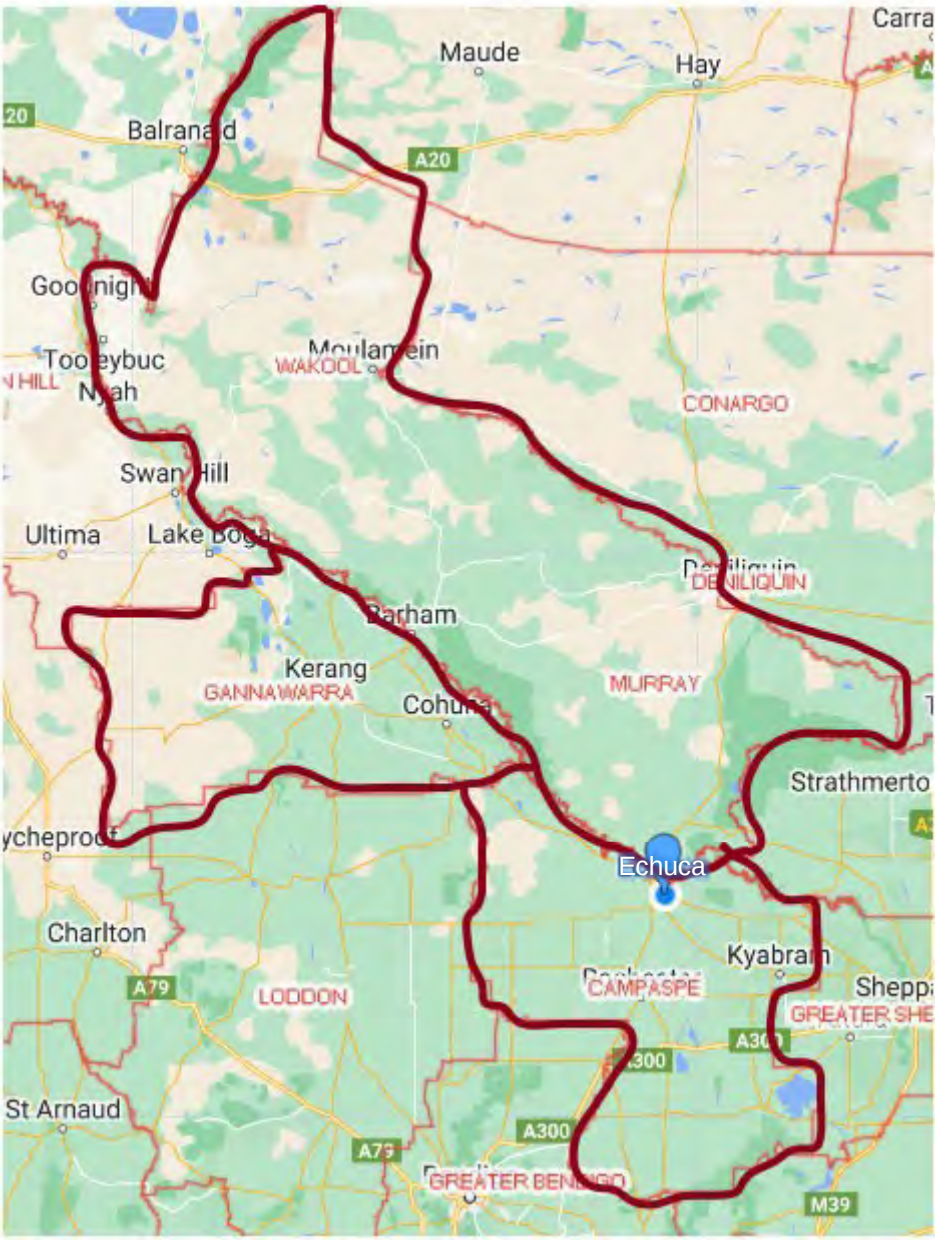


Figure 2 ERH Catchment

ERH Population Health

There are several distinct characteristics of ERH's primary catchment compared to the State of Victoria. The catchment has:

- A higher proportion of older persons aged over 65 years. The over 70 years age group is experiencing the greatest growth in the catchment, which indicates a growing need for health care services;
- The second fastest population group is between the ages 25 to 44, which indicates a need for birthing, paediatric and family services;
- A higher proportion of Aboriginal and Torres Strait Islander people.

Within the region there are significant areas of relative socio-economic disadvantage. Several Local Government Areas (LGAs) within the region rank poorer than the state average in relation to prevalence of:

- Unemployment;
- Financial stress;
- Obesity;
- Alcohol-related harm;
- Smoking;
- Illicit drug use; and
- Disability.

ERH Strategic Plan 2019-2024

The ERH Strategic Plan offers a clear and strong direction for how it aims to effectively realise its purpose of supporting everyone to be healthy and live well. It describes six strategic priorities and identifies a number of organisational capabilities that will be strengthened to support the delivery of the strategy.

The six strategic priorities are:

1. Reliable Safe, Person Centred Care.
2. Talented, Capable Engaged People.
3. Community Integration and Collaboration.
4. Digital Transformation.
5. Outer Regional Educational Leader.
6. Innovation in Care.

Figure 3. Health Service Strategic Priorities

ERH Campus

ERH services are predominantly provided from a single campus, with a combination of new and old buildings across the site.

The hospital has undergone a number of major redevelopments including:

- The opening of the new and expanded Echuca Regional Hospital in 2014, inclusive of new inpatient accommodation and Emergency Department (ED);
- A new standalone Cancer and Wellness Centre opened in 2022. This facility includes 12 points of care for chemotherapy and renal dialysis.

Figure 4 ERH campus

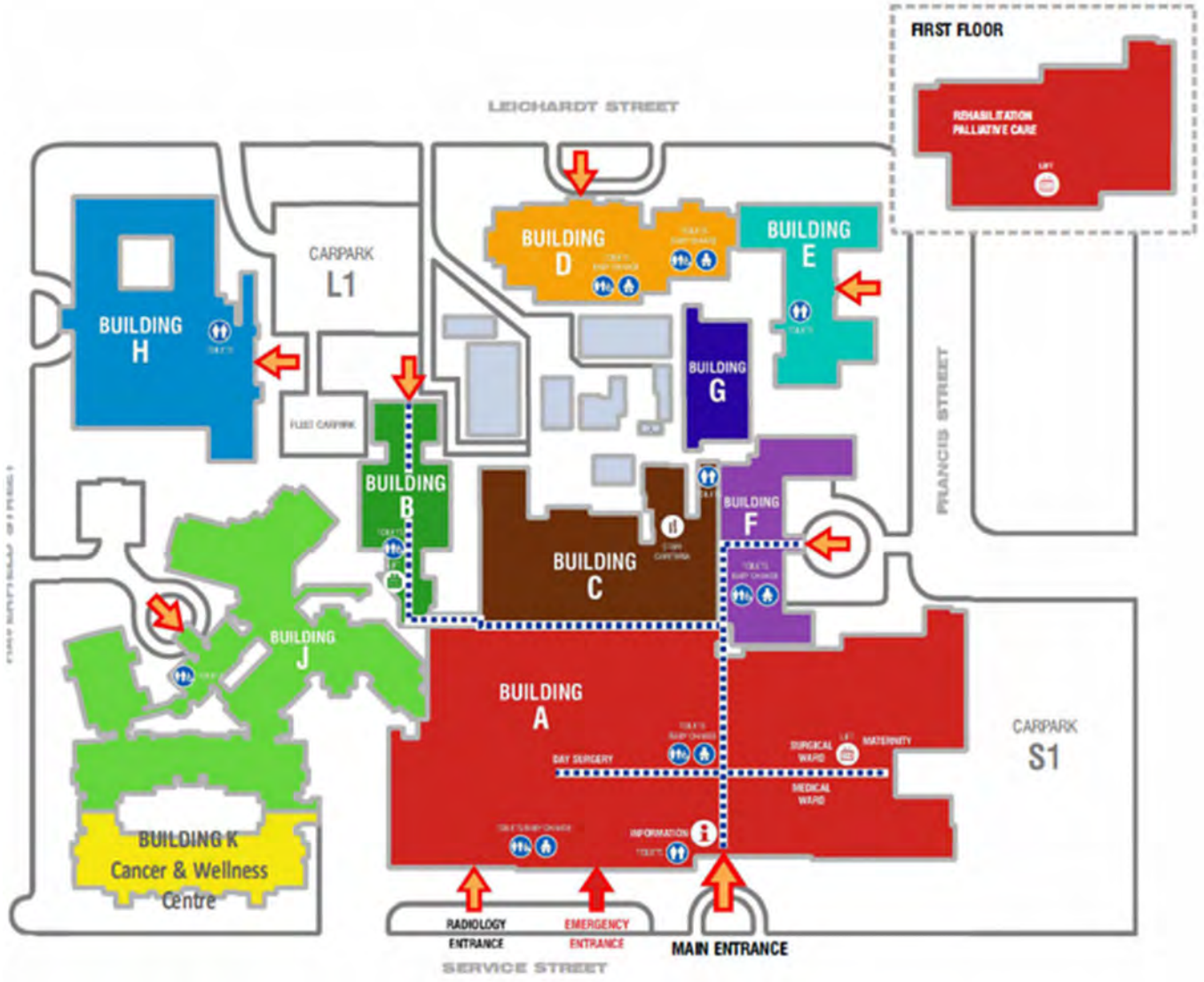


Figure 5 ERH floor plan

Building A	Building B	Building C	Building D	Building E	Building F	Building G	Building H	Building J	Building K
− Admissions − Cashier − Day Surgery − Emergency − Main Reception − Maternity Ward − Medical Ward − HDU − Palliative Care − Pharmacy − Medical Imaging − Rehabilitation Ward − Spiritual Spaces − Surgical Ward − Transition Care Program	- Community Nursing − Community Palliative Care − Inpatient Post Acute Care − Pathology − Perioperative Clinic − Stomal; Therapy/Wound Care Nurse − Theatre Liaison − HITH − Post Acute Care	− Engineering − Finance − General Services − Procurement − Staff Cafeteria − Medical Workforce − Population Health	**HOPWOOD CENTRE** − Community Rehabilitation − Dental − Diabetes Education − Dietetics − Occupational Therapy − Physiotherapy − Podiatry − Specialist Continence Clinic − Speech Pathology − Women's Health Clinic − NDIS	− Alcohol and Other Drugs − Specialist Consulting Suites − Primary Mental Health and Wellbeing	− Executive Offices − ICT − Infection Control − OHS − Volunteers	− Allied Health − Payroll − People and Culture	− Education Centre and Accommodation	− Aged Care − Glanville Village	− Cancer Care and Wellness Centre − McGrath Breast Care Clinic − Renal Dialysis

2. Background – Clinical Service Plan

2.1 Background – Clinical Service Plan

The ERH Clinical Service Plan identifies the key health service directions and strategies for the efficient and effective alignment of services to the needs of the local community over a 10-year planning horizon (2023–2033), with a longer-term outlook to 2037.

Creating a forward-thinking Clinical Service Plan requires ERH to:

- Understand and respond to current and future demand for services;
- Facilitate the provision of a greater breadth and complexity of clinical services so that more patients can receive care close to home;
- Prioritise the allocation of limited health service resources;
- Understand where partnerships can build service capacity across the region to deliver care closer to home;
- Identify and effectively respond to changes in the population and associated health service needs;
- Assess the impact of advances in clinical care and associated technologies and how these will shape the way future services are delivered;
- Increase organisational capacity and capability;
- Improve service efficiency through the exploration of alternative service options and infrastructure that can optimise service delivery arrangements to manage current and increasing demand;
- Continue to provide safe and sustainable services – high quality care that continues to meet and, where possible, exceed required minimum standards;
- Diversify workforce planning in partnership with tertiary education providers so that ERH can 'grow their own' and offer alternative models such as visiting staff to support the sustainable future of the health service whilst providing careers and improved socio-economic opportunities for the local community.

The Clinical Service Plan provides a strategic perspective on health service delivery across clinical services, providing guidance for service delivery directions and strategies in other key planning documents, including future masterplanning.

The strategic directions in the ERH Clinical Service Plan are influenced by the strategic state-wide health system priorities articulated in:

- Victorian Health Priorities Framework 2012 – 2022;
- Health Service Partnership Policy and Guidelines 2021;
- Loddon Mallee Health Network, Regional Plan 2020;
- Statewide system design, service, and infrastructure plan;
- Health 2040; Advancing Health, Access, and Care Strategy
- Better at Home Initiative;
- Urgent, Emergency and Trauma Care Capability Framework 2019;
- Better, Safer Care: Delivering a world leading health care system;
- Victorian Digital Health Roadmap 2021 – 2025;
- Stronger Rural Health Strategy.

The ERH Clinical Service Plan has been developed following a desktop analysis of various data, plans and reports, as well as feedback from stakeholder engagement with key clinical staff, service partners, and the community.

2.2 Consultation

Consultation with in excess of 200 internal and external stakeholders was undertaken between August 2022 and January 2023. This consultation was undertaken by the DCWC consultant team and consisted of a combination of site-based face-to-face and virtual stakeholder group meetings.

The purpose of the consultation was to engage key stakeholders in identifying current and potential health service needs to determine possible service solutions and options for addressing them. Stakeholders consulted are listed in Appendix 3.

2.3 Purpose

The purpose of this Clinical Services Plan is to identify the service capacity and capability requirements for ERH to meet the needs of the community over the next 10 years and beyond.

Implementation of the strategies outlined in the Clinical Service Plan will support ERH to:

1. Proactively respond to current and future demand for services.
2. Identify and effectively respond to changes in the population and corresponding health service needs.
3. Continue to provide safe and sustainable services – high quality care that continues to meet and, where possible, exceed required minimum standards.
4. Increase organisational capacity and capability.
5. Facilitate the provision of a greater breadth and complexity of clinical services within the community so that more patients can receive care close to home.
6. Reduce reliance on hospital bed-based services and support community-based care.
7. Prioritise the allocation of limited health service resources.
8. Assess the impact of advances in clinical care and associated technologies and how these will shape the way future services are delivered.
9. Improve service efficiency through the exploration of alternative service options and infrastructure that can optimise service delivery arrangements to manage current and increasing demand.
10. Effectively address workforce planning in partnership with tertiary education providers so that ERH can ‘grow their own’ and support the sustainable future of the health service, whilst providing greater career and improved socio-economic opportunities for the local community.
11. Leverage regional partnerships to support the delivery of more care closer to home.

2.4 Objectives

This service plan aims to

- Review recent service activity and forecast future demand and capacity at ERH;
- Consider available demand modelling from the DH and other planned health system investments in the broader area;

- Review the flow of patients and catchment areas from the dual state region (Victoria and NSW);
- Provide an assessment and make recommendations of what clinical service demand will likely be for the next ten years;
- Include anticipated demand regarding admitted and non-admitted care;
- Articulate high level in-hospital and hospital alternative Models of Care that improve access to services;
- Project the future Points of Care;
- Provide strategic priorities for models of care which include access to services within hospital and alternate care models.

2.5 Policy and Planning Context

There are a number of key policy directions and service trends that are relevant to the planning and delivery of services at ERH.

State and National frameworks articulate the environment in which ERH operates and are critical to ensure the delivery of contemporary, safe, high quality health care.

The key Victorian DH directions relevant to planning are outlined below.

2.5.1 National Context

The **Stronger Rural Health Strategy** aims to build a sustainable, high quality health workforce that is distributed across the country according to community need particularly in rural and remote communities. To meet the challenge of redistributing the workforce, the Strategy includes a range of incentives, targeted funding and bonding arrangements and will give doctors more opportunities to train and practice in rural and remote Australia. It will also enable a stronger role for nurses and allied health professionals in the delivery of more multidisciplinary, team-based models of primary health care.

2.5.2 Victorian Health System

To advance the implementation of the **Victorian Health Priorities Framework 2012–2022**, the Victorian government developed the Rural and Regional Health Plan which presents the government's response to the unique health and health system issues and experiences in Rural and Regional Victoria.

Many of the actions outlined in this plan require health services to work more closely together, embrace innovation and support their staff to adapt to new models and ways of delivering healthcare.

The Government's vision for the successful implementation of the Rural and Regional Health Plan is that by 2022, Victoria's health system will be responsive to people's needs and rigorously informed and informative.

With the system being *responsive* to people's needs the government expects the following outcomes:

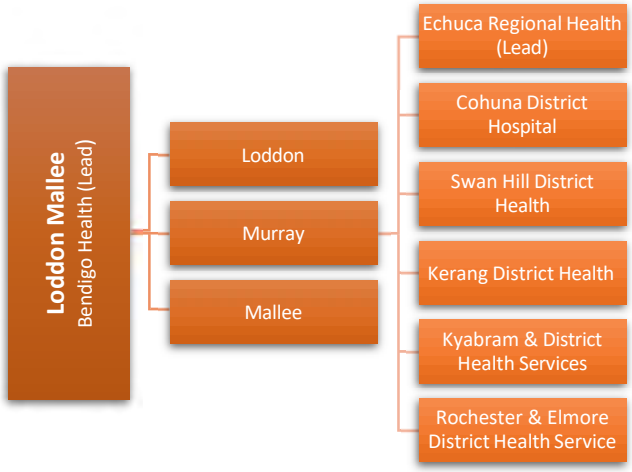
- People are as healthy as they can be (optimal health status)
- People are managing their own health better
- People enjoy the best health care service outcomes possible

By being rigorously *informed and informative*, the healthcare system is expected to produce the following outcomes:

- Care is clinically appropriate, cost effective and delivered in the most clinically appropriate and cost-effective service settings
- The health system is highly productive and health services are sustainable

From 1 July 2021, **Health Service Partnerships** replaced the health service 'clusters' that emerged during the COVID-19 pandemic, along with the Regional Area Health Partnerships that preceded them.

ERH is a member of the Loddon Mallee Regional Health Service Partnership and the Murray Local Area Health Partnership.



The Health Service Partnerships model preserves the local autonomy and responsibility of health services, which remain independent entities. Health services will continue to be individually responsible for their performance against Statements of Priorities, including management of budget and finances, along with clinical service delivery and clinical governance.

Each Health Service Partnership is required to develop an annual rolling work plan for endorsement by the Secretary, DH. The work plan will detail:

- The strategies and actions the partnership will undertake against each of the system-wide priorities;
- Local priorities identified and agreed at the time of plan completion;
- The responsible health service or partnership sub-committee (or other mechanism) responsible for leading each action;
- The responsibilities of members in relation to progressing these actions, including actions to strengthen the Key Activity Areas for rural and regional members (clinical governance support; workforce; and corporate effectiveness);
- The quantifiable measure by which the Partnership will evaluate progress and success; and
- How Health Service Partnership funding is expected to be allocated.

The **State-wide system design, service and infrastructure plan (The State-wide Plan)** was released in 2017 and detailed the future design of the Victorian health system. It provided the blueprint for how Victoria will deliver better, safer care and treat more patients sooner.

Five priority areas were identified to chart the path forward:

1. Building a proactive system that promotes health and anticipates demand.
2. Creating a safety and quality-led system.
3. Integrating care across the health and social service system.
4. Strengthening regional and rural health services.
5. Investing in the future—the next generation of healthcare.

The plan emphasises a more connected approach and prioritises formal health partnerships between regional and rural health services to improve health outcomes for Victorians living in rural and remote areas. **Health 2040: Advancing Health, Access and Care Strategy** articulates the Victorian Governments policy focus on providing the right care in right place at right time by the right people. State-wide planning aims to deliver care as close to home as possible but assumes that not all organisations should provide all health care services.

These aims reflect the strategic directions of the Victorian government including:

1. Growth in virtual health technology is delivering new innovative service models with improved diagnostics and more targeted treatments. This advancement in technology provides significant opportunities in rural and remote health services to increase their level of self-sufficiency.
2. The Victorian Health Priorities Framework 2012-2022 and the Rural and Regional Health Plan emphasise the use of innovative service models focusing on integrated partnerships with other service providers strengthening early intervention home based services within communities.
3. Emerging models of care will help to provide additional clinical skills, opportunities and ideally attract and retain staff to rural and remote settings.
4. The State-wide Design, Services and Infrastructure Plan for Victoria's Health System, articulates the continuum of care as a key component of successful master planning.
5. Recommendations from the Aged Care Royal Commission combined with emerging models of care that will change the way that Residential Aged Care is planned in the future.
6. Health 2040: Advancing Health, Access and Care Strategy focuses on providing the right care in right place at right time by the right people. State-wide planning aims to deliver care as close to home as possible but assumes that not all organisations should provide all health care services.
7. Delivering Health Service Partnerships which drive collaboration across service providers and ensure services work together on strategic system reform priorities as well as local priorities.

The **Better at Home Initiative** helps deliver more healthcare within patients' homes where appropriate and preferred by the patient, through home-based and virtual care.

The initiative was first announced in the 2020–21 Victorian Budget, with a commitment to provide $120.9 million in funding over 3 years.

The 2022–23 Victorian Budget committed a further $698 million to expand the program to help more than 15,000 Victorians access home-based care each year, in addition to telehealth check-ups.

Better at Home funding supports the delivery of more acute, rehabilitation, geriatric evaluation and management, health independence program and specialist clinic services in the home.

As an extension of the Better at Home Initiative, ERH will increasingly deliver more services to patients in a non-acute environment.

This includes:

- Developing the breadth of non-admitted hospital services;
- Designing and delivering an increasing range of programs to ensure that patients can remain in their homes as much as possible;
- Using technology to support the growth in non-hospital-based care.

Urgent, Emergency and Trauma Care Capability Framework (2019) is primarily a system planning tool that supports the provision of safe and high quality urgent, emergency and trauma care across Victoria.

The framework defines the competencies required for different levels of complexity across the spectrum of urgent, emergency and trauma care. For each level of complexity, the framework sets clear requirements for the workforce, infrastructure, equipment, support services and formal relationships needed to ensure patients have access to the care they need, and to ensure the care they receive at each level is safe.

The capability framework:

- Supports a transparent approach to planning and service development at local, regional and system levels
- Provides a common language and understanding of clinical services capability for the community and for health service providers, and
- Facilitates improved service alignment and linkages between healthcare providers.

The maternity and newborn capability frameworks operate as companion documents that:

- • support clinicians to partner with women and families to plan for their care through pregnancy, birth and in the postnatal period
- assist health services to make informed decisions about the resources, partnerships and protocols required to manage different complexities of care
- enable a transparent approach to planning and service development at a local level, considering community need
- support health service regions and the department to plan for and manage the maternity and newborn service system. Victorian maternity and newborn services operate in a network across six levels.

The Capability frameworks for Victorian maternity and newborn services (Department of Health 2021) describe the requirements for providing safe and high-quality maternity and newborn care, across the continuum from pregnancy through to the postnatal period, at each level for public services.

The workforce, infrastructure, equipment, clinical support services and governance requirements are also described and must be met at all times to maintain service capability.

2.5.3 Regional Partnerships

The Loddon Mallee Partnership is well positioned to drive their positive future. Members of the Partnership have operated with a similar planning platform since 2019 when together they developed the **Loddon Mallee Health Network (LMHN) Regional Plan.**

The Regional Plan is aimed at promoting collaboration, helping to address shared challenges, strengthening relationships and bolstering service provision.

Priorities and Goals for the Regional Health Network Plan include:

1. Region-wide service and workforce planning - Be a community that health care professionals want to be part of. Provide aged care our community is proud of. Provide mental health care our community is proud of. Provide acute care our community is proud of.
2. Central functions and Shared Services – Share services and centralise core functions. Use Technology in new ways. Manage and reduce our waste.
3. Local Solutions – Harness local assets to improve health outcomes for all our consumers
4. Quality, Safety and Patient Experience – Adopt and the safest processes and practices. Deliver culturally safe services.

3. Key Challenges

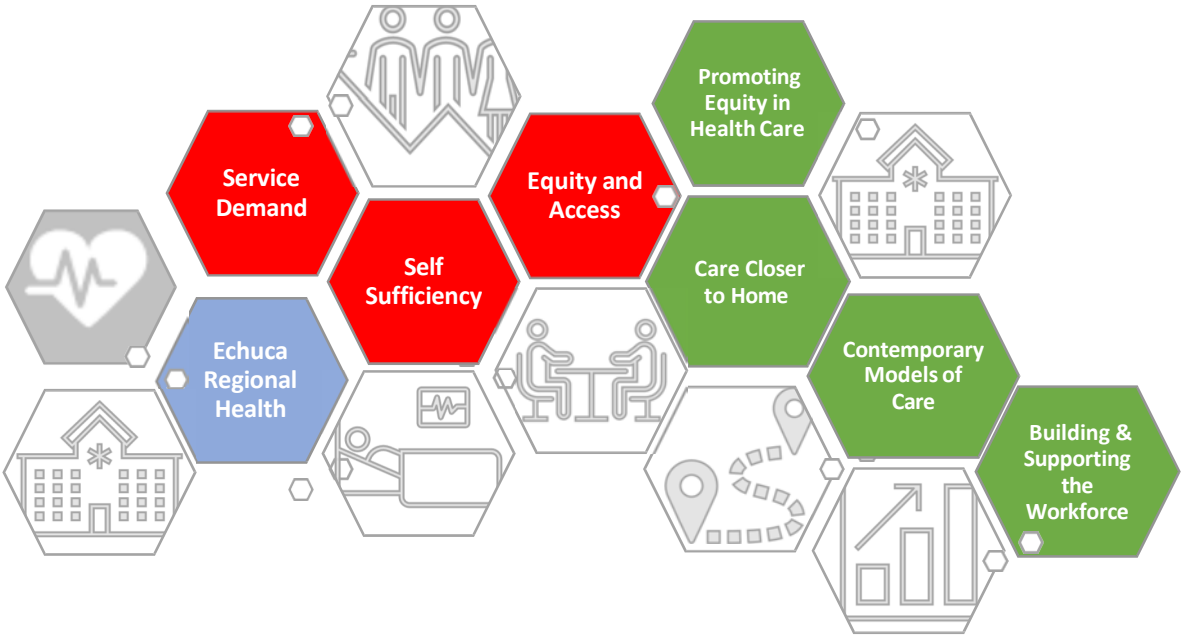
3.1 Key Challenges

The following discussion summarises the key challenges that have been identified during the Clinical Service Planning process.

These challenges are:

1. Service Demand
2. Self Sufficiency
3. Equity and Access

Further detail regarding each of these points is contained in the following text and within the Analysis of Current and Future Situation sections of this Plan.



3.2 Challenge - Service Demand

Increasing demographic pressures are leading to a higher demand for acute and community-based services.

The ERH catchment population has grown significantly over the past 5 years to levels above those projected by planning organisations such as the Department of Environment, Land, Water and Planning (DELWP)[1].

[1]https://www.planning.vic.gov.au/land-use-and-population-research/victoria-in-future

Demographic pressures include the following aspects, each of which is discussed below:

1. Population Growth.
2. Ageing Population.
3. Reduction of services at smaller rural health services.
4. Seasonal Population
5. Socio-economic Factors

3.2.1 Population Growth

The larger than projected population growth has contributed to an unprecedented requirement for health services both within the hospital and in the community setting.

The residential population within the ERH catchment in 2021 was 62,224 people. There were 29,384 dwellings with an average household size of 2.35.

In the five years from 2016, the population increased by 4.8 percent, with 2,978 additional people living in 1,434 dwellings with an average household size of 2.3 people. Growth has outpaced state-wide projections by in excess of 5,000 people. In 2021, the actual population was 62,224 people yet the projected population was only 56,972.

3.2.2 Ageing Population

At 18 percent, the proportion of the ERH catchment population aged above 65 years is significantly higher than the Victorian average of 15.5 percent.

The key service delivery implications of this population growth include increased demand for:

1. Family, birthing and paediatric services
2. Emergency and critical care services
3. Elective surgery
4. Primary mental health services
5. Chronic disease management
6. Community services, including disability support services

The implication of this is an increased prevalence of age-related and chronic health conditions, including diabetes, obstructive pulmonary disease, hearing loss, eye sight complications, depression and dementia, all of which require more frequent use of hospital and community-based services.

The ageing population will drive increased use of health services by older persons.

The key service delivery implications of this ageing population include:

1. Increased requirements for services that target people in their senior years and/or people with chronic health conditions.
2. Increased support for clients seeking to remain living in the community for longer.
3. Increase in hospital demand due to chronic and complex disease as well as increased life expectancy.
4. Increased demand for:
    - sub-acute services;
    - aged care assessment services;
    - home based care; and
    - residential aged care.

3.2.3 Reduction of services at smaller rural health services

The catchment area that ERH serves is growing as a number of small rural health services have reduced their level of service provision.

As a consequence of these changes in service delivery, the ERH catchment population and demand for ERH services has and is likely to continue to increase. ERH now routinely provides a range of specialist services, including emergency, adult medical and surgical services, as well as maternity and primary mental health services, to this broader population.

3.2.4 Seasonal Population

Echuca's positioning along the Murray river, combined with its warm climate, unique history and many tourist attractions, make it a major Victorian holiday destination.

Echuca and the surrounding areas along the Murray river experience a dramatic increase in population between December and April.

According to Murray Regional Tourism2, for the period July 2021 to June 2022, Echuca / Moama received 663,000 overnight visitors – up by 22.6% on year ending June 2021. Visitors spent over 2 million nights in the region - up by 26.9 percent on year ending June 2021. April (28.2 percent) was the most popular month for a daytrip to Echuca / Moama. July (10.5 percent) was the second most popular month to travel, followed by January (8.4 percent).

[2] https://www.murrayregionaltourism.com.au/wp-content/uploads/sites/2/Murray_Regional_Tourism_visitation_YE_Jun_2022.pdf

3.2.5 Socio-economic Factors

Higher levels of socio-economic disadvantage within the region has a direct impact on the provision of health services. Increasing levels of financial distress in the setting of reduced access to general practitioner bulk billing, for example, is associated with a higher utilisation of the emergency department (ED) for care. The burden of disease associated with smoking, obesity, alcohol and illicit drug use has implications for both inpatient and ambulatory care services. The challenges associated with socio-economic disadvantage are therefore essential to clinical service planning over the ten-year horizon.

3.3 Challenge - Self Sufficiency

Health services measure their capacity and capability to provide health services to their local catchment in terms of 'self-sufficiency'. That is, the number of services provided by ERH as a proportion of the number of people within the catchment receiving that service from all providers.

As highlighted above, the ERH catchment population is expected to grow significantly over the next 10 years, significantly above the current Victorian Government projections.[3] As the population continues to grow, there will be an inherent growth in demand for health services across the catchment.

Population growth will be a key driver of increased demand for core ERH services, such as emergency, maternity, medical, surgical and community services.

Victorian DH projections suggest that the overall number of patients requiring inpatient care is expected to increase at an average annual rate of 1.78 percent per annum (from 2021 – 2036)[4].

Given the unexpected growth in the ERH catchment population (4.7 percent per annum), it is likely the number of consumers requiring inpatient care at the hospital or in a Hospital in The Home (HITH) styled program will be well above DH projections.

As a general guideline, 70 percent of residents should be able to receive 70 percent of their public health care needs from a health service in their primary catchment area. This underpins the Health 2040: Advancing Health, Access and Care Strategy of being able to access care closer to home in the right place at the right time by the right people.

As highlighted below, ERH fails to meet the 70 percent guideline in a range of medical, surgical and paediatric services. Very high numbers of residents routinely need to travel away from the catchment to access paediatric care as well as surgical interventions for Ear, Nose and Throat (ENT), ophthalmology and orthopaedics.

ERH plans to improve the health service's level of self-sufficiency and achieve approximately 70 percent or higher for services that are delivered within their clinical capability. As listed below, key areas for immediate focus include maternity services, paediatrics, a range of surgical specialities and general medicine.

Without significant change, the self-sufficiency measures for public health services at ERH are likely to continue to decline as the forecast population growth is realised. This will place further strain on the broader

[3] https://www.planning.vic.gov.au/land-use-and-population-research/victoria-in-future
[4] VAHI Inpatient Projection model 2021

health and community care system across the catchment. Failure to grow and develop services at ERH will drive a demand and supply gap in the Loddon Mallee region and continue to place extra demand on other health services.

The key inpatient clinical specialties with low self-sufficiency for ERH include:

1. Surgical Specialties:
   - ENT at 11.9 percent
   - Ophthalmology at 17 percent
   - Orthopaedics at 34 percent
   - Endoscopy at 39.1 percent

2. Paediatrics:
   - ENT at 14.5 percent
   - Respiratory Medicine at 14.6 percent
   - General Medicine at 30.4 percent

3. Medical Specialties:
   - Haematology at 34.9 percent
   - Chemotherapy and Radiotherapy at 47.3 percent (noting that Radiotherapy is at 0 percent; (There is no intent to provide local Radiotherapy services over the 10-year horizon of the Clinical Services Plan)
   - General Medicine at 55.1 percent
   - Renal Dialysis at 57.8 percent

3.4 Challenge - Equity and Access

People living in rural areas face barriers to accessing health care, due to challenges of geographic spread, low population density, limited infrastructure, and the higher costs of delivering rural and remote health care.

At ERH, there are a limited number of publicly funded specialist outpatient services, including medical specialist clinics. As a consequence of this, the large majority of non-admitted services are provided on a fee for service basis and the out-of-pocket cost of non-admitted healthcare for the consumer is often considerable.

The Australian Institute of Health and Welfare (AIHW) reported that 6.3 percent of patients across the region delayed or did not see a general practitioner (GP) or other medical specialist or get an imaging or pathology test when needed due to the cost.[5]

[5] Australian Institute of Health and Welfare analysis of Department of Health, Medicare Benefits claims data, 2016–17.

4. Key Opportunities and Strategic Themes

4.1 Key Opportunities and Strategic Themes

The identification of the key challenges experienced by ERH supported the development of overarching strategic themes, potential opportunities for improvement, and greater alignment of services with the needs of the growing community.

As these opportunities were explored in greater detail, key strategic themes that will help to improve service delivery and enhance efficiency and effectiveness emerged. These strategic themes will help to guide the organisation's growth in capacity and capability and enable it to effectively address the future health priorities of the community over the next 10 years and beyond.

These key opportunities and strategic themes are:

1. Contemporary Models of Care
2. Equity of access in healthcare
3. Safe health care closer to home
4. Building and supporting the workforce

The following table summarises each of these strategic themes and opportunities for service improvement. The continued development of these strategies will help to guide the organisation's growth in capacity and capability and enable it to effectively address the future health needs of the community.

STRATEGIC THEME	CHALLENGE	OPPORTUNITIES
Contemporary Models of Care	**Increasing Service Demand** ▪ ERH is experiencing increasing pressure to provide a greater volume and breadth of efficient and effective services	ERH to improve access to a range of services by: a) Expanding telehealth service models b) Improving access to day and home-based services including hospital alternative models c) Focusing on population health and active ageing d) Implementing an integrated Critical Care Service for Emergency and High Dependency care, supporting the delivery of an ICU service e) Implementing surgical waiting list management f) Leverage and expand data analytics that support health service intelligence
Equity of access to healthcare	**Equity and Access** ▪ Current barriers for people to access outpatient-based services often include cost, location and waiting times ▪ Actively supporting Aboriginal health across the organisation and the region	Improve access to a range of outpatient-based services by expanding public specialist clinics, particularly for: ▪ Antenatal care; Paediatrics; Surgical specialties; Chronic care programs; Primary mental health services; Pre-admission assessment and surgical optimisation; Cancer services Completion of Aboriginal Cultural Safety Co-design Project resulting in: ▪ Reconciliation Action Plan ▪ Aboriginal Cultural Safety Plan ▪ Aboriginal Employment Plan

STRATEGIC THEME	CHALLENGE	OPPORTUNITIES
Delivering safe health care closer to home	**Self Sufficiency** ▪ Patients often need to travel outside of the catchment to access health services	ERH to improve access to a range of services by: ▪ Expanding surgical services by implementing a region wide surgical waitlist and developing a Surgical Services Hub for high volume, low to medium complexity procedures ▪ Delivering enhanced Women's and Children's services that increase organisational capability and capacity ▪ Continuing to develop the clinical capability of the Critical Care teams and working to full scope of practice so that patients with higher acuity can be cared for locally ▪ Providing opportunities to support shared care inpatient models between ERH and Bendigo Health for a defined range of mental health conditions ▪ Continuing to develop regional partnerships for service delivery where ERH accesses sub-specialist telehealth support from tertiary care providers, and ERH provides specialist telehealth support to small rural health services ▪ Continuing to work in partnership with GPs and other primary care providers with the aim of enabling people to access care closer to home

STRATEGIC THEME	CHALLENGE	OPPORTUNITIES
Building and supporting the workforce	**Recruitment and Retention** ▪ Workforce shortages exist in numerous disciplines across the health service ▪ Ageing workforce, attracting and retaining GPs across the catchment	ERH to improve staff recruitment and retention by: ▪ Ensuring workforce plans are innovative and comprehensive ▪ Enabling medical, nursing and allied health teams to work to their full scope of practice appropriate for ERH ▪ Expanding the role of nurse practitioners ▪ Providing increased training and educational opportunities for medical, nursing, allied health and non-clinical personnel ▪ Enhancing leadership capability ▪ Continuing to promote employee health and well-being ▪ Strengthening a data driven culture and developing the skill mix and competencies to strengthen data insights ▪ Actively engage staff health, wellbeing, and safety ▪ Taking an innovative approach to staff accommodation needs

5. Strategic Theme – Contemporary Models of Care

5.1 Key Opportunities and Themes

The following discussion explores these opportunities and themes in greater detail and outlines how they can be applied to individual clinical areas within ERH.

Additional detail regarding each of these points is contained within the Analysis of Current and Future Situation sections of this Plan.

5.2 Contemporary Models of Care

ERH is proactive in the implementation of contemporary Models of Care, supported by data driven decision making, in order to:

- Safely and appropriately meet growing demand;
- Prevent the admission of patients to hospital;
- Increase patient choice;
- Enable more patients to access care locally;
- Promote increased equity;
- Deliver the highest quality of care in a sustainable way; and
- Utilise regional partnerships and local expertise to support better access for patients to clinical trials

At ERH, further opportunities to improve existing service programs include:

a) Expanding telehealth service models
b) Improving access to day and home-based services including hospital alternative models
c) Focusing on population health and active ageing
d) Implementing an integrated Critical Care Service for Emergency and High Dependency care, supporting the delivery of an ICU service
e) Surgical access reform
f) Expansion of Women and Children's services

Potential improvements and opportunities for each of these programs is discussed in the following text.

a) Expanding telehealth service models

Telehealth programs help to improve the ability of regional service providers such as ERH to:

- Improve patient access to services and connect more effectively with their community;
- Enable safe care close to home and address a broader range of clinical conditions locally;
- Support the workforce by facilitating collaboration between professionals and
- Promote skills development.

The expanded use of telehealth will enable specialists and subspecialists to visit rural patients virtually and improve patient access to a greater breadth of services.

ERH has a track-record of innovation in the delivery of subspecialist telehealth services, for example in the provision of stroke care:

Service Model Success – Virtual Stroke Unit

ERH has become a sub-regional leader in the delivery of stroke care – despite having no neurologists regularly visiting the health service in-person.

Victorian Stroke Telemedicine (VST) program neurologists have been providing telemedicine guidance for suspected stroke patients presenting to the ERH ED since 2014.

Since then, ERH has partnered with stroke neurologists to provide virtual ward-based stroke unit care, supported by an ERH Stroke Coordinator. In 2021, 99% of ERH stroke patients were receiving virtual stroke unit care – compared to a national rate of 73% [Australian Stroke Clinical Registry (AuSCR) Annual Report 2021, p17].

ERH is also delivering enhanced care to stroke patients undergoing inpatient rehabilitation. Multidisciplinary case conferences, including participation by virtual stroke rehabilitation neurologists, are supporting the delivery of best practice stroke rehabilitation care.

Most recently, in late 2021, ERH commenced outpatient telehealth reviews by stroke neurologists, enabling timely specialist follow-up of patients who may require further investigation and management following their presentation to the hospital.

ERH plans to utilise telehealth and e-consults to strengthen local care provision, self-sufficiency and support everyone to be healthy and live well. Digital health transformation is a key strategic goal for ERH and the region and, as a component of this, ERH plans to expand the use of telehealth to include:

- The provision of specialist telehealth services to small rural hospitals in the ERH catchment;
- Formalising the provision of telehealth services to Residential Aged Care facilities, expanding on the Residential in-reach model and reducing the transfer of aged care residents to the ED.

b) Hospital Alternative Models

As an extension of the Better at Home Initiative, ERH will continue the implementation of robust community-based care alternatives and increasingly deliver more services to patients in a non-acute environment.

This growth in non-bed-based services will help to strengthen system sustainability, local care provision, self-sufficiency and support everyone to be healthy and live well.

ERH will:

- Use technology to support the growth in non-hospital-based care;
- Develop the breadth of non-admitted hospital services;
- Design and deliver an increasing range of programs to ensure that patients can remain in their homes for their care as much as possible; and
- Promote multidisciplinary care by enabling nursing and allied health team members to practice to

their full capabilities, including an expansion in nurse practitioner roles.

The increased utilisation of contemporary Models of Care is a key strategic goal for ERH, and as a component of this, the use of the following non-bed-based services will be expanded.

1. Hospital in the Home (HITH) Models

As part of this strategy, ERH will further develop and implement standardised clinical pathways for high volume admission types[6]. Agreed clinical pathways can drive reduction in variations to care, support clear discharge planning and prevent admission to a hospital bed.

Clinical pathways that allow flexibility when required will, where appropriate, support care at home and in the community. The objective is to enable patients to remain within their familiar environment, minimising hospital attendances and / or admissions, reducing pressure on inpatient beds.

Examples of HITH management alternatives that can reduce presentations to the ED and / or reduce hospital admissions include:

- Expansion of hospital alternative programs, including the existing HITH, Residential Aged Care in-reach, Complex Care, GEM at Home, Palliative Care at Home, and cardiac and pulmonary rehabilitation services;
- Assisted self-care using remote patient monitoring.

The current HITH service provides nursing and specialist medical care and is currently available to patients aged 16 years and over.

ERH is well-placed to implement innovative HITH programs within the next three to five years, including establishing a:

- Multidisciplinary (including geriatric specialist) community-based team;
- Rapid response team, consisting of a nurse, specialist paramedic, physiotherapist and / or other allied health professional, who provide 24-hour assessment and care at home for over 65-year-olds;
- Home based care for a limited range of mental health conditions;
- Structured program for patients discharged from the ED that may include multidisciplinary HITH management of infections, heart failure, chronic obstructive pulmonary disease and asthma;
- Structured HITH program for surgical to support early discharge from hospital when clinically appropriate.

2. Alternative Care Models

a) Promoting alternative ways of managing the large number of patients presenting to the ED with primary care type conditions. ERH is developing:

- GP and nurse practitioner roles within the ED, particularly in fast-track services;
- The broad use of liaison officers who can provide support to access community-based services and facilitate direct discharge from the ED.

There are opportunities for the ED team to provide telehealth consultation services to the small rural health service Urgent Care Centres (UCCs) in the ERH catchment.

[6] https://clinicalexcellence.qld.gov.au/resources/clinical-pathways

b) People living in the catchment have a significantly lower rate of inpatient admissions for mental health conditions that the Victorian average.

Owing to the lack of local mental health inpatient accommodation and capability, patients are generally required to travel to Bendigo, Shepparton or elsewhere for overnight or multiday mental health care.

There may be opportunities to develop telehealth models to support patients with a defined range of mental health conditions to access overnight care closer to home.

3. Community Based Care

Improving access to publicly funded ambulatory care and community-based services through the expanded use of hospital outpatient services, telehealth, and virtual care service delivery is an identified priority in this Clinical Services Plan.

The development of a comprehensive Ambulatory Care Centre within a single location and supported by services such as pharmacy and pathology collection, will enable a broad, integrated, biopsychosocial approach for clients within the region.

A range of strategies are being developed to better support the delivery of community-based care, including:

- Enabling nurses and allied health team members to practice to their full capabilities and provide an agreed, safe range of ambulatory care services. The expansion of nursing scope and the expansion of nurse practitioner roles, including in the areas of alcohol and other drugs (AOD) and primary mental health, will help to support timely and safe care in clinically appropriate settings;
- Increasingly using home monitoring to actively engage patients in the management of their chronic and / or behavioural health conditions between clinical visits;
- Targeting and coordinating community-based services for patients with complex chronic care needs; and
- Offering an increased breadth of chronic care management interventions by using a combination of multidisciplinary face to face and telehealth services to provide patients with greater access to integrated care.

c) Population Health and Active Ageing

ERH offers a comprehensive range of community health and wellness programs. It is also a registered National Disability Insurance Scheme (NDIS) provider. The specialist community health and NDIS teams include a large multidisciplinary team of nursing and allied health professionals.

An integrated program of community based clinical, therapeutic and social activity services for all ages and cultures will help to support an improvement in the connectedness, liveability, equity and access of the ERH community.

It will enable holistic advancement in the health and wellbeing of the community and potentially reduce the reliance on acute hospital and residential aged care services. Potentially, these services will help to drive generational change regarding modifiable lifestyle risk factors.

Community health and wellness services will become an increasingly important component of the ERH service profile as the regional population over 70 years is predicted to increase substantially.

Service Model Success – Community Mental Health and Wellbeing Services

ERH is committed to delivering outstanding community health and well-being services. Integration and partnerships with the social care sector have been established with social services such as NDIS providers, child protection services and family violence services such as 'orange door', to deliver health and wellbeing services to the community. Other programs that have been established by ERH include:

- Lead agency for headspace within the Echuca region, offering a mixture of in-person meetings and telephone and video call services that enable young people to access the support they need;
- In partnership with Bendigo Community Health Service (Lead) and Sunbury Cobaw Community Health, ERH is a funded Infant and Child Mental Health and Wellbeing Hub, which delivers mental health, health, and wellbeing support for infants, children, and families. The hub provides support for families with children 0-11 years experiencing developmental, behavioural and emotional challenges. Services includes a range of specialist medical and allied health services, including paediatricians, psychologists and speech pathologists, and offer parenting supports;
- Earmarked as a site for a 'Local' which will improve community-based support for patients requiring mental health, alcohol and other drug services, and sub-acute services, as the lead agency of an Adult and Older Adult Mental Health and Well-being Hub.

Community health programs will be key to successfully realising a higher level of Ageing in Place within the ERH community. As a consequence of these enhanced services, the requirement for Residential Aged Care services may reduce or be deferred for many local residents.

d) Integrated Critical Care service for Emergency and High Dependency Care

With the aim of providing greater continuity of care and supporting 24-hour specialist coverage, ERH is planning to develop a shared care model where appropriately trained staff work between the Emergency Department and the HDU.

This combined Critical Care Service will provide enhanced coverage for both the HDU, and the Emergency Department as required. In turn, this will support ERH's capability to care for a greater volume of patients and an increase in the complexity of patients that can remain at ERH.

ERH will continue to work with their tertiary care partners to further develop its critical care services. In doing this, ERH will focus on strengthening the clinical capability of their Emergency and High Dependency Unit teams so that they can care for patients with higher levels of acuity locally.

This Critical Care model will enable ERH to

1. Safely manage an increased volume and acuity of patients locally;
2. Reduce the need for patient transfers;
3. Improve organisational self-sufficiency;

4. Support the workforce through ongoing skills and competency development; and
5. Support the development of an ICU service.

e) Surgical Access Reform

Accurate and timely waiting list data is important for ERH to monitor community access more accurately and to plan effective and efficient use of its operating theatres.

The Victorian DH recently provided funding to the Loddon Mallee Health Service Partnerships to develop strategies to manage regional demand for elective surgery, so that:

- A greater breadth and volume of surgical services are available locally;
- Patients can receive the care they need as soon as possible; and
- Fewer patients are required to travel out of the area for this care.

This topic is covered within the 'Care Closer to Home' strategic theme.

f) Expansion of Women and Children's services

Improving the clinical capability maternity and neonatal services is a key priority for ERH over the next 5 years.

This topic is covered within the 'Care Closer to Home' strategic theme.

6. Strategic Theme – Equity of Access to Health Care

6.1 Equity and Access

6.1.1 Promoting Equity in Healthcare

Out-of-pocket costs of non-admitted healthcare can be prohibitively high for many patients. The following table provides a snapshot of the out-of-pocket costs associated with accessing specialist and GP services in Victoria. No recent data exists at the catchment level, but it is generally known that access to services is more limited in regional areas.

It highlights that:

- Approximately 50 percent of patients who accessed specialist services incurred significant out-of-pocket costs in 2021-22;
- Access to bulk billed GPs is limited and diminishing in regional areas, with approximately 40 percent of consumers incurring significant out-of-pocket costs when they access GP services.

Type of service	Average patient contribution per service:	Bulk billing rate*
Specialist attendance	$92.44	49.3%
Anaesthetics	$112.42	65.1%
GP	$43.05	85.9%

Table 1 Average patient cost for Primary health care Source[7]

Patients can incur substantial costs as a consequence of multiple appointments during their course of treatment. This is of major concern as the ERH catchment has a higher than Victorian average population of over 65-year-olds and a lower household income than the Victorian average. Further detail regarding income is available in the Analysis of Current Situation section of this Plan.

Throughout many of Victoria's public hospitals, publicly funded specialist clinics are used to provide an interface between primary care providers and hospital services. They generally provide medical, surgical and maternity assessment and treatment, as well as a range of specialised nursing and allied health services.

The demand for specialist clinics across Victoria is growing. This growth is driven by factors that include:

- An ageing population;
- An increasing burden of chronic disease;
- Reducing inpatient length of stay, and consequent increase in patient acuity at the time of discharge;
- The cost of accessing private specialists; and
- Increasing community expectations.

[7] https://www1.health.gov.au/internet/main/publishing.nsf/Content/Medicare+Statistics-1

Despite sharing the same demand drivers as many other health services, the ERH catchment has limited access to publicly funded specialist clinics and does not have comparable access to the outpatient-based services that some other Victorian communities have.

Owing to the limited availability of specialist clinics, consumers are often required to access ambulatory medical, surgical and maternity assessment and treatment, as well as a range of specialised nursing and allied health services, on a private basis.

Issues surrounding clinic availability includes:

- Limited funding available to support the delivery of non-admitted care;
- Workforce challenges in some disciplines (e.g. psychology); and
- Infrastructure - ERH does not have availability of appropriate physical infrastructure for a substantially increased ambulatory care-based service. Currently, there is a lack of available consulting rooms, allied health activity areas and supporting amenities. Some ambulatory patients are required to access re- purposed rooms within the inpatient units for their outpatient appointments.

ERH is seeking to introduce an increased number of publicly funded specialist clinics, obstetrics, gynaecology, paediatrics, medical, oncology, surgical and anaesthetic services being priority areas in the next three to five years.

The development of a comprehensive Ambulatory Care Centre within a single location, supported by services such as pharmacy and pathology collection, has been identified as a priority of this Plan. This centre will be delivered utilising a ‘wellness’ model that addresses adversity and mitigates long term chronic condition development.

7. Strategic Theme – Safe Health Care Close to Home

7.1 Safe Health Care Close to Home

The Health 2040 Advancing Health, Access and Care Strategy and the Better at Home Initiative both articulate the Victorian Government's policy focus on providing the right care in right place at right time by the right people.

In line with this approach, ERH supports state-wide planning that aims to deliver a greater breadth and volume of services of care as close to home as possible, in alignment with clinical capability frameworks.

Through the Better at Home Expansion and Prevention funding, ERH is developing and branding erh@home. A key component of the program will be to promote to the community the effectiveness of delivering safe, high-quality care in both home-based and centre-based locations.

ERH plans to increasingly:

- Deliver care as close to home as possible;
- Improve self-sufficiency;
- Operationalise a significant number of the existing inpatient beds;
- Use virtual health technology to deliver new and innovative service models;
- Focus on providing a range of community-based health and wellbeing services;
- Become a key lead in Adult and Aged Mental Health and Wellbeing Hub ('Local');
- Develop integrated partnerships with other service providers to strengthen early access to hospital and community-based services; and
- Address the recommendations from the Aged Care Royal Commission combined with emerging Models of Care that will change the way that Residential Aged Care is planned in the future.

7.1.1 Enhanced Self-Sufficiency

Evidence shows that people want to access care and support as close to home as possible. By doing so, they can stay in familiar surroundings and access family and community networks to help them.

High numbers of local residents currently need to travel away from ERH to access health care services. As noted in the challenges section above, ERH fails to meet the 70 percent self-sufficiency guideline in a range of paediatric, medical and surgical specialities.

ERH plans to enhance the health service's level of self-sufficiency and achieve 70 percent or higher for most services, within clinical capability frameworks. The health service is focused on the integration between inpatient and ambulatory and wellness services. Strengthening inpatient services will be complemented by the delivery of robust ambulatory care and wellness services.

Key areas for immediate focus, in collaboration with regional partners, include:

- Increased maternity and neonatal capability and capacity;
- Delivering enhanced paediatric services; and
- Surgical service expansion.

7.1.2 Enhanced Maternity and Neonatal Service

Currently, only low risk maternity patients receive planned inpatient care at ERH.

Moderate to high-risk pregnancies and qualified newborns[8] travel out of the catchment to receive inpatient services.

Integration of care is also lacking across Women's and Children's services.

ERH is currently developing the supports that would be necessary to provide a Level 4 maternity and Level 3 neonatal service in the next three to five years.

An uplift in clinical capability will:

- Support enhanced care for women with moderate risk pregnancies and increase the capacity to safely care for women and their newborn babies closer to home;
- Help to address the growing community need for an increased level of maternity, neonatal and paediatric care; and
- Support ERH to develop an integrated Women's and Children's service that can offer families a significantly improved local service.

An integrated Women's and Children's service will help to support a multidisciplinary approach to service delivery and put the patients and their families at the centre of how services are delivered.

To deliver this increased service, ERH will require the capacity to offer shared antenatal care for women with identified risk factors, such as hypertensive disorders, with regional consultation, thus decreasing the number of women required to birth away from home. A public midwifery-led antenatal clinic will support equity of access for women in the ERH catchment.

Workforce strategies, including partnering with Bendigo Health Women's and Children's Services, will be required to develop staff knowledge and skills to deliver local maternity, neonatal and paediatric care at a higher level.

7.1.3 Enhanced Paediatric Service

At 25 percent, ERH's self-sufficiency for paediatric services is extremely low. Paediatric patients admitted to ERH are admitted to the Maternity Unit and frequently cared for by midwives.

Currently, more than 500 families per year travel away from Echuca to access care for their child at other health services.

Opportunities exist for the ERH to develop regional partnerships and virtual service teams similar to the current partnership model between ERH HDU and Bendigo Health ICU.

[8] A newborn patient day is qualified if the infant meets at least one of the following criteria:

- is the second or subsequent live born infant of a multiple birth, whose mother is currently an admitted patient,
- is admitted to an intensive care facility in a hospital, being a facility approved by the Commonwealth Minister for the purpose of the provision of special care,
- is admitted to or remains in hospital without its mother. Source: https://meteor.aihw.gov.au/

The development of paediatric pathways and workforce strategies will enhance paediatric services offered at ERH, in both inpatient and ambulatory care settings such as specialist outpatient clinics.

Future workforce strategies should include the employment of trained neonatal and paediatric nursing and allied health staff and provide opportunities to upskill the current workforce.

7.1.4 Surgical Access Reform

The Victorian DH recently provided funding to the Loddon Mallee Health Service Partnership to explore options to manage regional demand for elective surgery, so that:

- A greater breadth and volume of surgical services are available locally;
- Patients can receive the care they need as soon as possible; and
- Fewer patients are required to travel out of the area for this care.

As an active participant in the partnership, ERH has identified the need for accurate and timely waiting list data in order to strategically plan to meet the demand for elective surgery.

In response to this need, the partnership is currently exploring the feasibility of introducing an Elective Surgery Information System (ESIS) to manage elective surgery waiting list data from approved Victorian public healthcare services across the region. Bendigo Health is currently the only health service in the Loddon Mallee with ESIS in place.

The introduction of a regional waitlist model would help to improve theatre efficiency and positively impact waiting times by effectively drawing on system resources and directing patients to locally based health services with available capacity based on specific criteria, including acuity, time waiting and patient readiness.

Furthermore, the implementation of a region wide ESIS waitlist would enable the alignment of activity across the region with each health service's priorities and clinical capability and support the effective use of valuable surgical resources in a sustainable way[9]. ERH will actively work with its regional partners in any regional ESIS initiative, to support the provision of surgical care in the right place at the right time.

As an extension of a regional waitlist model, the Loddon Mallee Health Service Partnership is also in the process of investigating opportunities to establish a regional Rapid Access Surgical Hub.

The development of a Rapid Access Surgical Hub would provide enhanced regional capacity for high throughput and low to medium complexity procedures in key specialities such as ENT, ophthalmology dental surgery and endoscopy. The Hub could support ERH to increase surgical self-sufficiency and undertake approximately 1,000 additional procedures per year.

The Loddon Mallee Health Service Partnership is continuing to develop options to effectively manage regional surgical demand and local available capacity. As a consequence of this, there is a compelling case for expanding the ERH Perioperative Suite to establish a regional Rapid Access Surgical Hub at ERH.

The development of an Echuca-based Rapid Surgical Hub would strengthen ERH's essential regional role in the delivery of surgical services. An expansion of the ERH Perioperative Suite would support the region to manage increasing demand, improve self-sufficiency and reduce waiting times for elective procedures.

[9] https://www.mq.edu.au/_data/assets/pdf_file/0007/1083823/Waitlist-Surgery-Report-Final-web.pdf

It is proposed that the Rapid Access Surgical Hub be established at ERH, and the Perioperative Suite be expanded as follows:

Points of Care	Pre-Expansion	Post Expansion
Operating Theatres	3	4
Day of Surgery Admissions (DoSA) Holding Bays / Chairs	6	10
Anaesthetic Bays	2	3
Recovery Places – Stage 1	5	7
Recovery Places – Stage 2	10	14
Total	26	38

The increase to ERH's surgical capacity combined with the streamlining of cases will enable ERH to improve its self-sufficiency and address unmet need for surgery, which is frequently undertaken at Bendigo Health, although within ERH's clinical capability. The expanded Perioperative Suite will also support the increasing need for emergency theatre access for general surgery and obstetrics.

ERH will need to consider the implications of these changes to the workforce training and upskilling required for peri-operative staff, including theatre technicians.

7.1.5 Bed Based Services

At the time of ERH's redevelopment, the hospital was built with some excess capacity. As a consequence of this, approximately 25 percent of its physical beds are not currently utilised.

The operationalisation of a significant number of these existing inpatient beds would strengthen capacity to manage growing demand.

ERH faces challenges across its inpatient services, including:

- Bed availability
    - Medical Inpatient Units – The occupancy of these units routinely runs at 98 percent.
    - Surgical Inpatient Unit – The occupancy of this unit routinely runs at 85 percent.

Increased availability of beds is required in order to enable optimal patient flows, manage clinical risk and facilitate increased surgical activity. Operationalising an additional 23 existing acute multiday inpatient beds by 2032 is proposed as part of this Clinical Service Plan.

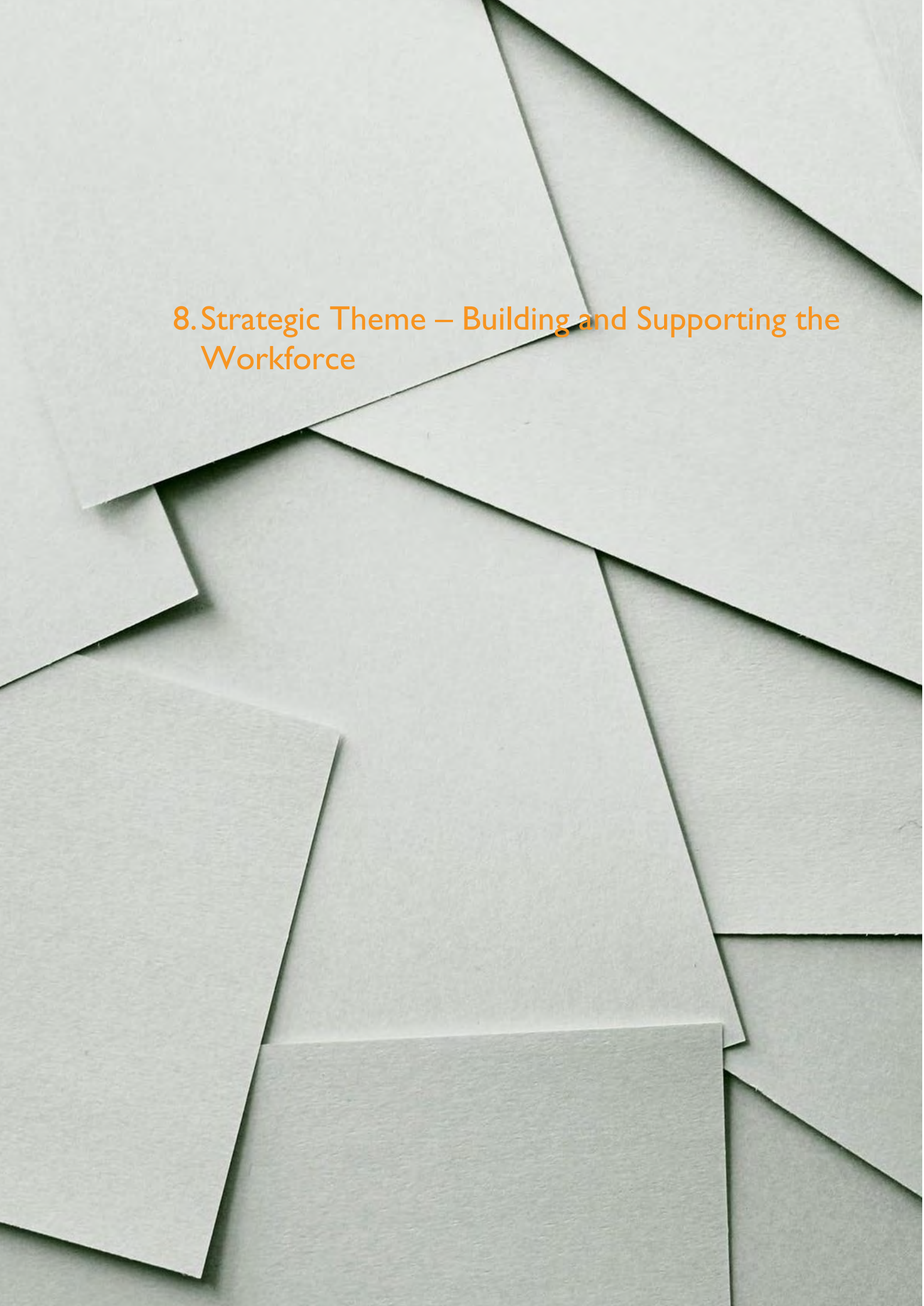
Additional patient flow efficiencies can be gained by streamlining patient journeys. Three methods of increasing system flow are recommended:

- Optimising the management of patient pre-existing conditions;
- Utilising post-surgery innovations to support patient recovery; and
- Increasing system capacity and capabilities to minimise bottlenecks.

Examples of alternative models include:

- Surgical optimisation models such as ‘prehabilitation’ and pathways of care that mitigate or prolong the need for orthopaedic surgery;
- Enhanced Recovery after Surgery (ERAS);
- Outpatients’ programs that promote wellness and the delivery of care by an interdisciplinary mix of health professionals that are committed to addressing and, importantly, understanding childhood adversity;
- Early supported discharge and expanded HITH services:
- Short Stay Unit (SSU) care, for the provision of short-term observation and treatment (less than 24 hours), reducing inappropriate admissions to inpatient beds;
- Colocation and coordination of primary or specialist care for older adults in aged care facilities; and
- Virtual Care Models - the use of alternative models of care, including telehealth and telemonitoring of patients, can reduce the waitlist by treating patients in alternative ways, and can thereby free up hospital resources.

ERH has been selected to participate in the DH’s Timely Emergency Care Collaborative (TECC). This 24-month initiative brings together health teams to learn from and share with each other, while being supported by improvement science and patient flow experts. The key objective of the collaborative is to improve the timeliness of emergency care by improving system-wide patient flow.



8. Strategic Theme – Building and Supporting the Workforce

8.1 Building and Supporting the Workforce

The workforce at ERH is its strongest asset.

As a teaching hospital and a sub-regional health service education and research leader, workforce capacity and capability building is delivered through recruitment, training and driving innovative learning and a best practice learning environment.

The ability to attract and retain suitably qualified staff to meet future demand for services is critical to the future success of ERH. The availability of a robust education program across ERH is an important link for current and future workforce and staff engagement.

A long-term strategy to recruit, train and develop the ERH workforce is required to ensure sustainability and growth of the health service into the future and to minimise work-related fatigue and stress.

ERH is conscious of its need to develop sustainable solutions to recruitment and retention. ERH seeks to build on the success of existing workforce plans to support broader regional workforce strategies.

ERH aims to:

- Fulfil its own service delivery requirements;
- Support the availability of a sustainable medical, nursing, allied health and non-clinical workforce in the medium and longer term; and
- Support other communities in the catchment to access quality, sustainable health care services as close to home as possible, through a region-wide workforce approach where appropriate.

ERH-based clinical training, education and supervision continues to be critically important to the sustainability and expansion of ERH services. Latrobe University and The University of Melbourne have both confirmed that ERH training programs have supported students to stay in their communities while they study and undertake clinical placements. This experience is known to increase a student's likelihood of staying and working in rural areas and enables ERH to grow its own workforce.

Furthermore, the Victorian State-wide Design, Service and Infrastructure Plan for Victoria's health system 2017–2037 states that new types of workers and new ways of working are required in rural areas.

In line with this approach, ERH has experienced significant success by:

- Embracing digital technologies to support remote practice;
- Promoting shared appointments of clinicians who work at other health services in the region or in Melbourne;
- Developing accredited specialist training pathways between regional and tertiary referral hospitals.
- Supporting rural generalist training and advanced skills placement in areas such as anaesthesia, obstetrics, and emergency medicine.

Introducing advanced nursing roles and expanding career opportunities for nurse practitioners will support the delivery of services such as wound care, fracture clinic and emergency.

As ERH provides an increasing breadth of multi-disciplinary care, its requirement to broaden clinical training, education and supervision will increase.

Over the life of this Clinical Services Plan, ERH will work with health services and university partners to further bolster their clinical training capability and capacity. This enhancement will support the active promotion of multidisciplinary care teams and optimise the cross-discipline richness in caring for patients.

It will be imperative for ERH to remain committed to providing accessible and reliable training and support through quality programs, reliable service and reporting against agreed outcomes.

Additional training and education programs will equip nursing and allied health team members to utilise the full extent of their skills and experience by practicing to their full capabilities and fulfilling lead roles across the organisation.

Furthermore, the continued development of advanced nursing and allied health roles will help to free up capacity across the medical team so that they too can work to their full capabilities. Their time should not be spent performing tasks that could be effectively undertaken by another profession with a different set of skills.

The following opportunities are relevant to the specific professional group but could be potentially interchangeable.

8.1.1 Medical

- Develop local rural generalist training to diploma level in emergency medicine, obstetrics and anaesthesia; and
- Expand staff specialist appointments and training posts, working alongside the rural generalist workforce.

8.1.2 Nursing and Midwifery

- Build the capacity and capability of nurses and midwives at ERH to deliver priority services to the local catchment in alignment with evolving service capability;
- Develop the roles of nurse practitioners and nurse practitioner candidates in specialist areas such as emergency, older persons health, renal and endoscopy, as well as supporting current NP candidates in areas such as diabetes education, palliative care and AOD services.

8.1.3 Allied Health

- Strengthen allied health educational pathways and advanced training opportunities;
- Maximise the use of contemporary digital health innovations to complement allied health services and improve patient outcomes;
- Develop Models of Care that integrate health service and National Disability Insurance Scheme (NDIS) work and create career opportunities for allied health professionals; and
- Investigate opportunities to develop allied health private practice arrangements to improve access to allied health services in regional areas.

8.1.4 Aboriginal Health Workforce

- Increasingly, Victorian health services are experiencing the benefits of employing Aboriginal Liaison Officers (ALOs) and Aboriginal Health Workers as members of their multidisciplinary teams. These roles are prioritised at ERH and will continue to grow over time;
- Collaboration with the Aboriginal Community Controlled Health Organisations (ACCHOs) must continue to be a priority, to ensure coordinated workforce planning across the region to meet the needs of Aboriginal communities and consumers;

- Programs to encourage Aboriginal people to enter the health workforce as doctors, nurses, allied health professionals, managers and in other non-clinical roles; and
- Ensuring cultural safety to support employment.

8.1.5 Corporate Workforce

- Develop an attraction strategy for school leavers not immediately wanting to progress into career or study pathways;
- Promote career progression opportunities into professional, management and leadership roles;
- Develop strategy to respond to ageing workforce challenges in this area.

8.1.6 Organisational Imperatives to Ensure a Sustainable Workforce

- Continue to develop leadership capability and promote career pathway opportunities;
- Invest in student and workforce accommodation to enable additional placements and therefore a larger pipeline of future talent; and
- Partner with other health services to support the sustainability of the workforce through expanded training opportunities and resource sharing.

9. Projected Points of Care

Projected Points of Care

The following table summarises:

- The existing physical and funded Points of Care;
- The projected Points of Care requirement until 2037.

The Points of Care profile described below is based on an annual projected growth rate of 1.78 percent as assumed in the Victorian DH projections.

It is noted that the projected Points of Care were then adjusted to account for unprecedented population growth, increasing levels of self-sufficiency and future service capability.

It is important to note that if the Victorian DH projections continue to be exceeded across the life of the Clinical Services Plan, this will have implications for the projected Points of Care and the associated infrastructure requirements.

Service Profile / Points of Care	2022	2022	2023	2027	2032	2037	Comments
	Physical	Open	Required				
Acute adult multiday (incl HDU)	60	41	44	60	63	65	(2023) Medical = 28 beds, Surgical = 16 beds required
HITH	10	10	20	25	30	35	Not included in POC total
Sub-total acute/multiday/overnight	**60**	**41**	**44**	**60**	**63**	**65**	
Maternity	6	6	6	6	7	8	
Paediatric	2	2	2	4	4	4	
Neonatal SCN	0	0	0	4	4	4	Assume increase in capability
Sub-total maternity/paediatric	**8**	**8**	**8**	**14**	**15**	**16**	
Day oncology / day medical	7	7	8	8	9	10	
Renal dialysis	6	6	5	5	5	5	Assume increased availability of home dialysis
Sub-total day medical same day	**13**	**13**	**13**	**13**	**14**	**15**	
Total Inpatient	**81**	**62**	**65**	**87**	**92**	**96**	
Emergency Department							
Cubicles – adult / paediatric acute	11	5	10	10	12	12	
Cubicles – isolation	1	1	1	1	1	1	
Cubicles – chairs / rapid assessment	2	2	8	8	8	9	
Resuscitation bays	2	2	2	2	2	2	
Behavioural assessment room	1	1	1	1	1	1	
ED – Short Stay Unit	6	5	5	5	5	6	
Total Emergency	**23**	**16**	**27**	**27**	**29**	**31**	
Operating Suite							
Operating theatres	3	3	3	4	4	4	
DOSA – holding bays / chairs	6	6	6	10	10	10	
Anaesthetic bays	2	2	2	3	3	3	

Service Profile / Points of Care	2022	2022	2023	2027	2032	2037	Comments
Recovery – Stage 1	5	5	5	7	7	7	
Recovery – Stage 2/3	10	10	10	14	14	14	
Total Operating Suite	**26**	**26**	**26**	**38**	**38**	**38**	
Birth Suite							
Birth room	2	2	2	2	2	2	
Maternity assessment	1	1	1	2	2	2	
Total Birth Suite	**3**	**3**	**3**	**4**	**4**	**4**	
Total Acute	**133**	**107**	**121**	**156**	**163**	**169**	
Rehabilitation and GEM	17	14	14	16	21	23	
Palliative care	2	2	2	3	3	3	
TCP beds	6	4	4	4	4	4	Hospital based
Sub-total Sub-acute	**25**	**20**	**20**	**23**	**28**	**30**	
Total Sub-acute	**25**	**20**	**20**	**23**	**28**	**30**	
Ambulatory Care							
Ambulatory care rooms	17	21	21	27	33	42	Hopwood Centre
Total Ambulatory Care	**17**	**21**	**21**	**27**	**33**	**42**	
Total	**175**	**148**	**162**	**206**	**224**	**241**	

Table 2 Projected Points of Care

10. Analysis of Current Situation – ERH Catchment

10.1 Population Analysis

The following analysis of the Current Situation:

- Defines the catchment population
- Explores the demographics of the catchment

10.2 Catchment Population

The ERH catchment covers 25,139 square kilometres and is defined by the Victorian SLAs of Echuca, Kyabram, Lockington – Gunbower, Rochester and Gannawarra (excluding Kerang), and the NSW SLAs of Moama, Deniliquin, and Deniliquin Surrounds.

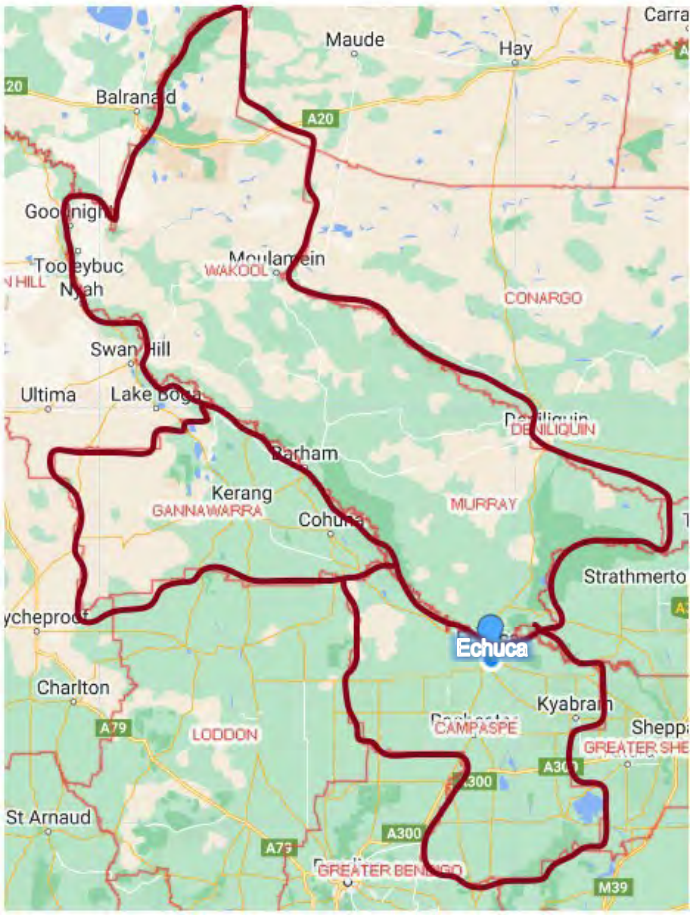


Figure 5 Map of catchment

The Shire of Campaspe is located in north central Victoria, approximately 180 kilometres north of Melbourne. The largest town is Echuca, followed by Kyabram, with smaller towns at Rochester, Gunbower, Lockington and Stanhope. The Shire encompasses a total land area of about 4,500 square kilometres. Land is used mainly for agriculture, particularly dairy farming, cereal and grain growing, and sheep grazing.

The Shire of Murray River is located in the NSW Southern Riverina district, three hours from Wagga Wagga.

The Murray River Shire has an estimated population of 12,780[10], with approximately 53 percent of the population residing in Moama. The shire encompasses about 11,800 square kilometres. Major townships and small settlements in Murray River Shire include Moama, Barham, Mathoura, Moulamein and Wakool.

The Shire of Gannawarra is located in the northern part of Victoria. It includes the towns of Cohuna, Kerang, Koondrook, Leitchville and Quambatook. It covers an area of 3,735 square

kilometres. The north-eastern border of the shire is the Murray River. The Loddon River flows through the shire, feeding into the Murray. Land is predominantly used for cereal grain production, dairying and milk processing. Tourists are attracted to the rivers and also the lakes, for fishing, bird watching and water sports.

10.3 Migration

Migration[11] gain to the region tends to be based on families moving from Melbourne and neighbouring shires, as well as those immigrating from overseas. In common with most of regional Australia, many young people leave the region after completing their secondary education, with a number of them migrating to Melbourne or Bendigo for education and employment opportunities. It is assumed that a number of these patterns will continue into the future, most notably flows into the region from Melbourne and other surrounding rural areas and losses of young people to larger centres.

The migration flows depicted below are historical and do not represent future or forecast migration flows or subsequent council boundary changes. The arrows represent migration flows to the area as a whole and do not indicate an origin or destination for any specific localities within the area. Overseas flow shows overseas arrivals based on answers to the census question "where did the person usually live 5-years ago" and an estimate of international out-migration.

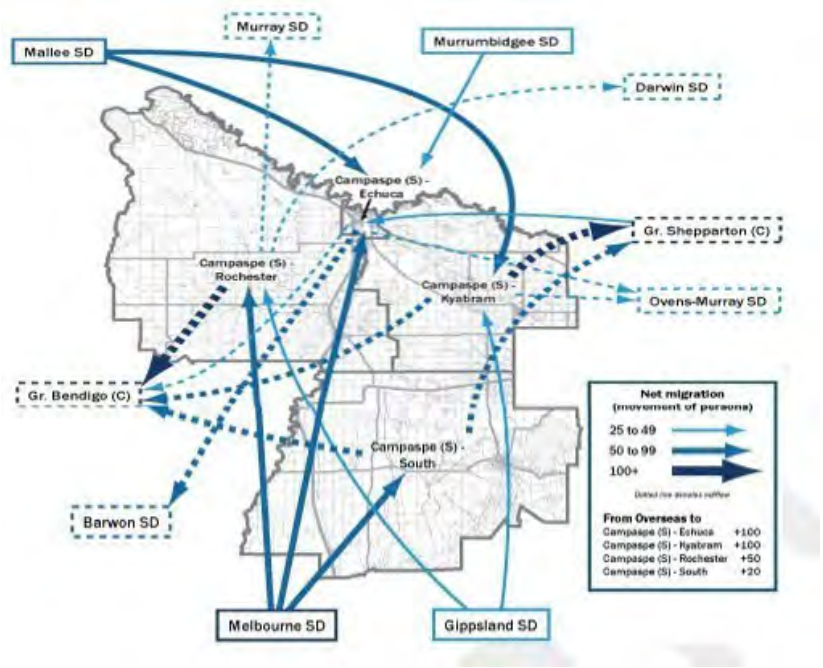


Figure 6 Migration flows - Campaspe

[10] 2021 ABS Estimated Resident Population
[11] Population and household forecasts, 2016 to 2036, prepared by .id (informed decisions), December 2017

10.4 Area Demographics

The situational analysis aims to provide a high-level overview of the demographics of the ERH catchment. The Clinical Service Plan will explore the following demographics, each of which influence the quality of life.

The area demographics for age and gender are explored at Statistical Area level 2 (SA2)[12], however the remainder of the analysis is at the LGA level: this was influenced by the availability of the data. All data for 2021 utilises the Census data.

[12] https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/main-structure- and-greater-capital-city-statistical-areas/statistical-area-level-2

10.5 Resident Population

The residential population within the ERH catchment in 2021 was 62,224 people. There were 29,384 dwellings, with an average household size of 2.35 people.

In the five years from 2016, the population grew by 2,978 people, living in 1,434 dwellings with an average household size of 2.3 people. This equates to approximately 4.8 percent growth.

The ERH catchment population has grown at levels well above those projected by planning organisations such as DELWP[13]. Growth has outpaced state-wide projections by in excess of 5,000 people. In 2021, the actual population was 62,224 people, compared to a projected population 56,972.

This larger than projected population is likely to drive an unprecedented requirement for health services both within the hospital and in the community setting.

Estimated Residential Population (ERP) by Location (SA2)	2017	2018	2019	2020	2021
Deniliquin	7,530	7,575	7,624	7,608	7,038
Deniliquin Surrounds	6,795	6,769	6,735	6,739	6,837
Echuca	14,931	14,933	14,974	15,019	15,636
Kyabram	11,056	11,028	11,063	11,097	11,121
Lockington-Gunbower	3,860	3,874	3,855	3,874	3,927
Moama	6,129	6,300	6,414	6,652	6,930
Rochester	3,902	3,906	3,886	3,833	4,016
Gannawarra	6,682	6,653	6,594	6,576	6,719
Grand Total	**60,885**	**61,038**	**61,145**	**61,398**	**62,224**

Table 3 Population ERH catchment

As demonstrated in the table below, the population across the catchment has increased by 1.35 percent (826 people) over the past 12 months, with the largest increase in the towns of Rochester, Moama and Echuca.

[13] https://www.planning.vic.gov.au/land-use-and-population-research/victoria-in-future

The town of Deniliquin saw a significant decrease in population of 7.49 percent (570 people) in 2020-2021.

Estimated Residential Population by Location (SA2)	Increase in Population 2020 to 2021	2020 to 2021
Rochester	183	4.77%
Moama	278	4.18%
Echuca	617	4.11%
Gannawarra	143	2.17%
Deniliquin Surrounds	98	1.45%
Lockington-Gunbower	53	1.37%
Kyabram	24	0.22%
Deniliquin	-570	-7.49%
Grand Total	**826**	**1.35%**

Table 4 ERP by location (SA2)

Place of Residence

In 2021, a significant proportion of the population lived within the rural city of Echuca. Echuca and Kyabram make up 43 percent of the total catchment population.

The remaining people reside in the smaller rural towns and communities in the Campaspe, Gannawarra and Murray River Shires. The largest area of growth was in Moama, which showed an annual growth rate of 2.49 percent.

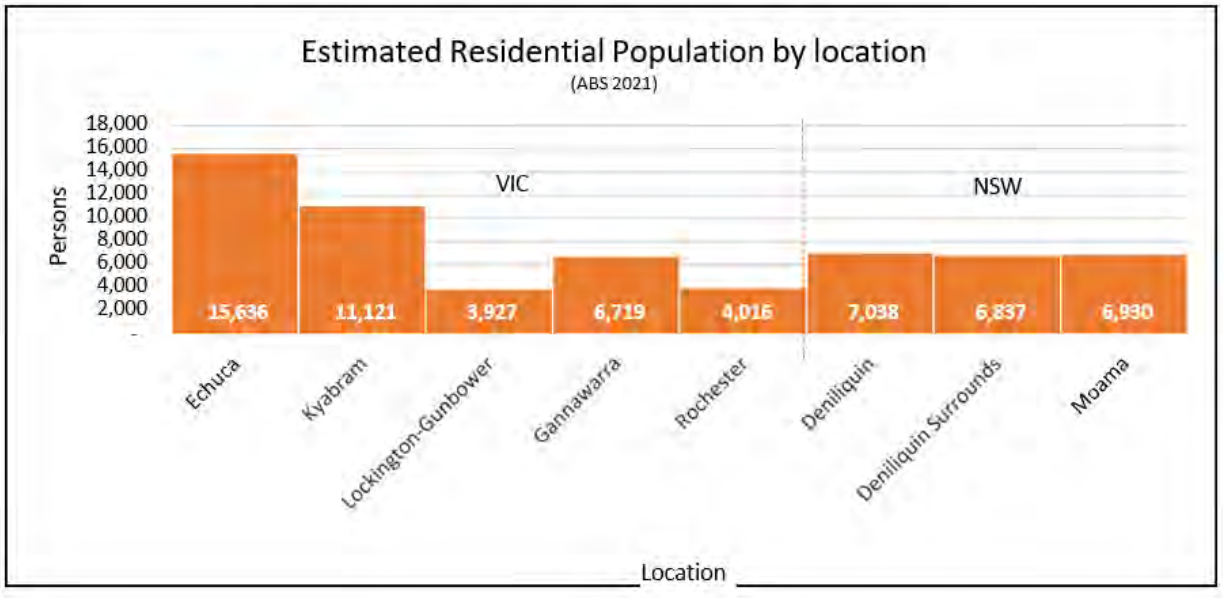


Figure 7 ERP by Location

Age

Over the next several decades, population ageing is projected to have implications for the region, including health, size of the working-age population, housing, and demand for skilled labour.

Similar to most developed countries, Australia's population is ageing as a result of sustained low fertility and increasing life expectancy.[14] This has resulted in proportionally fewer children under 15 years of age in the population, and a proportionally larger increase in those aged 65 and over.

In 2021, the median age for the ERH catchment was 47.8 years.

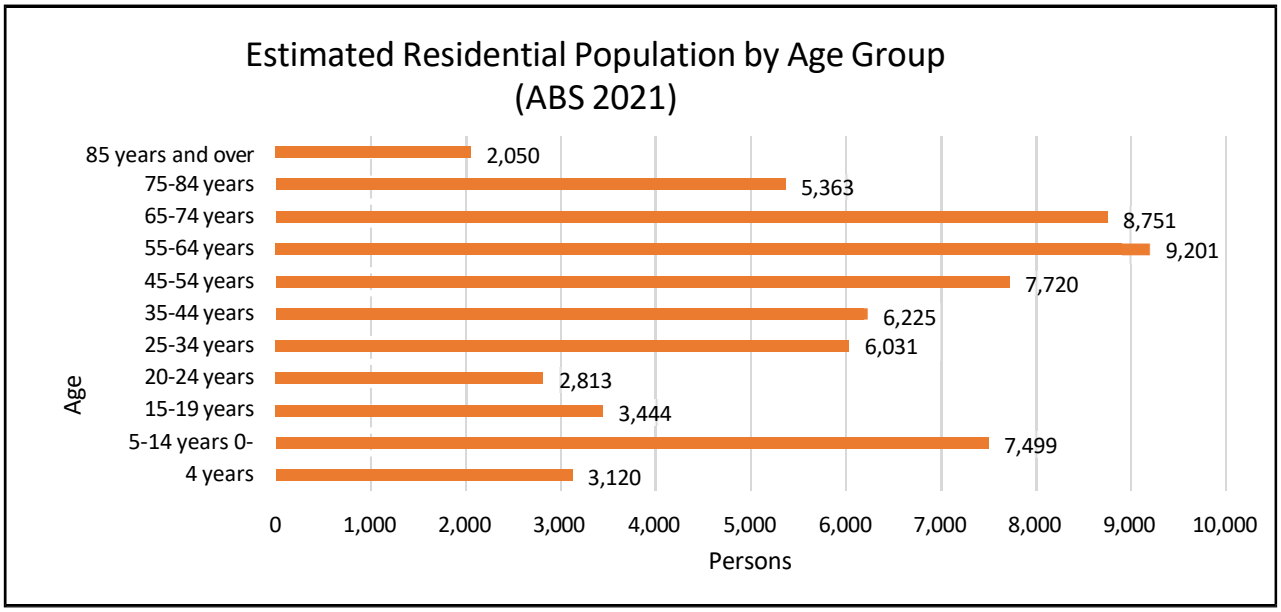


Figure 8 ERP by age group

Ageing Population

The largest area of growth occurred in the older persons age group, with 2.63 percent annual growth for those aged over 65 years.

Older people make up a considerable proportion of the catchment population. As of 30 June 2021, approximately 18 percent of the population were aged over 65 years, which is slightly higher than the Victorian average of 16.8 percent.

Older residents are known to be more frequent users of health services and often manage multiple co-morbidities. They require greater access to primary and community care services. In 2019–20, across Australia, people aged 65 and over accounted for 43 percent of same-day hospitalisations and 41 percent overnight hospitalisations.[15]

[14] https://victorianwomenshealthatlas.net.au
[15] https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance

As younger people with higher burdens of lifestyle related diseases become aged, further pressure is placed upon already stretched health services.

People are living longer, with associated growth in the prevalence of age-related conditions, such as dementia, which require more frequent use of health services. Women are living on average 4 years longer than men.[16]

ERP by population group	2017	2018	2019	2020	2021	Overall Change 2017 - 2021
Children aged 0-4 years	3,451	3,375	3,282	3,232	3,120	- 331
Children aged 5-14 years	7,561	7,610	7,626	7,638	7,499	- 62
Teens and Young Adults aged 15-24 years	6,701	6,711	6,737	6,862	6,257	- 444
Working aged 15-65 years	35,675	35,510	35,427	35,340	35,434	-241
Older Persons aged 65 years+	14,198	14,543	14,810	15,188	16,164	1,966

Table 5 ERP by Population group

Families and Young People

In 2021, 3,120 children (5.01 percent) aged 0-4 years, and 10,943 (17.6 percent) were aged 5-19 years.

Across Australia, the leading causes of total burden of disease (quantifiable impact of disease or injury on a population which captures health loss, or years of healthy life lost through premature death or living with ill health) for children 0-14 years includes:

Under 5 years	%	5-14 years	%
Preterm birth and low birth weight complications	15%	Asthma	14%
Birth trauma and asphyxia	9%	Anxiety disorders	11%
Sudden infant death syndrome	6%	Conduct disorders	7%
Cardiovascular defects	5%	Depressive disorders	6%
Asthma	4%	Autism spectrum disorders	5%

Table 6 Leading cause and total burden of disease amongst children 0-14 years[17]

In 2021, approximately 24 percent of the population (15,069 people) residing in the catchment were adults aged 20-44 years, many of whom would either have had a family or were starting a family.

Of the 16,770 family households in the catchment at the time of the 2021 census, 7 percent were one parent families with children under the age of 15 years. This is associated with a greater need for access to bulk billing and public health services, including access to public outpatient clinics in specialty areas such as paediatrics.

It is noteworthy, and distressing, that in 2021, suicide was the leading cause of death among people aged 15-25. This highlights the need for better access to mental health services for young people living in the ERH catchment.

[16] CEPAR 2021

[17] https://www.aihw.gov.au/reports/australis-health/health-of-children

Fertility Rate and Births

The majority of the SA2 areas across the catchment registered a fertility rate higher than the state average. The total fertility rate in 2020 (per female) across the catchment was higher at 2.07.

This will pose implications for services catering for pregnancy, babies, children and people caring for children.

Indicator	Campaspe	Victoria
Total fertility rate - ABS 2020	2.07	1.53

Table 7 Total fertility rate

The following table identifies the number of births that were registered per calendar year from 2016 to 2020 across the catchment.

Birth numbers have fluctuated yearly, with an average of 643 births per year.

With a higher birth rate per 1,000 women than the state average, there is a higher demand for pre- and post-natal care, ages and stages checks, kindergarten participation, and services targeting early years.

Indicator	2016	2017	2018	2019	2020
Births (no.)	671	651	659	628	604
Birth rate (per 1,000)	22.86	21.26	21.00	20.84	NA

Table 8 Birth rate

According to National Core Maternity Indicators for 2018, almost three quarters of all pregnant women (74.4 percent) commenced antenatal care in the first trimester, with lowest uptake by women under 20 years.

- For women with low-risk pregnancy, 45.3 percent had an induction of labour (up from 31 percent in 2004);
- 30.1 percent gave birth by caesarean section (up from 23.5 percent 2004); and
- 26.1 percent had an instrument-assisted birth for their first birth. Women's expectations and options in relation to pregnancy and birth can be limited by access to services, social supports, health literacy, and geographic location.[18]

Gender

The proportion of males and females is comparable across the catchment areas. In 2021, females made up 50.6 percent and males 49.4 percent of the population.

As shown in the following graph, the proportion of males to females is even, excepting the over 75 years age group in which women make up 55 percent of the population and men 45 percent of the population

[18] https //victorianwomenshealthatlas.net.au/

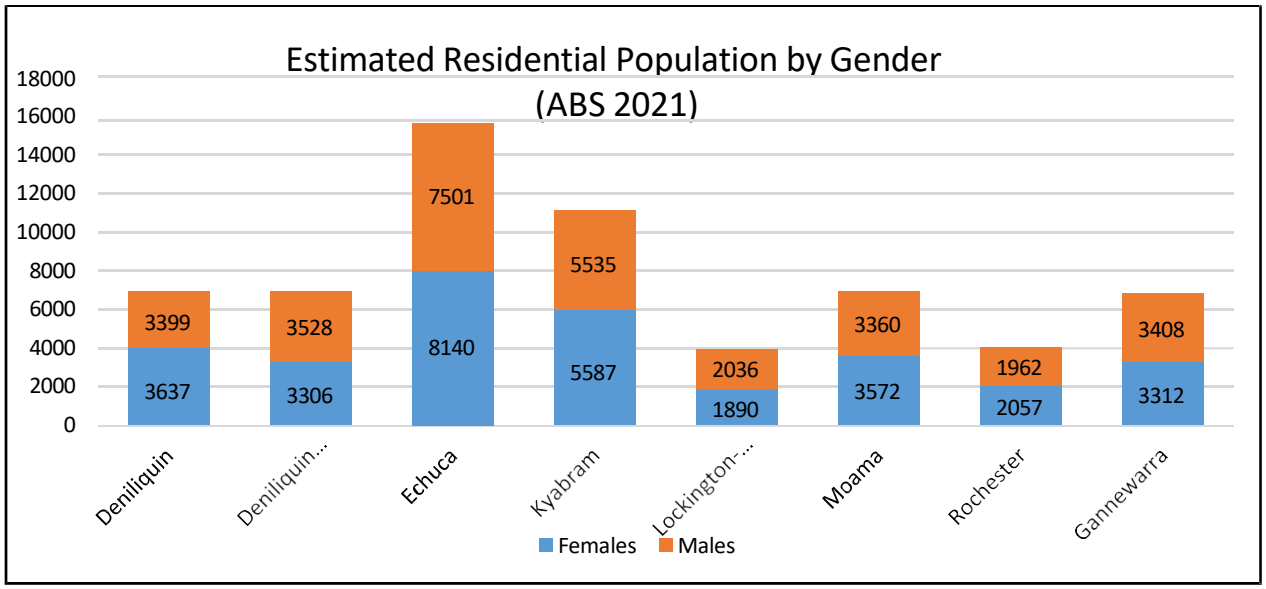


Figure 9 ERP by gender

Diversity

Aboriginal People[19]

In 2021, with an estimated Aboriginal population of 2,085 people within the catchment identifying as Aboriginal or Torres Strait Islander in the 2021 census, the proportion of Aboriginal people across the catchment is more than three times the overall Victorian population proportion (3.4 percent versus 1.0 percent).

Aboriginal and Torres Strait Islander Population	2011	2016	2021	Annual Growth
Deniliquin	258	341	383	4.03%
Deniliquin Surrounds	216	227	279	2.59%
Echuca	496	489	637	2.53%
Gannawarra	72	112	119	5.15%
Kyabram	195	206	285	3.87%
Lockington-Gunbower	41	65	75	6.23%
Moama	116	156	224	6.80%
Rochester	41	48	83	7.31%

Table 9 Aboriginal and Torres Strait Islander Population

Two Aboriginal Community Controlled Health Organisations (ACCHOs) provide services to Aboriginal and Torres Strait Islander people in the Campaspe, Murray River and Gannawarra shires. These services are

[19]Aboriginal people refers to all Aboriginal and Torres Strait Islander people

Njernda Aboriginal Corporation, located in Echuca, and Cummeragunja Housing and Development Aboriginal Corporation, located near Barmah.

The National Aboriginal and Torres Strait Islander Health Plan 2021-2031 affirms that Aboriginal and Torres Strait Islander people's health and wellbeing is the whole community's responsibility. This means collaboration and coordination is needed across all services and aspects of health care delivery.[20]

ERH is actively working to improve services to Aboriginal and Torres Strait Islander people in ways that are culturally appropriate. Existing partnerships between the ACCHOs and ERH can be strengthened through connected service pathways, including referrals and discharge planning, so that Aboriginal patients have appropriate follow-up support available to them. Collaboration with Rural Workforce Agency Victoria (RWAV) in the delivery of the Healthy Ears, Better Health, Better Listening Program for Aboriginal and Torres Strait Islander people is an example of a streamlined program of early intervention that will be possible when ERH is able to resume local specialist ENT services in 2023.

Migrants

At the 2021 census, the region had 4,289 persons (7 percent) born overseas, markedly less than the overall Victorian population of 30 percent.

The majority of migrants are from Europe, followed by Oceania. The region provides semi-skilled and labouring farm work for people who sometimes lack recognisable skills, including English language skills.

This highlights a need for:

(i) interpreter services;

(ii) the provision of health information in languages other than English;

(iii) workers to have a high proficiency of cross-cultural communication skills;

(iv) services to be delivered in a culturally safe manner that respects cross cultural and religious protocols; and

(v) people to have the ability to receive education regarding the availability of services and how to access them

Indicator	Catchment	State of Victoria	Comments
Aboriginal and Torres Strait Islander Population (ABS 2021)	3.4%	1.0%	2085 persons identified as Aboriginal and Torres Strait Islander in the 2021 census. The largest population of 637 people resided in Echuca, followed by 383 people in Deniliquin.
Persons born overseas (ABS 2021)	6.9%	30.0%	4289 people in the catchment were born overseas. This figure is anticipated to be higher if the seasonal agriculture workers are included.
English Proficiency (ABS 2016)	94.9%	86.5%	Deniliquin had the lowest English proficiency rate at 85.7% followed by Rochester (93.7%)

Table 10 Cultural Diversity

20 National Aboriginal and Torres Strait Islander health plan 2021-2031

10.6 Health and Welfare

Welfare refers to the wellbeing of individuals, families and the community. It is associated with comfort, happiness, health, prosperity, security and safety. A person's wellbeing is influenced by a broad range of individual, social, economic and environmental factors.[21]

The level of support a person requires will depend on their stage of life, level of disadvantage, health and disability status, education, social and economic participation, access to suitable housing, support networks and the relationship across all these functions.

Amongst the literature various indicators of disadvantage are identified. The indicators of disadvantage identified below incorporate a number of the identifiers used in the Socio-Economic Indicator for Areas (SEIFA) indexes as well as community safety.

The four SEIFA indexes 'rank the level of social and economic well- being of a region'. A score below 1,000 reflects relative disadvantage. As demonstrated in the following table, the catchment population generally scores in the vicinity of 950 to 1,010.

Socio-Economic Disadvantage / Financial Stress

Socio-economic disadvantage has been associated with the following:

- Worse health outcomes;
- Higher levels of disease risk factors; and
- Lower use of preventative health services.

Across the catchment, the level of relative socio-economic disadvantage remains stable, with Deniliquin the most disadvantaged and the only SLA in the first quintile. The areas with the least disadvantage are Moama and Lockington-Gunbower.

As reflected in the following table, a number of indicators suggest many people residing within the catchment are experiencing financial stress.

Region	Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)	Index of Relative Socio-Economic Disadvantage (IRSD)	Economic Resources (IER)	Education and Occupation (IEO)
Deniliquin	923	940	951	926
Deniliquin Surrounds	972	984	1004	988
Echuca	945	972	980	940
Gannawarra	945	968	990	946
Kyabram	941	965	980	934
Lockington-Gunbower	975	1007	1037	952
Moama	981	1012	1009	968

[21] https://www.aihw.gov.au/reports/australias-welfare/australias-welfare-2021-data-insights/contents/summary

Region	Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)	Index of Relative Socio-Economic Disadvantage (IRSD)	Economic Resources (IER)	Education and Occupation (IEO)
Rochester	932	954	982	925
Variables Considered	▪ Income ▪ Level of Educational attainment ▪ Unemployment ▪ Rent less than $120 per week ▪ Mortgage stress ▪ Occupied private dwellings that require one or more extra bedrooms	▪ Low Income ▪ Low educational attainment ▪ One-parent families ▪ Unemployment ▪ Dwellings without motor vehicles	▪ Income and wealth ▪ Access to economic resources	▪ Proportion of people with formal qualifications ▪ Proportion of people with the skills required to perform different roles

Table 11 SEIFA Socio-economic disadvantage

Education

An influencer of socio-economic disadvantage is education participation.

Rates regarding the completion of Year 12 and higher qualifications are 34.3 percent of the total population aged 15 years and over. This is significantly lower than the Victorian total of 59.2 percent.

Implications include a reduction in future earning capacity, economic and social opportunities and health literacy.

The following table highlights that people living within the catchment frequently have a lower level of education than the Victorian average.

Indicator	Catchment	Victoria
Completed Year 12 or equivalent - total population aged 15 years and over - ABS 2021	34.3%	59.2%
Completed post Year 12 education - total population aged 15 years and over (pooled data) - ABS 2021	69.5%	80.1%

Table 12 Indicator of educational levels

Housing and Transport

Mortgage stress and rental stress includes low-income households (bottom 40 percent of income distribution) that spend at least 30 percent of their income on either their mortgage or rent.

Households experiencing mortgage or rental stress are more likely to experience stress associated with:

(i) A lack of money; and

(ii) Financial hardship outcomes such as missing out on adequate health care. A lack of money can contribute to health problems as well as posing stress on

family relationships.

Indicator	Campaspe	Victoria
Home ownership status - owned with mortgage - VPHS 2020	44.8%	35.2%
Low-income households with mortgage stress - PHIDU 2016	10%	10.2%
Low-income households with rental stress - PHIDU 2016	27.4%	27.2%
Private dwellings with no motor vehicle - PHIDU 2016	4.8%	7.9%

Table 13 Housing and Transport Indicators

Social Determinants of Health

According to the AIHW, people living outside metropolitan areas often have poorer health outcomes compared with those living in metropolitan areas.

Data shows that people living in rural and remote areas have higher rates of hospitalisations, mortality, injury and poorer access to, and use of, primary health care services, compared with those living in metropolitan areas.

Health inequalities in rural areas may be due to factors, including:

- Challenges in accessing health care or health professionals, such as specialists;
- Social determinants such as income, education and employment opportunities;
- Higher rates of risky behaviours such as tobacco smoking and alcohol use; and
- Higher rates of occupational and physical risk, for example from farming or transport-related accidents.

The following table highlights that people living within the catchment frequently experience more disadvantage than the Victorian average.

Indicator	Campaspe	Victoria
Single (or lone) person households - ABS 2016	28.2%	24.7%
Internet accessed from dwelling - ABS 2016	74.6%	83.7%
Persons undertaking voluntary work for an organisation or group (persons aged 15 years and over) - ABS 2016	24.7%	19.2%
Adult population (low or medium) feeling of life being worthwhile - VPHS 2017	13.5%	16.7%
SEIFA Index of Relative Socio-Economic Disadvantage Vic ranking (1-79) - ABS 2016	23	N/A
Median weekly household income $ - ABS 2016	1,081	1,419
Total weekly household income less than $1000 - ABS 2016	41.2%	31.8%
Ran out of money to buy food in last 12 months - VPHS 2020	7.4%	5.9%
Population receiving disability support pension - PHIDU 2020	7.7%	4.2%
Aged population (65+ years) receiving aged pension - PHIDU 2020	67.2%	58.3%
Population Health Care Card holders - PHIDU 2020	13%	11.3%

Population female sole parent pensioners - PHIDU 2020	6.1%	2.7%

Indicator	Campaspe	Victoria
People receiving unemployment benefit - PHIDU 2020	11.4%	8.8%
Adult population fair or poor self-reported health - VPHS 2020	17%	21.4%
Adult population low or medium life satisfaction - VPHS 2020	15.1%	22.3%
Estimated number of people with high, or very high, levels of psychological distress (based on K10 score) (ASR per 100) - VPHS 2020	20	23.5
Taxpayers who report having private health insurance - ABS 2020	27%	28.2%

Table 14 Social determinants of health

Risk Factors

Health risk factors are attributes, characteristics or exposures that increase the likelihood of a person developing a disease or health disorder. Many health problems can be prevented by reducing exposure to modifiable risk factors such as:

- tobacco smoking
- poor eating patterns
- risky alcohol consumption
- not getting enough exercise.

The following table illustrates that people living within the catchment frequently have more exposure to modifiable risk factors than the Victorian average.

Indicator	Campaspe	Victoria
Adult population obese (BMI ≥ 30) VPHS 2020	28.2%	19.5%
Adult population overweight (BMI ≥25) VPHS 2020	61.2%	51%
Adult population doctor diagnosed hypertension - VPHS 2017	26.5%	25.4%
Adult population increased lifetime risk of alcohol-related harm - VPHS 2019	68.9%	59.5%
Adult population increased risk of injury from a single occasion of drinking - VPHS 2017	53%	42.6%
Adult population daily consumption of sugar sweetened soft drinks - VPHS 2017	18%	10.1%
Adult population current (i.e. daily or occasional) smoker - VPHS 2020	22.4%	16.4%
Hospital admissions per 100,000 population for Illicit drugs (any) use - AOD Stats 2018 - 2019	311.2	298.4
Adult population insufficiently active - VPHS 2017	38.1%	44.1%
Adult population complied with fruit consumption guidelines - VPHS 2019	36.6%	40.6%
Adult population complied with vegetable consumption guidelines - VPHS 2019	1.8%	5.7%

Table 15 Risk factor indicators

Disability

Disability is the umbrella term for any limitation, restriction or impairment which restricts everyday activities, or a restriction in participation (the involvement of a person in life situations), and has lasted, or is likely to last, for at least six months.[22]

- People can be born with disabilities whilst many people acquire a disability. This may be incurred for example through a transport or workplace accident or with ageing.
- There is a strong relationship between age and disability. As people grow older, there is a greater tendency to develop conditions which cause disability.

On average, 6.9 percent of the catchment, have a disability and this proportion is increasing with an ageing population.

As reflected in the following table, there is a higher rate of people living with a disability in the catchment than the Victorian average.

Indicator	Campaspe	Victoria
Persons who have need for assistance with core activities for daily living - ABS 2016	6.4%	5.1%
Persons with a disability - ABS 2018	6.9%	5.5%
People with a profound or severe disability (includes people in long-term accommodation), all ages - PHIDU 2016	6.8%	5.4%
People with a profound or severe disability and living in the community, all ages - PHIDU 2016	5.6%	4.6%
Population receiving disability support pension - PHIDU 2020	7.7%	4.2%
Number of lone persons with a disability - Victoria Local Government Association 2016	379	46560
Number of NDIS participants - NDIS 2022	1,061	116,380
Persons who provide unpaid assistance to people with a disability - PHIDU 2021	14%	11.6%

Table 16 Indicator of disability status

Women's Health / Equity

Gender equity is the process of being fair to women and men by recognising diversity and disadvantage and directing resources accordingly to create equal outcomes. Equity denotes the series of actions needed to be taken before equality can be achieved.

By acknowledging the cultural, social and economic factors that disadvantage women, gender equitable policies can be supported by allocating extra resources and targeted policies to bridge the gap in order to achieve equality.[23]

[22]Definition: Disability National Insurance Disability Scheme (NDIS)

[23] https://victorianwomenshealthatlas.net.au

The following table highlights that women living within the catchment frequently experience similar disadvantage as other women throughout Victoria, noting that the number of women who have completed Year 12 is substantially lower than the state average.

Indicator	Campaspe	Victoria
ERP - number of females - ABS 2019	18,903	3,329,108
ERP - female - PHIDU 2019	50.3%	50.5%
Births rate per 1,000 women - Victorian Women's Health Atlas 2019	20.8	23.3
Proportion of local councilors female - Victorian Women's Health Atlas 2020	33.3%	42.7%
Unpaid domestic work more than 15 hours per week (females) - Victorian Women's Health Atlas 2016	28.1%	26.7%
Unpaid domestic work more than 15 hours per week (males) - Victorian Women's Health Atlas 2016	10.2%	9.5%
Proportion of females earning below minimum weekly wage - Victorian Women's Health Atlas 2016	47.4%	45.7%
Females 15 years and over who have completed Year 12 or equivalent - Victorian Women's Health Atlas 2016	28.7%	40.4%
BreastScreen participation for women aged 50-69 years - PHIDU 2016-2017	55.2%	54.1%
National Cervical Screening Program participation for women aged 20-69 - PHIDU 2015-2016	58.6%	57.1%
Females diagnosed with anxiety or depression - VPHS 2017	39.2%	33.6%
Potentially avoidable deaths age-standardised rate per 100,000 females - AIHW 2019	77.7	NA

Table 17 Indicator of women's health and equity

Oral Health

The data contained in the following table highlights that the oral health of people living in the catchment is significantly lower than the Victorian average.

Indicator	Campaspe	Victoria
Adult population with fair/poor self-reported dental health - VPHS 2017	25.7%	24.4%
Children (0-5 years) presenting with at least one decayed, missing or filled (baby) or permanent (adult) tooth, attending public dental services - Dental Health Services Victoria 2017-19	35%	26%
Potentially preventable hospitalisations dental conditions standardised rate per 1,000 persons - VHISS 2019-20	2.38	2.35
Potentially preventable hospitalisations dental conditions for children aged 0-9 years, standardised rate per 1,000 persons - Dental Health Services Victoria 2018-19	10.5	6.1
Adult population avoided or delayed visiting a dental professional because of the cost - VPHS 2017	40.8%	33.9%

Table 18 Indicators of oral health

Mental Health

Mental health is a key component of overall health and wellbeing (WHO 2021).[24]

The National Study of Mental Health and Wellbeing conducted in 2021 found that an estimated 1 in 5 (21.4 percent) Australians aged 16–85 experienced a mental disorder in the previous 12 months.[25]

The following table highlights that people living in the catchment have a significantly lower rate of inpatient admissions than the Victorian average.

This reflects the lack of local mental health inpatient accommodation. Local residents are generally required to travel to Bendigo or elsewhere for multiday mental health care.

The ERH and Bendigo Health teams are exploring how they can provide enhanced access to inpatient care locally and utilise shared care and telehealth models to support mental health patients to access overnight accommodation close to home.

Indicator	Campaspe	Victoria
Adult population doctor diagnosed anxiety or depression - VPHS 2017	30.3%	27.4%
Estimated number of people with high, or very high, levels of psychological distress (based on K10 score) (ASR per 100) - PHIDU 2017-2018	12.7	13.3
Estimated number of people with mental and behavioural problems ASR per 100 population - PHIDU 2017-2018	21.6	19.7
Estimated number of people with mood (affective) disorders ASR per 100 population - PHIDU 2014-2015	10	9.5
Emergency- total presentations for mental and behavioural disorders, ASR per 100,000 population - PHIDU 2018-2019	747.5	924.3
Admissions by principal diagnosis- mental health related conditions- all hospitals, ASR per 100,000 population - PHIDU 2018-2019	1	1
Admissions by principal diagnosis- mood affective disorders - all hospitals, ASR per 100,000 population - PHIDU 2018-2019	281.4	588.1
Admissions by principal diagnosis- intentional self-harm (females) - public hospitals, ASR per 100,000 females - PHIDU 2018-2019	81.3	120.2
Admissions by principal diagnosis- intentional self-harm (males) - public hospitals, ASR per 100,000 males - PHIDU 2018-2019	64.9	77
Deaths from suicide and self-inflicted injuries, persons aged 0-74 years (average annual ASR per 100,000) - PHIDU 2014-2018	9.7	10.1
Avoidable deaths from suicide and self-inflicted injuries, persons aged 0-74 years (average annual ASR per 100,000) - PHIDU 2014-2018	9.7	10.1
Accidental poisoning by and exposure to noxious substances standardised rate per 100,000 persons - VHISS 2012-2016	6.04	5.05
Suicide and self-inflicted injuries, standardised rate per 100,000 persons - VHISS 2012-2016	13.34	10.33

[24] World Health Organisation (WHO) 2021
[25] ABS 2022a

Indicator	Campaspe	Victoria
Adult population sought help for a mental health related problem - VPHS 2017	15.1%	17.6%

Table 19 Mental health Indicators

Alcohol and Other Drugs

Alcohol and other drug (AOD) treatment services assist people to address their drug use. Treatment objectives can include reduction or cessation of drug use as well as improvements to social and personal functioning. Assistance may also be provided to support the family and friends of people using drugs.[26]

Indicator	Campaspe	Victoria
Average rate of Alcohol and drug-related hospitalisations per 100,000– AOD Stats 2018-19	700	845.1
Average rate of Alcohol and drug-related ambulance attendances per 100,000 – AOD Stats 2020-21	639	730

Table 20 AOD Indicators

Mortality and Life Expectancy

Potentially avoidable deaths are deaths below the age of 75 from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care.

Life expectancy at birth indicates the average number of years that a new born baby could expect to live, assuming that the current age-specific death rates are experienced throughout his/her life. These data are based on the AIHW analysis of life expectancy estimates as provided by the Australian Bureau of Statistics (ABS).

The following table highlights that people living in the catchment have lower rate of life expectancy and a high potentially avoidable death rate than the Victorian and national average.

Indicator	Campaspe	VIC*/AUS
Median age at death (years) males - AIHW 2019	79	78
Median age at death (years) females - AIHW 2019	85	84
Life expectancy (years) at birth- males - VHISS 2013-2017	79.96	81.9*
Life expectancy (years) at birth- females - VHISS 2013-2017	83.72	85.55*
Total deaths age-standardised rate per 100,000 population - AIHW 2019	561.8	528.2
Premature deaths (aged under 75) age-standardised rate (per 100,000 population) - AIHW 2019	223.3	209.2
Potentially avoidable deaths (aged under 75) age-standardised rate (per 100,000 population) - AIHW 2019	111.8	103.1

Table 21 Indicators of life expectancy and Mortality

[26] https://www.aihw.gov.au/reports-data/health-welfare-services/alcohol-other-drug-treatment-services/overview

The top five causes of mortality in the Murray PHN region in 2013-2017 were:

- Coronary heart disease (12.3 percent);
- Dementia and Alzheimer's disease (7.1 percent);
- Cerebrovascular disease (6.5 percent);
- Chronic obstructive pulmonary disease (5.5 percent); and
- Lung cancer (5.1 percent).

This is aligned with the overall inner regional causes of death in Australia, as demonstrated in figure 10 below.

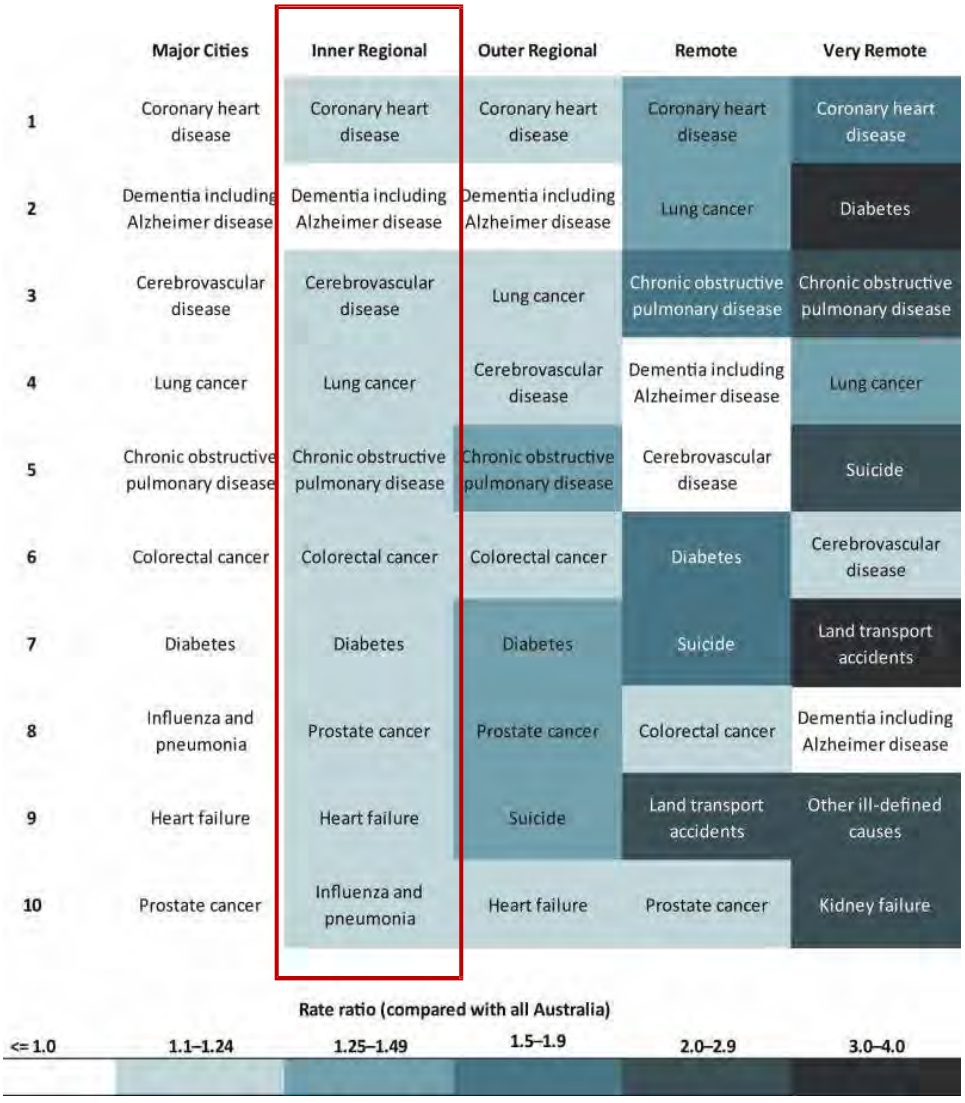


Figure 10 Leading cause of death by remoteness area, with comparison mortality rates with Australia overall 2016-20

11. Analysis of Current Situation – ERH Catchment

Analysis of Current Situation

The following analysis of the current situation:

- Explores the health services that are available within the catchment
- Explores the health service activity within the catchment
- Identifies the area patient flows
- Identifies the area self-sufficiency and service sustainability

Catchment Health Services Snapshot

Acute and Sub-acute Services

ERH forms part of the Loddon Mallee Health Network, an entity that aims to shape health care in the region and to provide services that health professionals want to work in and that communities are proud of.[27]

ERH provides a comprehensive range of emergency, medical, surgical and sub-acute services, as well as residential aged care and a broad range of community healthcare services.

ERH works collaboratively with small rural health services, including Cohuna District Hospital, Kyabram District Health Service, and Rochester and Elmore District Health Service.

The nearest tertiary health service is Bendigo Health, located approximately 90km away.

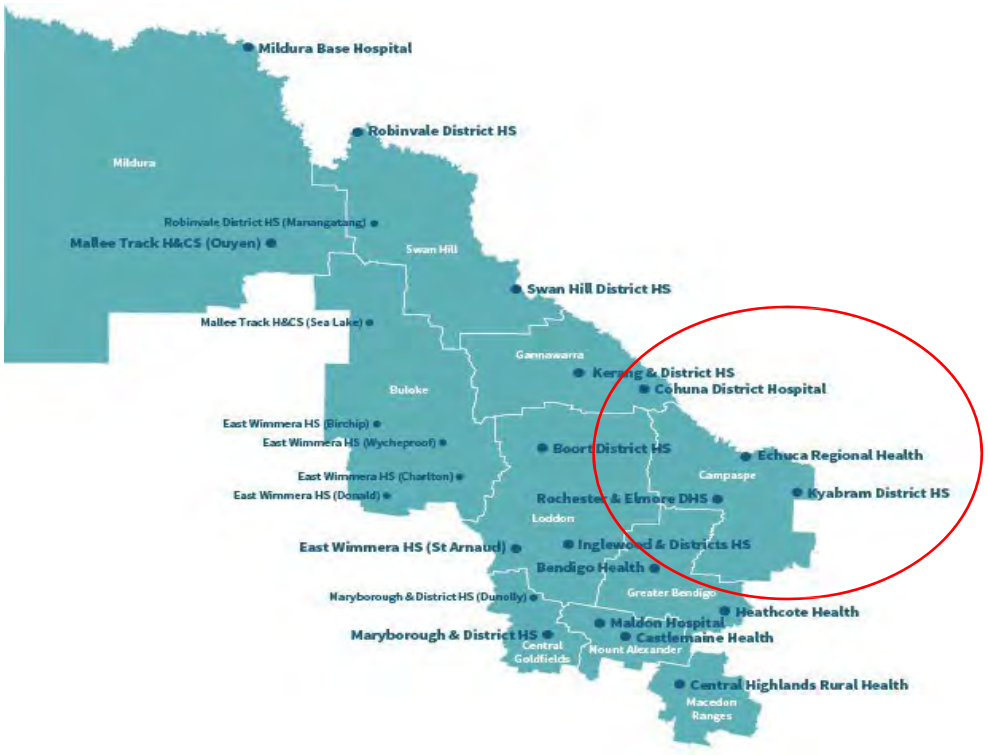


Figure 11 Loddon Mallee Health Services

[27] Loddon Mallee Health Network Regional Plan 2020+

General Practice, Primary and Community Health Services

In 2019, a Murray PHN community consultation identified access to general practice as one of the main primary health concerns across the Loddon Mallee region, including Campaspe Shire.

According to AIHW, access barriers to GPs and other specialists are more likely to be reported by people in regional areas compared with major cities.

The following table highlights that the catchment is relatively well supported by GPs, nurses and midwives. The ERH catchment is, however, very under represented with other specialist practitioners and dentists.

Stakeholder consultation also highlighted a significant under provision in most allied health professions.

In reflection of this, ERH has developed and successfully implemented innovative workforce models that include the broad utilisation of rural generalists, staff specialists, and innovative telemedicine programs in sub-specialty areas such as stroke unit care and high dependency.

ERH is expanding the role of nurse practitioners and allied health professionals.

Indicator	Campaspe
General medical practitioners per 100,000 people	97.6
Specialist practitioners per 100,000 people	158.3
Registered nurses per 100,000 people	1047.2
Enrolled nurses per 100,000 people	465.4
Midwives per 100,000 people	52.9
Dentists per 100,000 people	25.6

Table 22 Health Workforce Indicators National Health Workforce dataset (NHWDS) 2021

Ambulatory Care Sensitive Conditions

The following table reflects a higher than state admission rate for ambulatory care sensitive conditions (ACSCs) that could potentially be managed more effectively in the community.

It also suggests that people within the catchment are twice as likely to present to the ED for non-urgent conditions than the Victorian average.

In 2016, the then Department of Health and Human Services (DHHS) stated that:

- An ACSC is thought to be avoidable with the application of public health interventions and early disease management, usually delivered in ambulatory settings such as primary care;
- High rates of hospital admissions for ACSCs can reflect a problem with patient access to primary healthcare, inadequate skills and resources, or disconnection with specialist services

Indicator	Campaspe	VIC
Total ambulatory care sensitive conditions- hospital admissions standardised rate per 1,000 persons - VHISS 2020-21	35.73	27.48
Chronic ambulatory care sensitive conditions- hospital admissions standardised rate per 1,000 persons - VHISS 2020-21	22.23	13.9

Acute ambulatory care sensitive conditions- hospital admissions standardised rate per 1,000 persons - VHISS 2020-21	13.16	11.54
Vaccine-preventable ambulatory care sensitive conditions- hospital admissions standardised rate per 1,000 persons - VHISS 2020-21	0.44	2.27
Emergency department total presentations ASR per 100,000 population - PHIDU 2018-2019	22	26
Emergency department presentations (non-urgent) ASR per 100,000 population - PHIDU 2018-2019	2	1

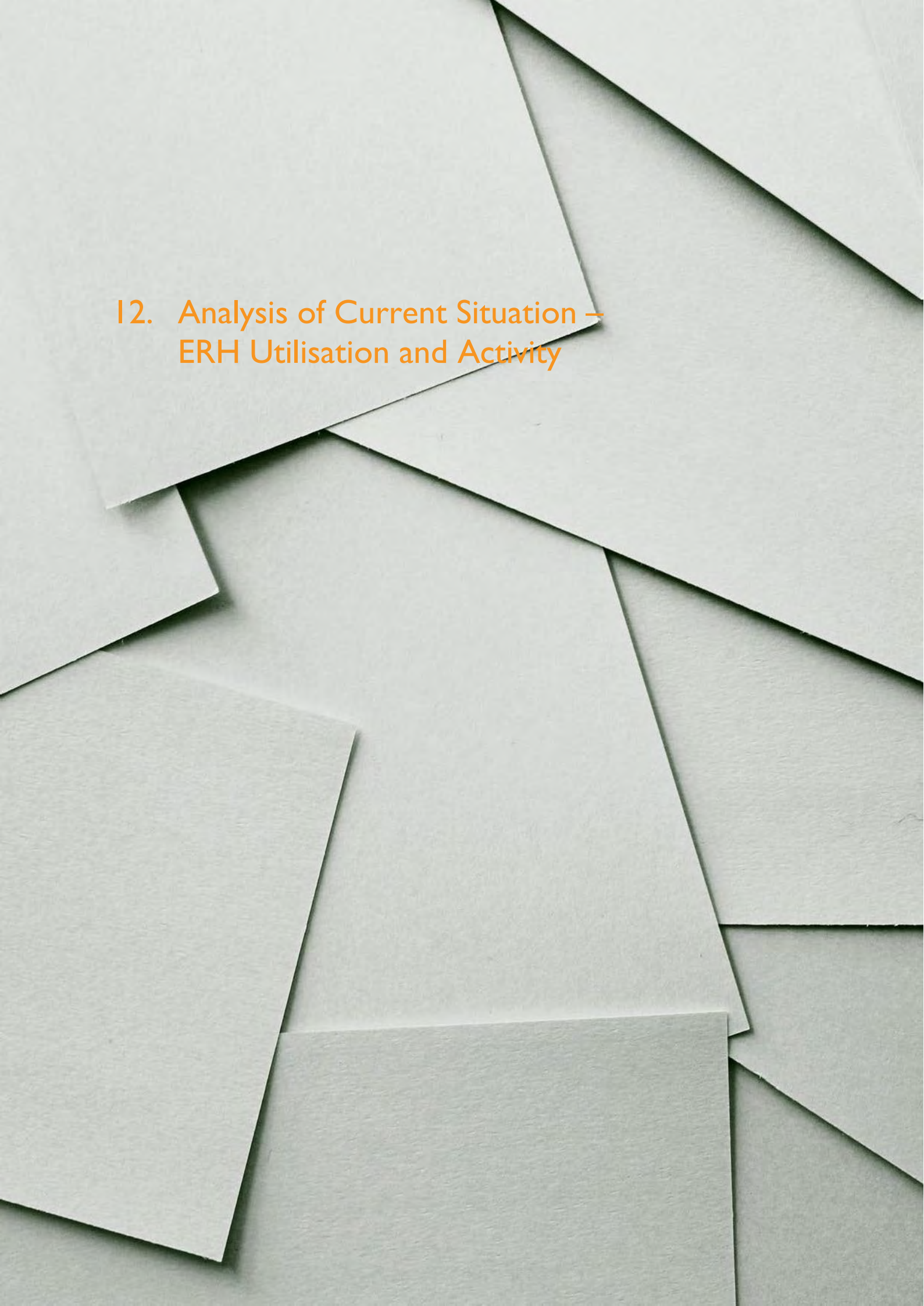
Table 23 ACSC Indicators

Analysis of annual data shows that in 2020-21, the diagnosis of iron deficiency anaemia had the largest number of admissions (472) with an average length of stay of just over one day (1.05 days).

Patients with a diagnosis of Congestive Cardiac Failure (189 patients) utilised the largest number of bed days (1,116), with an average length of stay of 5.9 days.

All individual ACSCs for 2020/21	Number of Admissions	Standardised Rate per 1,000 Persons	Average Bed days	Total Bed Days
Iron deficiency anaemia	472	10.54	1.05	497
Cellulitis	164	3.64	4.87	798
Dental conditions	123	3.52	1.23	151
Congestive cardiac failure	189	3.17	5.90	1116
Diabetes complications	113	2.58	5.46	617
Chronic obstructive pulmonary disease (COPD)	143	2.50	4.41	630
Urinary tract infections, including pyelonephritis	108	2.26	3.78	408
Convulsions and epilepsy	58	1.60	2.22	129
Angina	75	1.44	1.95	146
Asthma	34	0.93	1.82	62
Ear, nose and throat infections	32	0.91	2.06	66
Hypertension	45	0.76	3.40	153
Gangrene	34	0.70	15.00	510
Other vaccine-preventable conditions	17	0.37	4.47	76
Perforated/bleeding ulcer	17	0.34	5.88	100
Bronchiectasis	9	0.23	6.78	61

Table 24 Individual ACSC Admissions 2020-21



12. Analysis of Current Situation – ERH Utilisation and Activity

12.1 Historical and Current Activity

This section provides a snapshot of service utilisation over five years, from 2016-2021, including emergency presentations and acute and sub-acute admissions to ERH.

ERH Activity	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR
Acute separations	9,793	10,428	11,347	11,919	12,300	4.66%
Emergency presentations	20,689	21,121	22,829	22,961	23,664	3.81%

Table 25 ERH Acute and Emergency Activity (Source VAEN, VEMD)

ERH Activity	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR
Sub-acute separations	310	333	356	449	497	9.88%

Table 26 ERH Subacute separations (Source VEMO VAED)

12.1.1 Emergency Department

ERH provides a 24-hour Level 4 urgent, emergency and trauma care service[28] to residents and visitors to the ERH catchment, including NSW.

The Emergency Department (ED) receives, assesses, stabilises and manages patients who present with a wide variety of conditions of varying urgency and complexity[29].

The ERH staffing profile includes specialist emergency physicians, rural generalists, and skilled nursing and allied health staff. Patients requiring higher complexity specialist care are referred to an appropriate higher-level service as required.

Patient care is streamed for specific cohorts such as rapid assessment and short stay and has models of care for managing patients with special needs, including high and complex needs. Patients can be discharged directly from the ED or admitted for short stay unit or inpatient care.

The ED team partners with local primary care providers to manage care in the community with a focus on safe, comprehensive, and quality discharge and alternative primary care/medical and mental health care in the community.

The Bendigo Health Echuca Community Mental Health team provide an enhanced crisis assessment team (ECAT) mental health nurse for in-hours mental health assessment.

[28] https://www.health.vic.gov.au/sites/default/files/migrated/files/collections/policies-and-guidelines/u/urgent-emergency-trauma-care- services-capability-framework-implementation-version.pdf
[29] Australasian Health Infrastructure Alliance. Australasian Health Facility Guidelines: Version 2. AHIA; 2007. www.healthfacilityguidelines.com.au/

Service Profile

The current ED encompasses both cubicles and a Short Stay Unit (SSU). The ED capacity includes:

Emergency Department	POC	POC Open	
Cubicles – adult / acute	10	6	Includes 1 negative pressure room
Cubicles – paediatric	2	2	
Behavioural Assessment Room	1	1	
Cubicles – chairs / fast track	2	2	
Resuscitation bays	2	2	
Short Stay Unit	6	5	
Total Emergency Points of Care	**23**	**18**	

Table 27 ED Profile

Model of Care

Patients who present to the ED are triaged according to the predetermined triage criteria and moved to the required care stream such as resuscitation, acute, or rapid assessment.

If observation is required for under 24 hours the patient will be admitted to the SSU.

If a patient requires inpatient care, they will be admitted to an inpatient bed or they will be referred to a higher-level service and transferred once stabilised. Patients requiring hospital admission generally remain in the ED until reviewed and admitted by the inpatient service.

Treatment is provided by a specialist emergency medicine team and supported by key specialist services (general medicine; general surgery; obstetrics; anaesthetics; paediatrics; and mental health).

Clinical care is supported by medical imaging and pathology departments operating 24-hours (including on- call).

An acute stroke assessment pathway is in place to ensure rapid investigation and treatment, with specialist stroke neurologist input via the Victorian Stroke Telemedicine (VST) program.

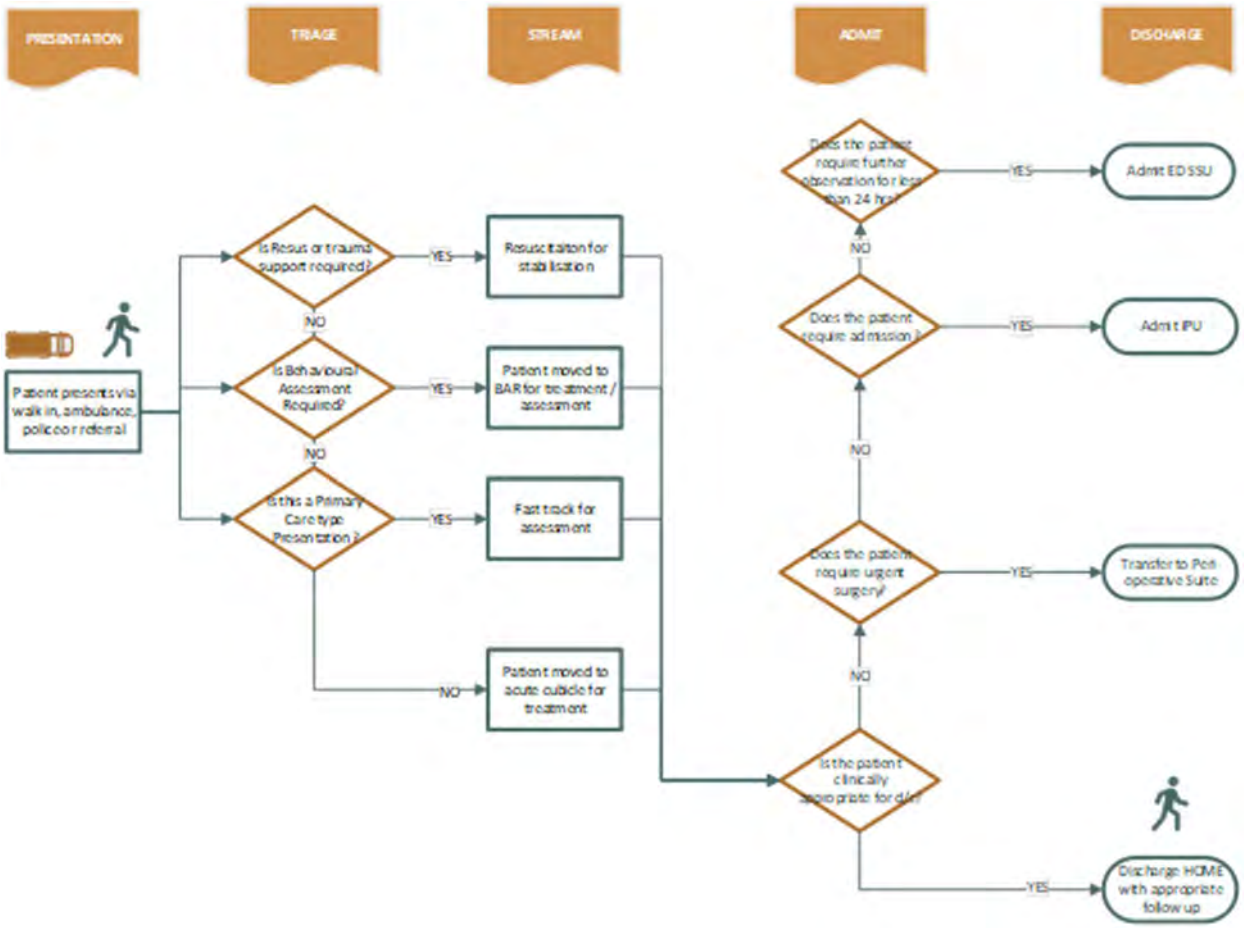


Figure 12 ED Patient Journey

Presentations

Over the 5-year period from 2016-17 to 2020-21, ED presentations across Victoria grew by an average of 2.63 percent per annum.

The ERH ED has experienced similar growth of 3.81 percent in total presentation activity over the same 5 years (20,689 presentations in 2016-17 to 23,507 presentations in 2020-21).

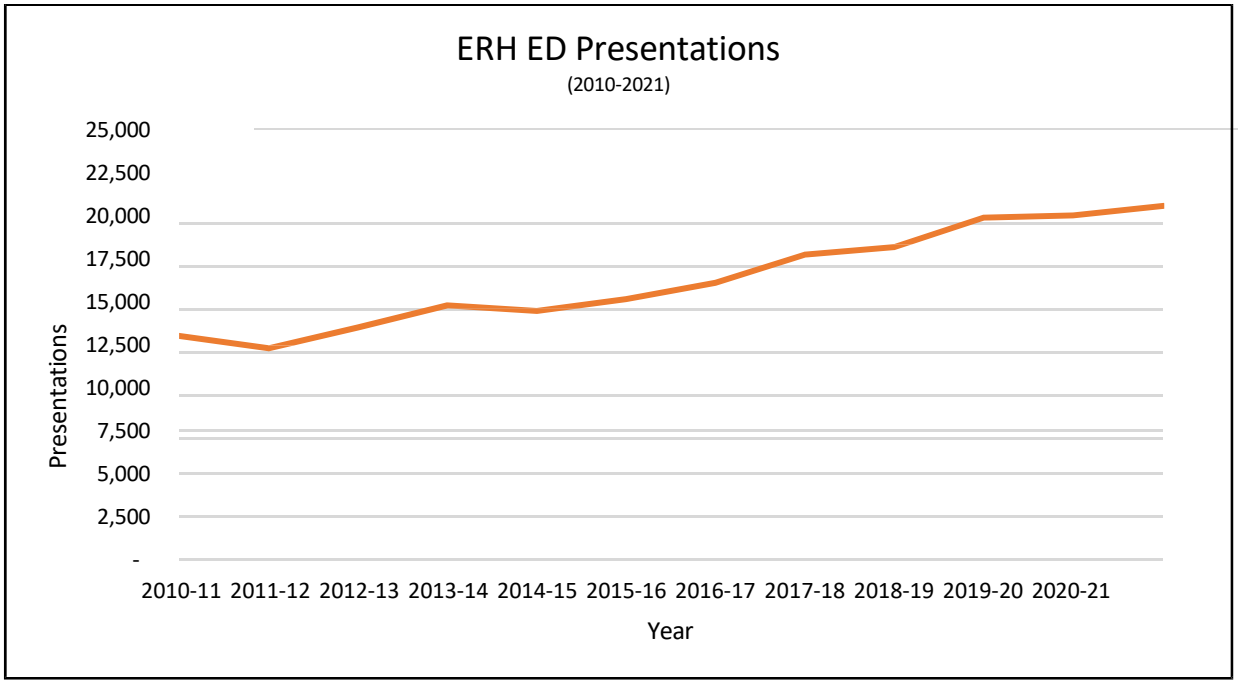


Figure 13 ED Presentations by Year

Age Profile

ED Presentations	2020-21	% Of Total
0-4 years	2,039	8.61%
5-14 years	2,168	9.16%
15–65 years	13,459	56.88%
> 65 years	5,999	26.58%
Total Presentations (excl COVID Clinic)	23,664	

Table 28 ERH ED Presentations by Age Groups

- Children form a significant proportion of presentations to the ERH ED
- In 2020-21, children aged 0-14 years made up 17.7 percent (4,206) of the presentations, of these, 48.5 percent (2,039) of the presentations were children aged 0-4 year
- People aged over 65 years accounted for 26.6 percent (5,999) of the total presentations to the ERH ED, of these 19.9 percent (1,192) were aged over 85 years.

Demographic Profile

On average, 81.1 percent of presentations are Victorians, followed by 18 percent from NSW and a further 1.0 percent from the other states.

State	2016-17	2017-18	2018-19	2019-20	2020-21
Victoria	81.0%	80.1%	81.0%	82.1%	82.4%
NSW	17.9%	18.9%	18.0%	17.1%	16.9%
Queensland	0.4%	0.4%	0.4%	0.3%	0.5%
South Australia	0.2%	0.2%	0.1%	0.1%	0.1%
Western Australia	0.2%	0.1%	0.2%	0.1%	0.1%
Tasmania	0.1%	0.1%	0.1%	0.1%	0.0%
Northern Territory	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	0.1%	0.0%	0.1%	0.1%	0.0%
Other	0.1%	0.1%	0.1%	0.1%	0.0%

Table 29 ERH ED Presentations by State (source ERH)

Peak Periods of Demand / Seasonal Fluctuations

ED presentations peak during the summer months (December/January) and Easter (March/April), with seasonal fluctuations relating to holiday makers visiting the region at these times.

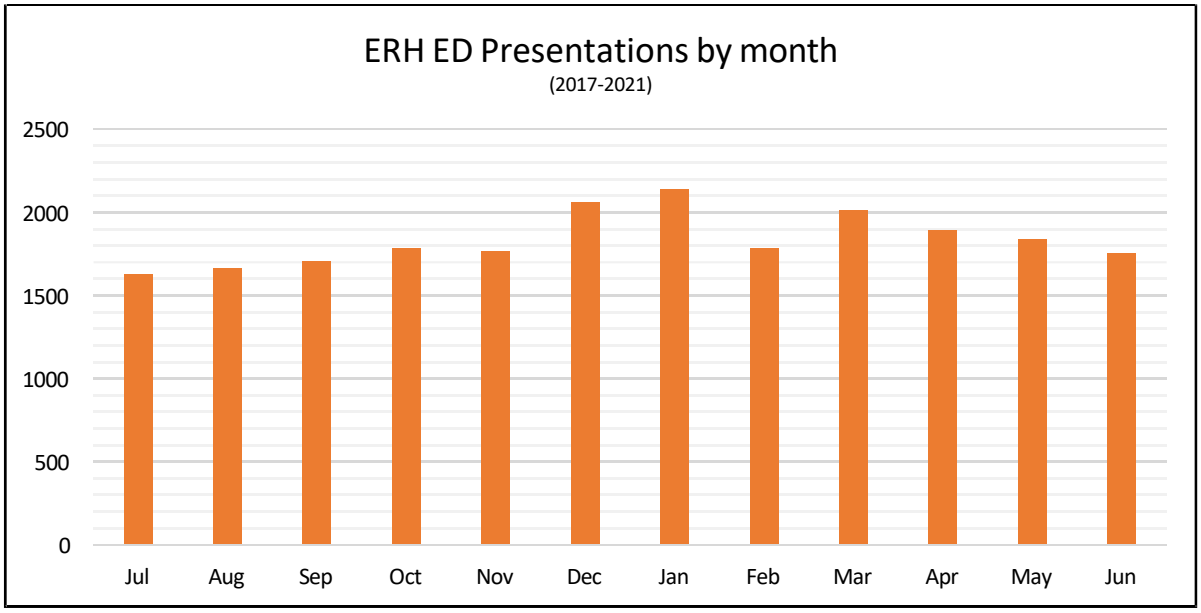


Figure 14 ED presentations by month. Source ERH

Utilisation by Triage Category

The Australasian Triage Scale (ATS) utilises five categories from Category 1, an immediately life-threatening condition that requires immediate simultaneous assessment and treatment, to Category 5, a chronic or minor condition which can be assessed and treated within two hours.

Australasian Triage Scale Category	Treatment Acuity (maximum waiting time for medical assessment and treatment)
Category 1	Immediate
Category 2	10 minutes
Category 3	30 minutes
Category 4	60 minutes
Category 5	120 minutes

Table 30 ATS - Treatment acuity wait times

Between 2016-17 and 2020-21:

- Triage Category 4 (semi-urgent) made up the highest percentage of presentations (45.2 percent), followed by Category 3 (urgent) (27.6 percent);
- Category 1 and 2 accounted for approximately 9.4 percent of all presentations;
- The highest rates of annual increase were in Category 2 (10.5 percent per annum) and Category 3 (5.9 percent per annum);
- Category 4 presentations have grown slightly (5 percent) and together with Category 5 (non-urgent) presentations have accounted for 61.4 percent of the total presentations.

Triage Category	2016-17	2017-18	2018-19	2019-20	2020-21	Raw change	Total Change %	Annual change
Triage 1 - Resuscitation	26	33	29	33	30	4	15%	2.9%
Triage 2 - Emergency	1,372	1,826	1,857	1,996	2,256	884	64%	10.5%
Triage 3 - Urgent	5,147	5,770	6,406	6,551	6,846	1,699	33%	5.9%
Triage 1-3 % of Total	**32%**	**36%**	**36%**	**37%**	**39%**			
Triage 4 - Semi-urgent	9,368	9,666	10,823	10,560	9,850	482	5%	1.0%
Triage 5 - Non-urgent	4,774	3,825	3,714	3,819	4,677	97	-2%	-0.4%
Triage 4-5 % of Total	**68%**	**64%**	**64%**	**63%**	**61%**			
Total	20,687	21,121	22,829	22,961	23,659	2,972	14%	**2.7%**

Table 31 ERH Presentations by Triage Category

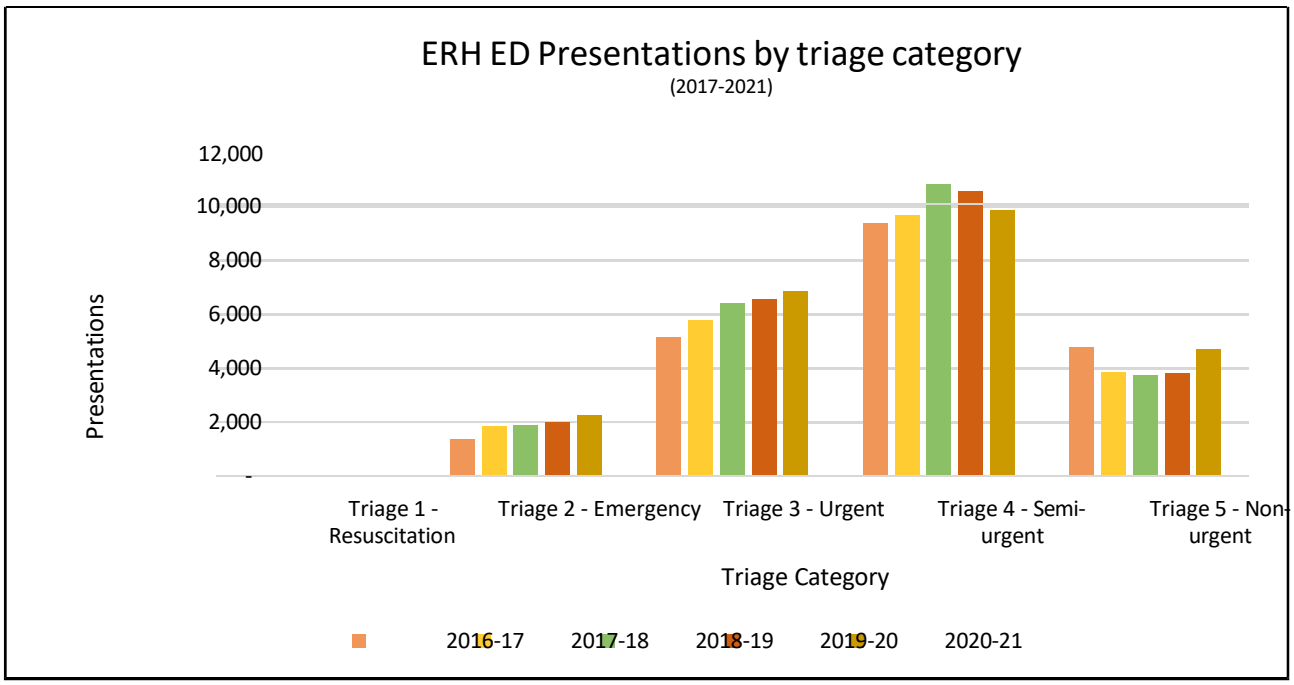


Figure 15 ERH Presentations by year and triage category

As highlighted in the following table, in 2019-20 the catchment had:

- A higher than state average for Category 4 and 5 presentations; and
- A lower than state average of Category 1, 2, and 3 presentations.

	ERH		Victoria	
Triage Category	Count	Proportion	Count	Proportion
Triage 1 - Resuscitation	33	0.14%	11,279	0.60%
Triage 2 - Emergency	1,996	8.69%	245,988	13.13%
Triage 3 - Urgent	6,551	28.53%	741,532	39.57%
Triage 4 - Non-urgent	10,560	45.99%	738,103	39.39%
Triage 5 - Semi-urgent	3,819	16.63%	136,792	7.30%

Table 32 ED presentations by triage category, ERH and Vic 2019-20

Primary Care Type Presentations

Many people present to the ED for health conditions that can be managed more appropriately and effectively in a different health care setting, such as through their GP or other primary care provider.

The Better Faster Emergency Care[30] policy defines a primary care type as triage Categories 4 and 5, not referred by a GP and not arriving by ambulance, who were not admitted and had a total stay in the emergency department of less than 12 hours.

The 2019-20, VEMD data shows that almost one in two ED presentations (44 percent, 10,205) of the total presentations to ED at ERH were classified as lower urgency. Close to a half (41 percent, 4,188) of these were aged under 25 years. Children under 15 years represented 30 percent (3,099) of all lower urgency presentations. Conversely, people aged 65 years and over accounted for 15 percent of lower urgency ED presentations.

Just under half (44 percent, 4,495) of all lower urgency ED presentations occurred during a period when general practices and other primary care providers are usually closed.[31] People aged under 65 were more likely to present to ED after-hours (45 percent of presentations for this age group) than people aged 65 and over (38 percent of presentations for this age group).

It is recognised that some people with primary care type health needs are most appropriately cared for in the ED, however, timely access to GPs in the community is critical to ensure the health system can respond more appropriately to people who need care for short term illness or injury.

Aboriginal Profile

Aboriginal people from the ERH catchment present to the ED at a higher rate than non-indigenous people. As previously documented, Aboriginal people make up 3.4 percent of the catchment population.

Data indicates that Aboriginal and Torres Strait Islander people are more likely to leave the ED without treatment. ERH is actively monitoring this and is developing and implementing strategies to better support Aboriginal and Torres Strait Islander people who present to the ED.

	Aboriginal population	Total population	Aboriginal population as proportion of total population	Aboriginal ED presentations as proportion of total presentations
ERH Catchment	2085	62,224	3.35%	6.99%

Table 33 ED attendances by Indigenous status 2020-21

ERH ED presentations	ED presentations	Left without treatment	%
Aboriginal ED presentations	1,604	109	6.80%
All ED presentations	22,961	787	3.43%

Table 34 Left without treatment by Indigenous status 2020-21

[30] https://www.health.vic.gov.au/publications/better-faster-emergency-care-improving-emergency-care-and-access-in-victorias-public

[31] **In-hours** includes weekdays from 8am to 8pm and Saturdays from 8am to 1pm (excluding public holidays). **After-hours** includes Sundays, public holidays, weekdays before 8am and from 8pm, and Saturdays before 8am and after 1pm.

Utilisation by Arrival Category

Data from the Victorian Emergency Minimum Dataset (VEMD) records how a patient arrives at the ED. Over the five years from 2016-17 to 2020-21:

- Arrivals by road ambulance accounted for 14.8 percent of arrivals;
- Patients self-presenting represented the highest arrival mode at 85.5 percent of arrivals; and
- Less than 1 percent (0.45 percent) arrived by police vehicle.

Arrival mode	2016-17	2017-18	2018-19	2019-20	2020-21
Ambulance - Private hospital	7	12	26	4	0
Ambulance – Ambulance Victoria	2	9	3	0	0
Community/public transport	127	45	26	26	0
Other (incl. car, other private transport)	17792	17955	19305	20294	19581
Police vehicle	105	114	104	103	78
Road Ambulance Service	2656	2989	3370	3490	4000

Table 35 ED Arrival Category

Utilisation by Departure Category

Most patients are discharged home from the ED (74.5 percent) or left at own risk without treatment (5.8 percent).

In the five years from 2017 to 2021, 17.8 percent of patients were admitted to an inpatient unit and 2.2 percent of presentations to ERH were transferred to another hospital for care.

This trend remained consistent across this time period.

Discharge destination	2016-17	2017-18	2018-19	2019-20	2020-21	%
Admitted as inpatient to ERH	3285	4213	4721	4028	3746	17.8%
Transferred to another hospital	389	504	587	532	496	2.2%
Attended and discharged from ED	15768	15019	15927	18126	18352	74.2%
Died within ED	5	9	8	6	7	0.0%
Left at own risk, with or without treatment	1242	1379	1591	1225	1018	5.8%

Table 36 ED Departure Category

Length of stay

The Victorian Health Services Performance monitoring framework[32] specifies targets for the percentage of emergency patients with a length of stay in the ED of less than four hours. Over the five years prior to 2022, it can be seen that performance against recommended ED length of stay was below target for the last three years of that period.

[32] https://www.health.vic.gov.au/funding-performance-accountability/performance-monitoring-framework

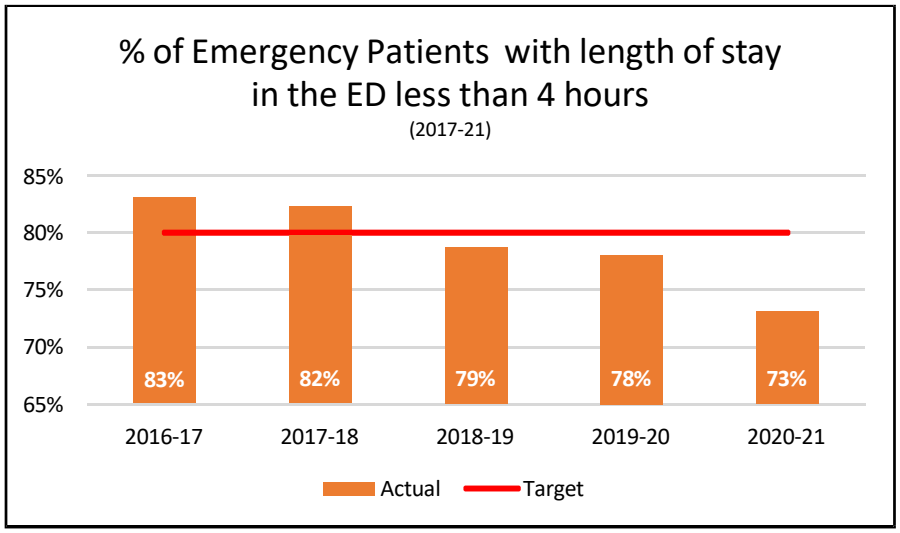


Figure 16 ED Length of stay Indicator - All

Non-Admitted ED Presentations

The number of non-admitted patients leaving the ED within the recommended four hours has remained above the 80 percent target for the five years to 2020-21, excepting 2019-20.

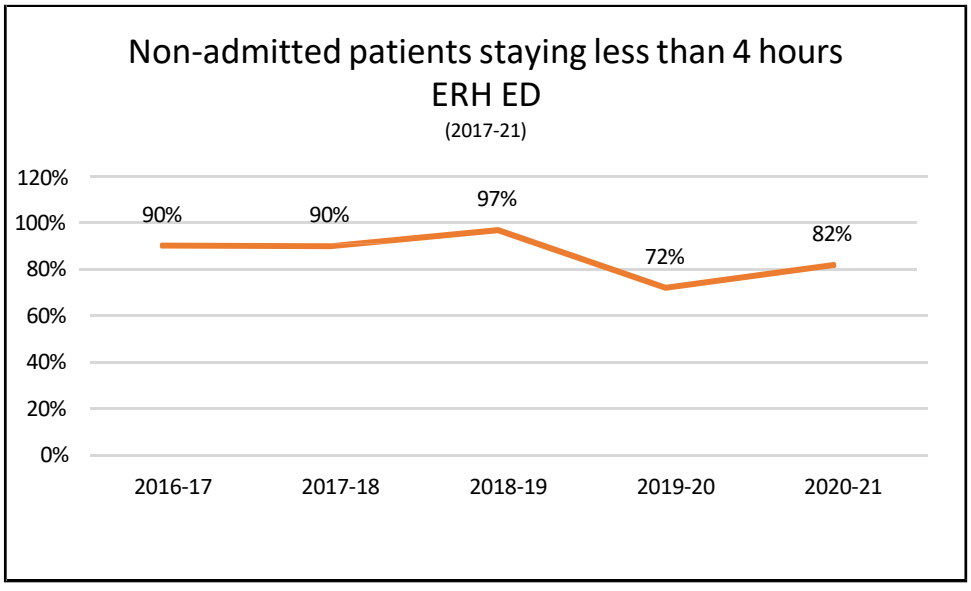


Figure 17 ED Length of Stay Indicators

Waiting Times to Treatment

Over the period from April 2021 to June 2022, it can be seen that performance against clinically recommended ED treatment times was below target. However, at 62.3 percent, it exceeds the Victorian average of 58.97%.

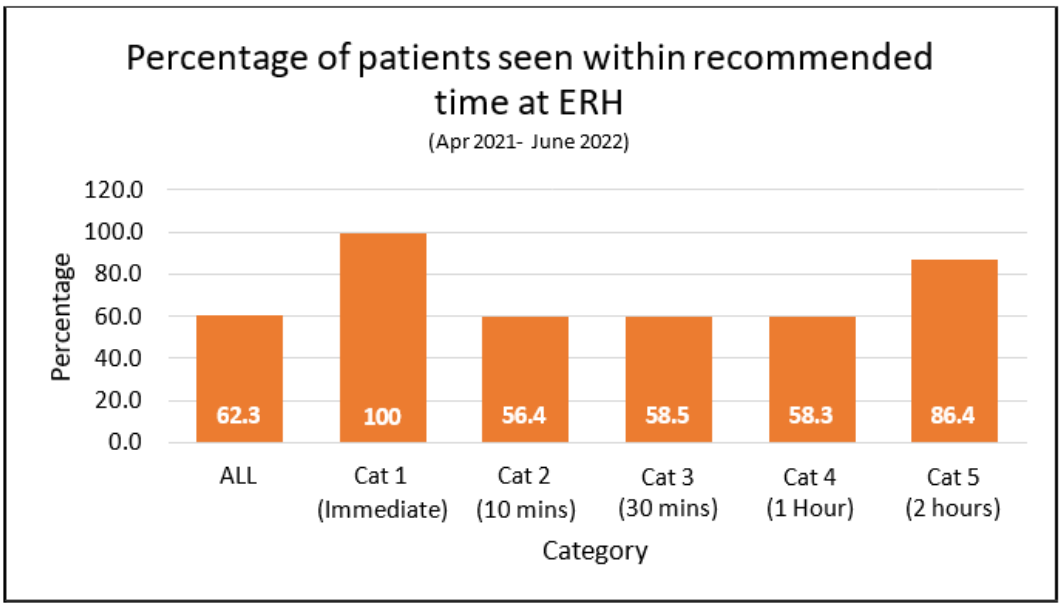


Figure 18 ED seen within recommended times

- No 24-hour breaches were identified during the reporting period.

Ambulance Offload

The percentage of patients transferring from ambulance to the ED within 40 minutes has decreased from 91.4 percent in June 2020 to 86.3 percent in June 2022.

The median transfer time from ambulance to ED in minutes was 16 minutes.

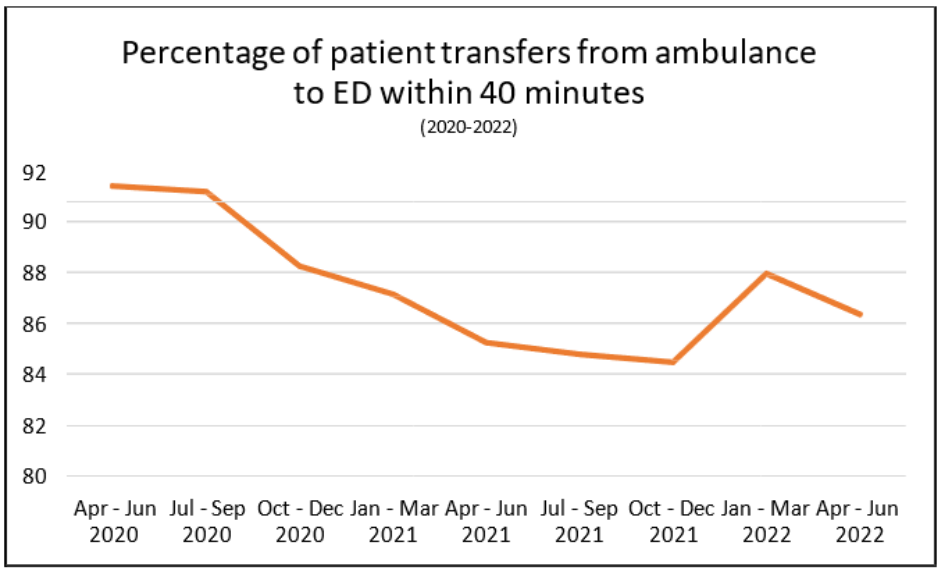


Figure 19 ED Ambulance Offload

ED Key Challenges

Key challenges identified during the consultation included:

Workforce

- Recruitment and retention of an appropriately skilled health workforce is an ongoing challenge, reflective of a global shortage of health professionals, and the rural location

Short Stay Unit

- Limited capacity within the SSU affects ED streaming and flow.

Escalation Calls

- ED team members are a key component of clinical escalation calls throughout the health service. This takes senior clinicians away from the ED, which has an impact on patient flow.

Low Urgency ED Presentations

- Lower urgency ED[33] presentations are amongst the highest in the state. Patients are presenting to the ED for care that could often be undertaken in other care settings such as general practice. ED presentations that are lower acuity are sometimes used as a proxy measure of access to primary health care. Higher presentation rates may suggest a lack of access to GPs or other primary health services due to availability and/or cost.

[33] Lower urgency ED presentations are defined as presentations at formal public hospital EDs where the person:

- *Had a type of visit to the ED of Emergency presentation;*
- *Was assessed as needing semi-urgent (triage Category 4: should be seen within 1 hour) or non-urgent care (Category 5: should be seen within 2 hours);*
- *Did not arrive by ambulance, or police or correctional vehicle;*
- *Was not admitted to the hospital, was not referred to another hospital, and did not die.*

IT Systems

- ERH does not yet have a comprehensive electronic medical record (EMR), although funding for a regional EMR solution has been announced;
- A number of electronic systems are used for various functions (e.g., viewing medical imaging and pathology; creation and transmission of discharge summaries), however, they lack integration.

Medical Imaging

- Lack of availability of formal ultrasound (undertaken by an ultrasonographer and reported by a radiologist) after-hours;
- Limited footprint for CT scanner to be located within the ED.

ED Key Opportunities

1. Streaming or Rapid Assessment has been implemented at ERH. To support the effectiveness of this strategy, there is a requirement for appropriate staffing (e.g., a GP or nurse practitioner) and physical space to meet the patient demand of each stream

2. Dedicated paediatric areas are required to ensure quality and safe care in appropriate spaces. Given the high demand for paediatric care in the ED, a dedicated area for paediatric patients may result in shorter time to treatment and decreased length of stay within the department.

3. Greater utilisation of nurse practitioners working to their full scope of clinical practice.

4. Primary care co-located within the ED, given the large number of patients presenting with primary care type presentations, may be beneficial and efficient. The availability of rotations of GPs through the ED would aid communication and relationships with primary care and assist with directing care back into the community. There is some evidence to suggest that GPs are less likely to order tests, with fewer admissions, whilst patient satisfaction is increased.[34]

5. Optimising the use of SSU beds for admissions of less than 24 hours allows for timely access to diagnostics, specialist advice, observation, and reassessment to inform rapid decision making and treatment.

6. Aboriginal cultural safety is a priority for ERH. A reduction in the number of Aboriginal patients leaving the ED before being seen would be one measure of success.

7. Telehealth has long been advocated for improving the quality and efficiency of health service delivery, especially in regional, rural, and remote settings. There are opportunities for the ERH ED to play a greater role in supporting small rural health service Urgent Care Centres (UCCs) through telehealth.

8. Artificial Intelligence (AI). AI will revolutionise many aspects of health care in the foreseeable future. There are opportunities to consider the application of AI in support of clinician interpretation of some types of X-ray imaging (for example) in the next 12 months.

[34] Bosmans JE, Boeke AJ, van Randwijck-Jacobze ME, et al. Addition of a general practitioner to the accident and emergency department: a cost-effective innovation in emergency care. *Emerg Med J.* 2012;29:192–6.

12.1.2 Inpatient Services

ERH provides acute inpatient services including general medicine, surgery, maternity/paediatrics and high dependency care

Activity within most clinical streams is forecast to grow over coming years, reflecting population growth and ageing. However, some clinical areas have demonstrated low growth over recent years, and this may reflect difficulty in resourcing services beyond these levels rather than actual demand (for example, dental care).

Service Profile

Acute Services	POC avail	POC open	Comments
Surgical Ward	30	18	2 rooms used for HITH review clinic, and wound clinic 3 swing beds with Maternity
Medical Ward	24	23	
High Dependency Unit	6	3	
Maternity Ward	8	8	
Total Acute Points of Care	68	52	

Table 37 Current Acute Points of Care

Acute Separations

This section considers acute care service delivery across ERH. It summarises historical trends in aggregate in respect to service utilisation/acute hospital admissions.

ERH had a 4.66 percent per annum increase in acute separations over the period 2015-20.

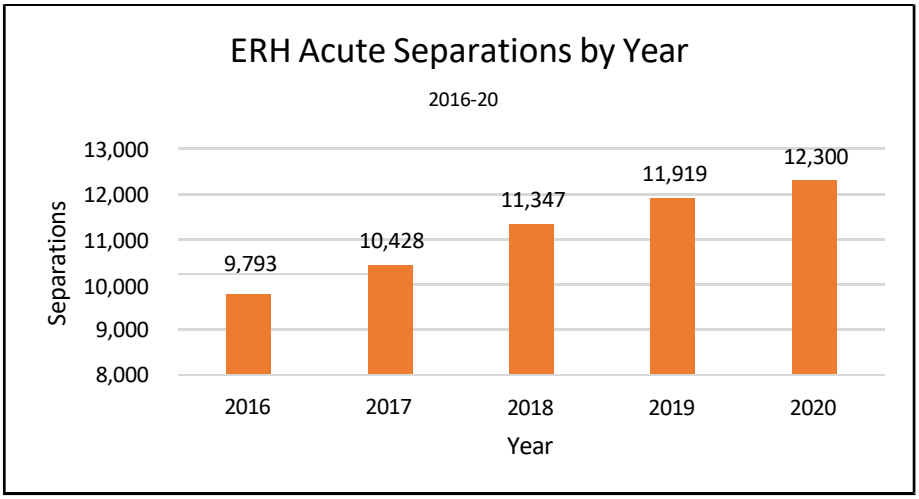


Figure 20 Acute Separations by Year 2015-16 to 2019-20 (Source VAHI)

Acute Separations – Admission Types

There has been a 4.66 percent per annum (overall 25 percent) increase in the number of admissions to ERH in the period from 2016 to 2020.

- The largest source of admissions was for planned admissions (62.2 percent), the majority of which were same day separations (88.6 percent);
- Emergency admissions were the next in volume, at 33.4 percent;
- Maternity admissions accounted for 4.1 percent of admissions;
- Newborn and statistical admissions accounted for less than 1 percent of admissions.

The majority of the increase in admissions occurred from ED, which increased by 69 percent (2,641 to 4,462 admissions) over the same period.

ERH activity	2015-16	2016-17	2017-18	2018-19	2019-20	% - 5 year
Admission from ED	2,641	3,055	4,010	4,485	4,462	33.4%
Planned admission	6,650	6,968	6,822	6,938	7,322	62.2%
Newborn admission	9	5	3	14	3	0.1%
Maternity admission	471	387	495	457	485	4.1%
Statistical admission	22	13	17	25	29	0.2%
Acute separations	**9,793**	**10,428**	**11,347**	**11,919**	**12,300**	

Table 38 Acute separations by admission type

Length of Stay

The average length of stay for all acute multiday patients at ERH in 2020 was 4.1 days.

Elective multiday medical patients stayed an average of 9.8 days, whilst emergency multiday medical patients stayed an average of 11 days.

Emergency surgical patients stayed longer (7.3 days) than elective surgical patients (4.9 days).

Program description	Length of stay (days)				
	2015-16	2016-17	2017-18	2018-19	2019-20
Emergency multiday medical	11.22	10.83	10.59	10.83	10.97
Emergency multiday surgical	8.60	7.25	7.15	7.56	7.27
Elective multiday medical	9.34	8.90	8.52	8.27	9.85
Elective multiday surgical	9.46	8.27	6.01	5.06	4.94
All medical/surgical	**9.86**	**8.99**	**8.52**	**8.67**	**8.77**

Table 39 Length of stay by admission type

Occupancy

There are currently 44 open adult medical/ surgical /HDU beds across ERH. As discussed previously, ERH has non-utilised beds available.

Occupancy for acute adult multiday beds has increased to above the recommended 85 percent occupancy rate that allows for optimal patient flow through the hospital.

Program description	Occupancy				
	2015-16	2016-17	2017-18	2018-19	2019-20
Available beds	60	60	60	60	60
Open beds	41	41	41	41	41
All medical / surgical (open beds)	**79%**	**81%**	**81%**	**90%**	**94%**
All medical / surgical (available beds)	**54%**	**55%**	**56%**	**61%**	**65%**

Table 40 Occupancy by available and open beds

Acute Separations – Private and Public Insured Trends

Trends in private insured patients has seen a gradual decrease in the number of clients utilising private health insurance by a rate of 5.22 percent per annum.

The largest decrease has been in the number of Department of Veteran's Affairs (DVA) patients utilising the service, which has decreased by just over 12 percent, which is comparative with state/national trends.

Account type - Acute	2016-17	2017-18	2018-19	2019-20	2020-21	Annual change
Public	8,020	9,070	9,787	9,236	9,051	2.45%
Private	2160	2041	1919	1763	1652	-5.22%
DVA	192	160	130	99	100	-12.23%
Compensable	54	74	81	59	48	-2.33%
Ineligible	1	0	1	0	0	N/A

Table 41 Public and Private Insurance Trends (ERH data)

Acute Separations – Discharge Destination

Separation Mode - Acute	2016-21
Death	0.88%
Left against medical advice	0.43%
Mental health residential facility	0.00%
Other acute hospital / extended care/rehabilitation / geriatric centre	3.83%
Private residence / accommodation	91.43%
Residential aged care facility	0.65%
Statistical separation	2.67%
Transitional care bed-based program	0.11%

Table 42 Separation mode - acute

The majority of separations from ERH were discharged home to a private residence or to aged care accommodation.

Over the last five years, 91.4 percent of separations were discharged home, while a further 3.8 percent were transferred to another hospital/rehabilitation.

Trends in Aboriginal Patients

There were 3,600 separations for Aboriginal patients at ERH over the five years from 2016 to 2021. These separations were categorised as follows:

- Acute separations at 6.47 percent;
- Sub-acute separations at 1.79 percent;
- Palliative care at 2.13 percent; and
- 7.17 percent were unallocated.

Separations	2016-17	2017-18	2018-19	2019-20	2020-21	Annual change
Aboriginal and Torres Strait Islander people	650	856	909	720	641	-0.28%

Table 43 Separations by ATSI profile

By far, the largest clinical admission group for Aboriginal and Torres Strait Islander people over the five-year period was dialysis with 48.8 percent of all admissions, followed by respiratory medicine at 4.4 percent of all admissions.

The greatest increase in demand over the five years was in clinical cardiology services (16 percent increase), general surgery (9.2 percent) and diagnostic gastrointestinal (GI) endoscopy (5.2 percent).

The greatest decrease in separations over the five years to 2019 occurred in respiratory medicine (-13.4 percent) with a slight decrease in dialysis (-2.1 percent).

It is noted that, due to the small number of separations per clinical group per year (average total 755 per annum), the actual increase in numbers are relatively small.

MRCG	2016-17	2017-18	2018-19	2019-20	2020-21	Raw change	Total Change	annual change
13. Dialysis	322	421	436	372	290	-32	-9.9%	-2.1%
14. Respiratory medicine	37	39	39	32	18	-19	-51.4%	-13.4%
31. General surgery	20	29	48	30	31	11	55.0%	9.2%
36. Obstetrics	24	35	44	25	25	1	4.2%	0.8%
6. Diagnostic GI endoscopy	28	25	34	22	36	8	28.6%	5.2%
17. General medicine	21	34	33	20	21	0	0.0%	0.0%
26. Orthopaedics	16	16	32	20	20	4	25.0%	4.6%
4. Endocrinology	11	16	29	30	14	3	27.3%	4.9%
7. Haematology	17	26	30	10	16	-1	-5.9%	-1.2%
1. Clinical cardiology	10	23	23	13	21	11	110.0%	16.0%
Other	144	192	161	146	149	5	3.5%	0.7%
Total	650	856	909	720	641	-10	-1.4%	-0.28%

Table 44 Separations by MRCG

Surgical Services

Surgical separations include those which involve a surgical intervention. ERH offers a broad range of surgical services, from general surgery and various sub-specialties but transfers all quaternary services such as cardiothoracic, neurosurgery or major trauma.

The forecasts indicate that the demand for surgical procedures associated with ageing will grow over the next 10 years.

The surgical areas with the largest growth over the past five years includes vascular surgery (64 percent), orthopaedics (22 percent) and general surgery (13 percent).

Service Profile

ERH provides 24 hours, seven days a week general surgical care to mainly adult patients, with paediatric procedures in a limited range of areas such as dentistry. Surgical care can be planned or unplanned emergency care. The range of surgical services at ERH includes:

- General surgery
- Diagnostic GI endoscopy
- Orthopaedics
- Obstetrics
- Colorectal surgery
- Vascular surgery
- Plastic surgery
- Gynaecology
- Urology
- Ophthalmology
- Upper GIT surgery
- Dentistry
- Breast surgery

At ERH, surgical care is provided in a number of locations, including the perioperative suite and the surgical ward.

Perioperative services at ERH include:

Perioperative services	POC	Comments
Day surgery admission	4	2 holding bays and 4 chairs
Anaesthetic rooms	2	
Operating room	3	
Recovery – stage 1	5	
Recovery stage 2/3	10	
Surgical inpatient ward	18	3 swing beds
Total Points of Care	**24**	

Table 45 Perioperative Services

The Perioperative Suite is available 24 hours, seven days a week. The perioperative suite currently offers 22 sessions (of four hour's duration) per week, Monday to Friday.

Day of Week	Operating Hours
Monday to Friday	0700 to 1700 then on-call
Saturday	On-call
Sunday	On-call

Table 46 Peri-operative Suite Hours of Operation

Elective surgery commences at 0800 for morning lists, and 1300 for afternoon lists.

Model of Care

ERH delivers person centred, integrated and co-ordinated surgical care. Surgical services are accessed through general practice and specialist referral pathways, as well as through the ED.

All patients access surgical services at ERH directly through a medical specialist/rural generalist who adds them to their operating list. There is currently no centralised waiting list in operation.

Patients who require emergency surgery are reviewed in the ED and admitted to an inpatient bed prior to surgery or taken directly to theatre, depending on the urgency. Some patients may be discharged home and readmitted when an operating theatre/bed becomes available.

Patients who are required to stay in hospital one or more nights after their surgery are expected to attend the pre-assessment clinic prior to surgery.

Trends in Surgical Separations

The top five surgical specialties (volume in 2020-21 and five-year per annum growth rate from 2016-17 to 2020-21) are:

- General surgery (922, 2.5 percent);
- Diagnostic GI endoscopy (705, -1.7 percent);
- Orthopaedics (673, 4.1 percent);
- Obstetrics (501, 0.4 percent); and
- Colorectal surgery (413, -1.4 percent)

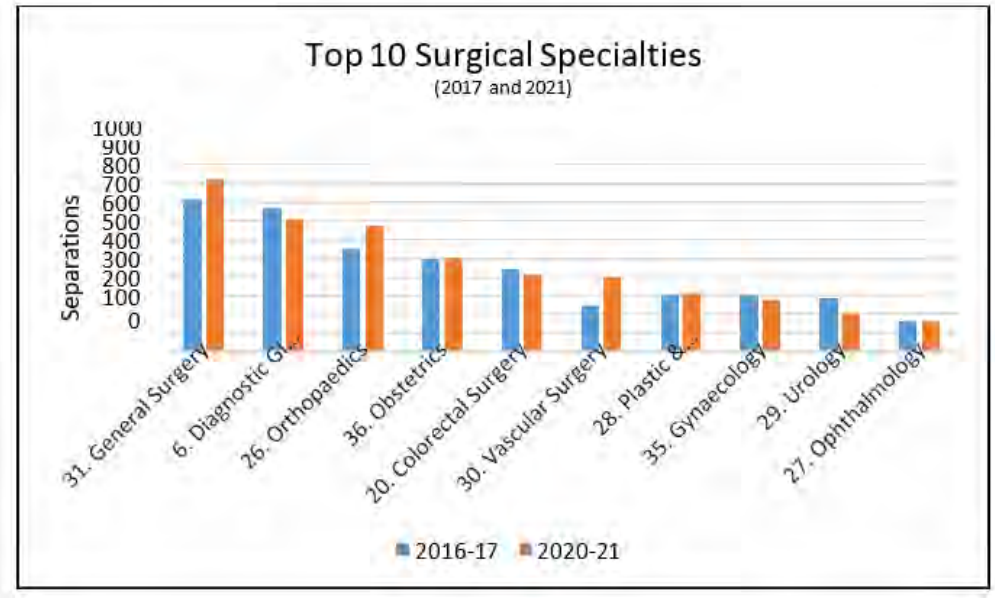


Figure 21 Top 10 Surgical Specialties 2017-2021

The three major clinical reference groups (MCRG) with the largest volume increase in surgical activity from 2017 to 2021 were:

- Vascular surgery (157, 10.4 percent);
- Orthopaedics (122, 4.1 percent); and
- General surgery (109, 2.5 percent).

The three MCRGs with the largest volume decrease in surgical activity from 2017 to 2021 were:

- Urology (-84, -6.6 percent);
- Diagnostic GI endoscopy (-65, -1.7 percent); and
- ENT (-43, -11.8 percent).

MRCG	2016-17	2020-21	Annual change
31. General Surgery	813	922	2.5%
06. Diagnostic GI endoscopy	770	705	-1.7%
26. Orthopaedics	551	673	4.1%
36. Obstetrics	492	501	0.4%
20. Colorectal surgery	444	413	-1.4%
30. Vascular surgery	245	402	10.4%
28. Plastic and reconstructive surgery	300	313	0.9%
35. Gynaecology	305	279	-1.8%
29. Urology	289	205	-6.6%
27. Ophthalmology	163	165	0.2%
21. Upper GIT surgery	41	82	14.9%
25. ENT	92	49	-11.8%
24. Dentistry	59	29	-13.2%

MRCG	2016-17	2020-21	Annual change
23. Neurosurgery (mainly head injuries, concussion)	35	27	-5.1%
18. Breast surgery	23	19	-3.7%
22. Head and neck surgery	12	5	-16.1%
33. Extensive burns	4	4	0.0%

Table 47 MRCG Activity 2016-17 to 2020-21 (Source VAED)

It is noted that elective surgery volumes were significantly impacted by the COVID pandemic.

General Medicine

ERH offers a broad range of medical services.

Medical specialties increased by 2.4 percent per annum over the five years 2017 to 2021.

Service Profile

The service provides 24 hours, seven days a week medical care to adult patients. Medical services include:

- Dialysis
- Neurology
- Clinical cardiology
- Gastroenterology
- Immunology and infections
- Endocrinology
- Renal medicine
- Rheumatology
- Chemotherapy
- Respiratory medicine
- General medicine
- Haematology

At ERH, medical care is provided in a number of locations, including the ED, medical ward, HDU and medical day unit.

Medical Services	POC	Comments
Medical ward	23	Medical
Higher dependency unit	3	3 HDU
Medical day unit	13	
Total Points of Care	39	

Table 48 Medical Unit POC

Model of Care

ERH delivers person centred, integrated and co-ordinated medical care. Medical services are accessed through general practice and specialist referral pathways as well as an emergency referral pathway.

Patients who require admission for medical specialties are generally reviewed in the ED and admitted to an inpatient bed.

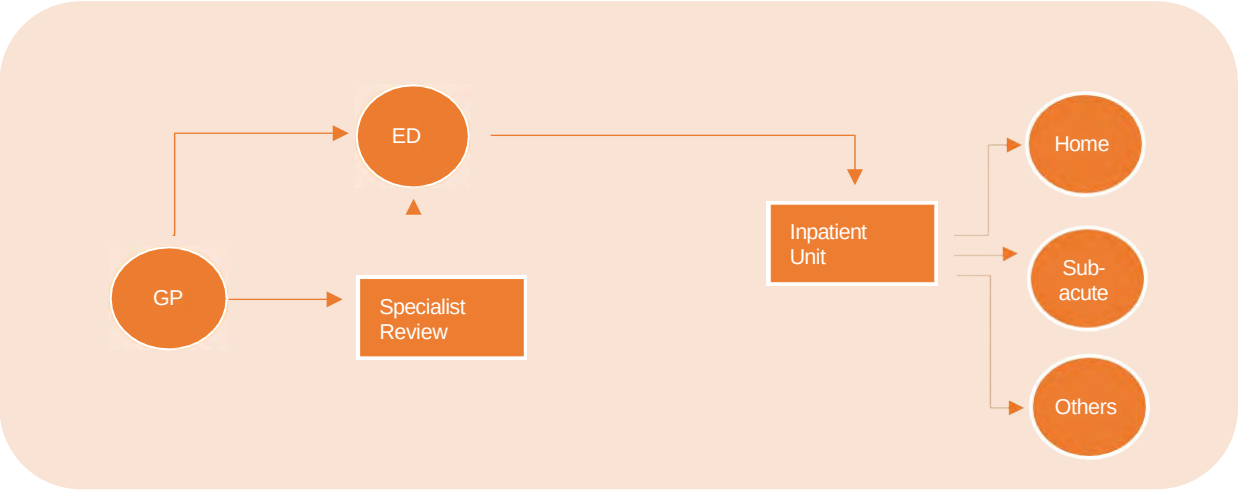


Figure 21 Medical Patient Flow

Trends in Medical Separations

For ERH, the top five medical specialties (volume in 2020-21 and five-year per annum growth rate from 2014-15 to 2018-19) are:

- Dialysis (1720, 2.8 percent);
- Chemotherapy (842, -1.2 percent);
- Neurology (581, 10 percent);
- General medicine (538, -4.0 percent); and
- Respiratory medicine (449, -3.4 percent).

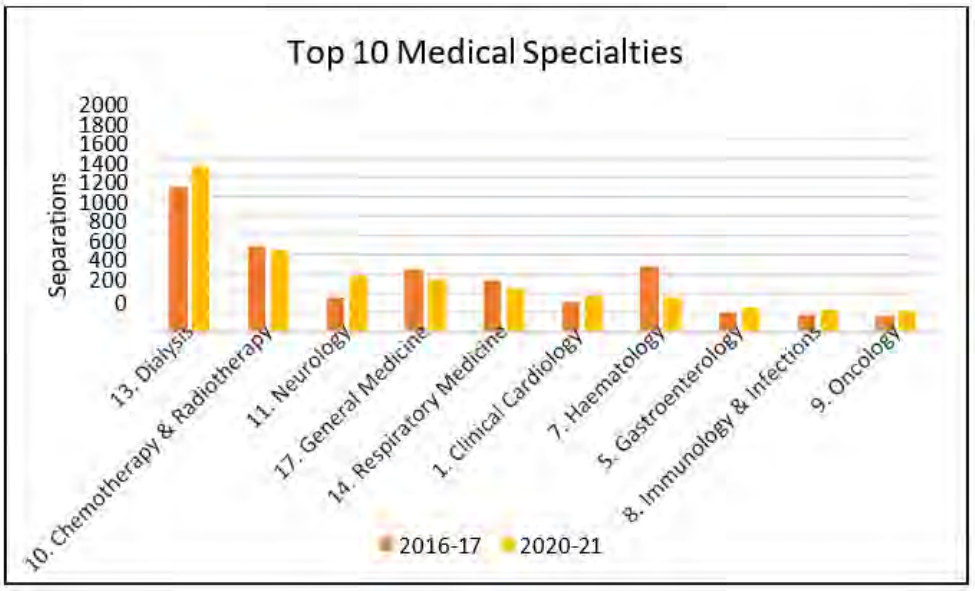


Figure 22 Top 10 Medical Specialties 2017-2021

For ERH, the three MCRGs with the largest volume increase in activity were:

- Dialysis (223, 2.8 percent);
- Neurology (220, 10.0 percent); and
- Oncology (70, 7.7 percent).

For ERH, the three MCRGs with the largest volume decrease in activity were:

- Haematology (-321, -12.0 percent);
- General medicine (-122, -4.0 percent); and
- Respiratory medicine (-86, -3.4 percent).

MRCG	2016-17	2020-21	annual change
13. Dialysis	1497	1720	2.8%
11. Neurology	361	581	10.0%
9. Oncology	157	227	7.7%
1. Clinical cardiology	309	369	3.6%
5. Gastroenterology	203	252	4.4%
8. Immunology and infections	184	233	4.8%
4. Endocrinology	126	160	4.9%
12. Renal medicine	46	62	6.2%
15. Rheumatology	19	16	-3.4%
10. Chemotherapy and radiotherapy (note: radiotherapy =0)	894	842	-1.2%
14. Respiratory medicine	535	449	-3.4%
17. General medicine	660	538	-4.0%
7. Haematology	679	358	-12.0%

Figure 23 Medical MRCG change 2017-2021

Maternity Services

ERH maternity services currently provide pregnancy, birthing and post-natal care.

Service Profile

ERH provides a level 3 maternity service and a level 2 neonatal service under the Victorian Maternity Capability Framework[35]. The health service does not have a Special Care Nursery (SCN).

Maternity services include:

Maternity services	POC	Comments
Birth suite	2	
Maternity assessment	1	Located in birth suite, doubles as a birth suite if required
Maternity ward	8	
Total Points of Care	11	

Table 49 Maternity Service Profile

The Maternity Service is supported by GP obstetricians (GPOs), specialist obstetricians, a staff paediatrician, midwives, lactation consultants, nurses, allied health staff and shared care GPs working in partnership to provide maternity care to women throughout the pregnancy and birthing continuum.

Maternity Model of Care

Antenatal care is mainly delivered through GPOs within their private rooms.

A specialist obstetrician clinic is available, but with limited capacity. Appointments are arranged following referral from community providers such as a GP or from a hospital referral source.

Women receive obstetric-led antenatal care where they are seen by the GPO or specialist obstetrician through much of their antenatal journey. Women who are assessed as outside ERH's clinical capability framework are referred to a higher-level service such as Bendigo Health for birthing.

[35] https://www.health.vic.gov.au/patient-care/maternity-and-newborn-care-in-victoria

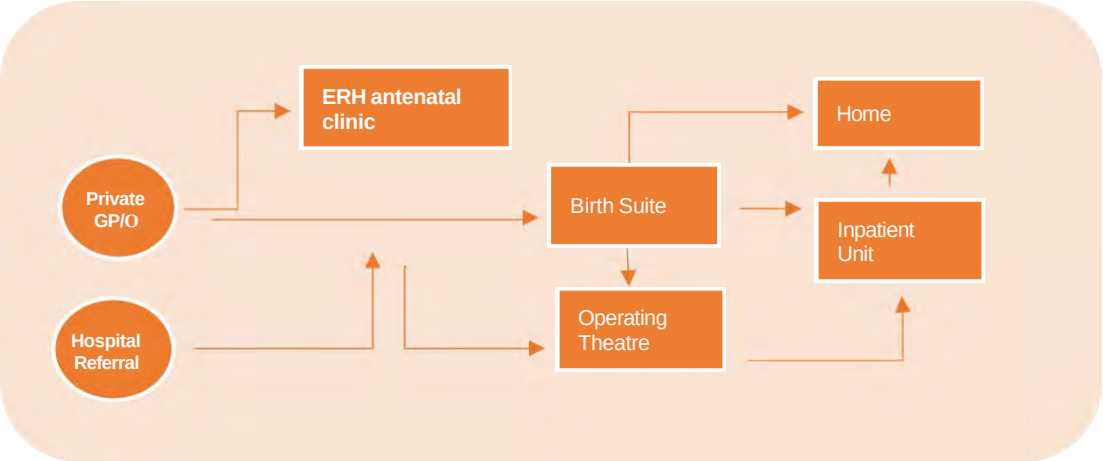


Figure 23 Maternity Patient Flow

Maternity Assessment

The maternity assessment facility is located within the birth suite and can be utilised as a birth suite if required.

The maternity assessment facility offers maternal and fetal surveillance for women who have pre- existing co- morbidities and/or develop pregnancy induced complications. It operates as an outpatient service, seeing woman of greater than 20 weeks gestation who require maternal and/or fetal monitoring.

Lactation consultant referral and care is available during the antenatal and postnatal period as an inpatient and via home visits.

Domiciliary care is offered to all women birthing at ERH and visits are carried out in the woman's home, generally within 25km of the hospital campus.

Trends in Maternity Separations

Over the previous four years, there has been an increase of 9.1 percent in maternity separations at ERH.

MRCG	2016-17	2017-18	2018-19	2019-20	Raw change	Total Change	annual change
114. Caesarean delivery	108	150	146	161	53	48.8%	10.4%
113. Vaginal delivery	217	258	235	244	27	12.7%	3.0%
Total birthing	325	408	381	405	80		
115. post-natal admission	14	18	20	25	11	81.4%	16.1%
112. Ante-natal admission	148	143	102	101	- 47	-31.9%	-9.2%
Total	487	569	503	531	44	9.1%	2.2%

Table 50 Trends in Maternity Separations 2017-2020

- In 2019-20, there were 531 maternity separations inclusive of births, ante-natal and post-natal admissions.

Birth by Type

In 2020, the rate of caesarean births at ERH was 30.2 percent of the total births, lower than the Victorian average of 38.4 percent. Over the previous four years, the caesarean rate has increased a total of 19.9 percent (3.7 percent per annum).

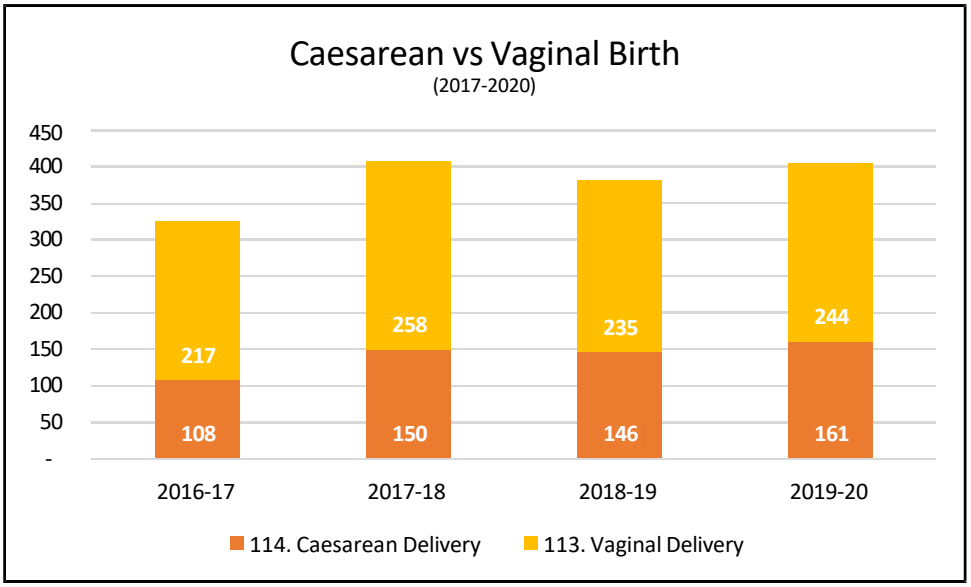


Figure 24 Birth by delivery type 2016-20

Length of Stay

The average length of stay for maternity separations in 2019-20 was 2.6 days, inclusive of all birth, ante-natal and post-natal admissions. Caesarean births had an average length of stay of 3.8 days, whilst vaginal births had an average length of stay of 2.7 days.

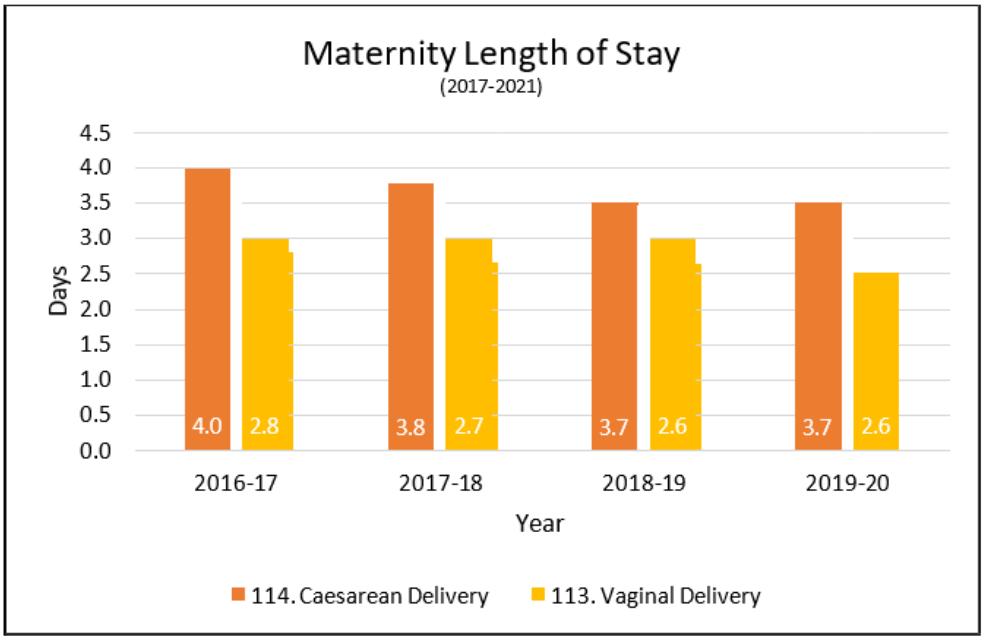


Figure 25 Maternity Length of Stay 2017-2020

Occupancy

Occupancy at ERH for maternity beds is well within the recommended 85% occupancy rate that allows for optimal patient flow through the unit. There are 8 maternity beds across ERH.

Occupancy	2016-17	2017-18	2018-19	2019-20
Beds	**8**	**8**	**8**	**8**
Maternity	42.3%	49.4%	45.2%	47.8%

Table 51 Maternity Unit Occupancy

Maternity Challenges and Opportunities

1. Equity in Maternity Care

While it is generally accepted that women should have access to safe maternity care as close as possible to where they live, consistent with their assessed level of risk, the options available to women differ according to where they live. (DH 2008 – expand reference)

Women living in the ERH catchment may have difficulties accessing appropriate antenatal health care due to distance and limited availability of services.

They may be required to give birth away from their communities, which can lead to extra financial cost, lack of practical and emotional support, isolation, lack of integrated care between systems, inappropriate or culturally unsafe health care, and temporary separation from older children.

The health service does not provide special care nursery services; all higher risk pregnancies must travel to larger health services for women to access specialist care or newborn services.

Opportunity

In regional settings, care is largely provided by the local primary care health professionals: midwives, nurses, GP/GPO, or a combination of these. It is important that these health professionals have access to specialist advice and support. Contemporary approaches, including telemedicine, support lines and online services, are becoming increasingly available and will be extremely valuable in regional areas.

Innovative models of care (e.g. specialist outreach services and caseload midwifery care) may also expand women's possibilities to have care as close to home as possible. It is also important for health professionals in these areas to use family and community networks where possible and explore community initiatives and existing programs to improve pathways to care for women in their region.[36]

Broadening or increasing the availability of low-cost public specialist obstetric clinics within the region would allow equity of services, similar to that which is available in larger regions.

2. Increased Demand for Maternity Services

Over the past 3-5 years, there have been significant changes to maternity service delivery across the Loddon Mallee region. Some health services no longer offer birthing service while others have experienced an increase in demand. The following outlines some of those changes which have had a direct or indirect effect on ERH.

- Kyabram District Health Service (KDHS) previously offered a satellite antenatal service from Goulburn Valley Health (GVH), however this ceased in 2018. Around this time, there was limited access to GPs who offered shared care. This left the people of Kyabram and surrounding areas with little to no access to pregnancy care close to home. The number of women birthing at ERH from Kyabram has remained high, averaging 64 births per annum over the past 5 years. Postnatal home care services were offered until 2019 when KDHS assessed that it was no longer able to maintain its level 1 capability. Postnatal home care is now offered by ERH or GVH, depending on where the women have birthed.
- Cohuna District Hospital (CDH) offered a maternity and newborn service until May 2021 when its sole GPO retired from providing intrapartum care. This has left CDH without the ability to deliver birthing services. CDH continues to offer antenatal and postnatal care and is currently redesigning its maternity service to meet the needs of the community.
- Kerang District Health (KDH) provided a level 1 maternity service for a number of years, offering postnatal care. The limited availability of GPs who offer shared care within the town means that women have to travel to access pregnancy care and birthing services. In January 2022 KDH could no longer maintain its level 1 capability and postnatal home care is now predominantly delivered by midwives from CDH

In recent years, reductions in workforce availability has had an effect on maternity services in the region. Both Swan Hill District Health (SHDH) and Deniliquin Health Service have on occasion gone on short periods of obstetric diversion. SHDH is currently in the process of redesigning its model of care. While the town of Deniliquin sits within the NSW Murrumbidgee Local Health

[36] https://www.health.gov.au/resources/pregnancy-care-guidelines/part-a-optimising-pregnancy-care/other- population-groups-with- specific-care-needs

District (MLHD), ERH is geographically closer than its own larger health services which are more than two and a half hours away.

Opportunity

An increase to the ERH maternity and newborn capability to level 4 and level 3 respectively will enable more women to birth closer to home. Development of an enhanced paediatric and neonatal service is required to allow for higher risk pregnancies to have care delivered at ERH. See Strategic Theme – Safer Care Closer to Home.

High Dependency Care

The High Dependency Unit (HDU) at ERH provides care to patients who require closer observation and higher acuity care. This may include patients who have undergone surgery, or who require cardiac monitoring or non-invasive respiratory support.

Daily virtual ward rounds with intensivists at the Bendigo Health Intensive Care Unit (ICU) supports the ongoing management of HDU patients and the early escalation of care when necessary.

Service Profile

ERH operates a three bed (capacity for six bed) HDU which operates 24 hours per day, seven days a week. It is co-located within the Medical Ward. The HDU provides a higher level of care (including monitoring and observation, non-invasive ventilation, low dose inotropes) for specific cohorts of patients (e.g. medical or post-surgery).

Intensive Care Unit Services Profile at ERH:

Unit	POC	Comments
HDU	3	1:2 nursing care (capacity = 6)
Total Points of Care	**3**	

Table 52 HDU Profile

Model of Care

The focus of the high dependency model is to provide an increased level of care in a separate specialised area with closer monitoring, greater nursing support and early intervention and escalation as required.

Patients may be admitted directly from the ED, theatre recovery or from a ward.

The HDU, together with the ED team, is required to offer the emergency response service for the hospital for Code Blue and Medical Emergency Team (MET) calls, with designated roles at all hours.

Trends in HDU separations

There has been an 8.63 percent increase in admissions to the HDU over the five years to 2021 (1.67 percent per annum).

Activity	2016-17	2017-18	2018-19	2019-20	2020-21	Total change	Annual change
HDU admissions	556	542	498	594	604	8.63%	1.67%

Table 53 HDU Trends in Separations

Day Medical Services

The following services are provided from the newly opened Cancer and Wellness Centre:

- Oncology Day Unit, providing medical oncology services, including chemotherapy;
- Medical Day Treatment Unit (MDTU) providing nurse-led treatment to patients with chronic medical conditions, including the administration of iron infusions, trial of void, and venesection; and
- Renal dialysis, a service for outpatients requiring haemodialysis.

Service Profile

The Cancer and Wellness Centre is open Monday to Friday from 8.00 am to 4.30

pm. There are 12 treatment chairs in the facility, with one treatment room.

Chemotherapy services operate five days per week, with treatments provided under the direction of visiting medical oncologists and a staff clinical haematologist.

The renal dialysis service operates three days per week, allowing for a total 12 sessions. The renal service is a satellite service of Austin Health Nephrology service.

Cancer and Wellness Centre Profile at ERH:

Cancer and Wellness Centre	POC	Comments
Chemotherapy / MDTU	13	Includes a treatment room
Renal dialysis		
Total Points of Care	**13**	

Table 54 Day Service Profile

Model of Care

Clinical care provided in the Cancer and Wellness Centre includes the specialties of medical oncology, haematology, nephrology and general medicine. Medical oncologists and a clinical haematologist provide on-site services weekly. A radiation oncologist provides a fortnightly consulting service.

Some urological procedures are also carried out, namely intravesical instillations for bladder cancer and catheter removals for trial of void.

The Cancer and Wellness Centre has 12 chairs and one bed, with co-located specialist consulting rooms.

The Cancer and Wellness Centre is supported by a McGrath breast nurse and a prostate nurse.

Trends in Day Medical Separations

Over the five years from 2015-16 to 2019-20:

- There was an increase in chemotherapy separations at ERH of 5.8 percent per annum, from 825 to 1,095 separations;

Stream	2015-16	2016-17	2017-18	2018-19	2019-20	Annual change
Chemotherapy	825	894	833	1047	1095	5.8%

Table 55 Chemotherapy activity

- There was an increase in renal dialysis separations of 1.1 percent per annum from 1,619 to 1,712 separations over the five-year period from 2016 to 2020;
- At present, a waiting list of four persons exists above the 12 places available for renal services;

Stream	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR
Renal	1619	1497	1434	1583	1712	1.1%

Table 56 Renal activity

- There has been overall decrease of 4.1 percent per annum of haematology and medical same-day separations over the period from 2016 to 2020.

Stream	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR
Haematology / medical day treatment	688	689	815	630	558	-4.1%

Table 57 Other day medical activity

There is likely to be an increase of service needs with the opening of the Cancer and Wellness Centre. The availability of care spaces has not increased with the opening of the new building.

Sub-acute And Palliative Care

Sub-acute inpatient services support patients to maximise their independence and functioning, with the aim to minimise long term health and community care needs. Subacute and palliative care services at ERH are undertaken in both an inpatient and community setting. Services include:

- Admitted rehabilitation services;
- Admitted Geriatric Evaluation and Management (GEM);
- Transition Care Program (TCP);
- GEM@home; and
- Palliative care.

Service Profile

The sub-acute and palliative care bed profile includes:

Subacute Service	POC	Comments
Sub-acute	14	14 open
Palliative care	2	
TCP	4	4 hospital-based beds open
Total Points of Care	**20**	

Table 58 Sub-acute POC

Model of Care

Sub-acute inpatient care at ERH predominantly comprises the following care types:

- Palliative care, in which the primary clinical purpose or treatment goal is optimising quality of life for a patient with an active and advanced life-limiting illness. The patient will have complex physical, psychosocial and/or spiritual needs;
- Rehabilitation, in which the primary clinical purpose or treatment goal is improvement in the functioning of a patient with impairment, activity limitation or participation restriction due to a health condition. The patient will be capable of actively participating in rehabilitation; and
- Geriatric Evaluation and Management (GEM) services provide care in which the primary clinical purpose or treatment goal is improving the functioning of a person with multidimensional needs. These needs are associated with medical conditions related to ageing.

In Victoria, the primary focus of most rehabilitation services is to return the patient back home safely and enable independence in basic activities of daily living.

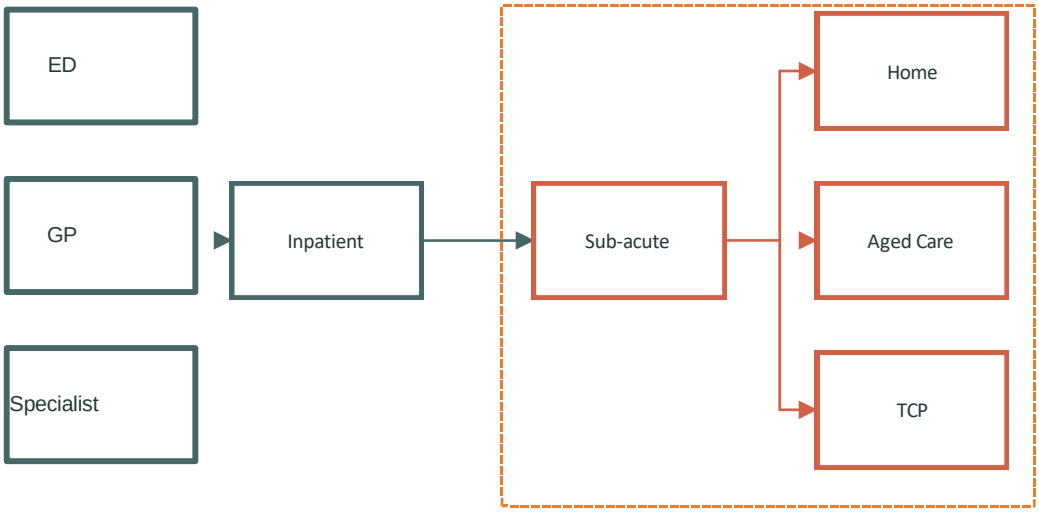


Figure 26 Sub-acute patient flow

Trends in Sub-acute Services

Over the five years from 2015-16 to 2019-20:

Rehabilitation

- There was an increase in rehabilitation separations at ERH of 10.45 percent per annum, from 166 to 273 separations.
- 74 percent of rehabilitation admissions were discharged home, 1.9 percent were discharge to a residential aged care facility, whilst 14.6 percent became statistical separations (administrative process by which the hospital records the cessation of an episode of care for a patient within the one hospital stay).

Geriatric Evaluation and Management (GEM)

- GEM admissions increased by 13.4 percent year-on-year over the five years, from 81 to 152 separations per year.
- 76 percent of GEM admissions were discharged home, 1.7 percent were discharged to a residential aged care facility, whilst 13.9 percent became statistical separations.

Palliative Care

- Palliative care admissions increased by 2.6 percent year-on-year, from 63 to 72 admissions.

Sub-acute care type	Activity measure	2015-16	2016-17	2017-18	2018-19	2019-20	Annual change
Rehabilitation	Separations	166	203	187	243	273	10.45%
	Bed days	2,785	3,177	2,930	2,549	2,527	-1.92%
	ALOS	34	40	30	20	17	-13.10%
GEM	Separations	81	64	89	131	152	13.43%
	Bed days	2,054	1,830	2,271	2,795	3,046	8.20%
	ALOS	51	49	53	45	48	-1.51%
	Occupancy	**94.7%**	**98.0%**	**101.8%**	**104.6%**	**109.1%**	
Palliative care	Separations	63	66	80	75	72	2.61%
	Bed days	598	597	604	763	686	2.78%
	ALOS	15	12	13	14	13	-2.97%
	Occupancy	**81.9%**	**81.8%**	**82.7%**	**104.5%**	**94.0%**	

Table 59 Sub-acute activity

12.1.3 Mental Health Services

Bendigo Health provides specialist public mental health services to the communities of the ERH catchment through the Loddon Campaspe Area Mental Health Service.

Whilst most services are physically located in Bendigo, the service provides an outreach program to Echuca. Community Mental Health Services are delivered in a separate facility located on the ERH hospital campus.

The ERH ED supports the local service in delivering emergency mental health care. An Emergency Crisis Assessment Worker (ECAW) is located in the ED during business hours to support the timely delivery of specialist mental health assessment and care.

All moderate to high-risk mental health admissions are transferred to Bendigo Health or elsewhere, and only admissions that are assessed as low risk are admitted to ERH.

Trends in Mental Health Separations

Mental Health	2015-16	2016-17	2017-18	2018-19	2019-20
Separations	16	16	27	14	14
Bed days	3	4	6	4	16
ALOS	43	54	127	40	144

Table 60 Mental Separations

Trends in Community Mental Health Sessions

Community mental health services	12-month average caseload
Aged mental health	31
Child and adolescent mental health (CAMHS)	24
Adult community mental health	111

Table 61 Community Mental Health Separations

12.1.4 Alcohol and Other Drugs

Alcohol and Other Drugs (AOD) services at ERH are provided in the ED, on an inpatient basis, or in the community.

Trends in AOD Separations

The demand for inpatient AOD treatment increased by 0.5 percent per annum between 2015-16 to 2019-20.

Implications of the increase in demand for services and the Public Drunkenness reforms require ERH to alter the way it responds to this cohort of patient.

Opportunities include:

- Establishment of a ‘safe space’ or sobering facility within the ED for the management and treatment of people affected by substances. This will allow the police to bring intoxicated people to the ED for management in a specifically designed space with appropriate behavioural and medical care/support as required.

AOD	2015-16	2016-17	2017-18	2018-19	2019-20
Separations	39	46	23	23	40
Bed days	117	131	45	45	75
ALOS	5	4	3	2	2

Table 62 AOD Activity

12.1.5 Specialist Clinics and Other Non-Admitted Services

Specialist clinics provide planned, non-admitted services for patients. The clinics provide an interface between primary care services and acute inpatient services, with access to:

- Medical, nursing, midwifery and allied health professionals (depending on the clinic type) for assessment, diagnosis, and treatment;
- Ongoing specialist management of chronic and complex conditions in collaboration with community providers;
- Pre- and post-hospital care;
- Maternity care; and
- Related diagnostic services such as pathology and imaging.

People are referred to specialist clinics by their GP, specialist, or other community-based health providers, as well as hospital-based clinicians in the emergency department, inpatient wards and other areas of the hospital.

ERH offers a limited number of Tier 2 (public) specialist clinics.

Tier 2 categorises a hospital's non-admitted services into classes which are generally based on the nature of the service provided and the type of clinician providing the service. The structure of the classification is first differentiated by the nature of the non-admitted service provided.

The major categories are:

- Procedures;
- Medical consultation services;
- Diagnostic services; and
- Allied health or clinical nurse specialist intervention services.

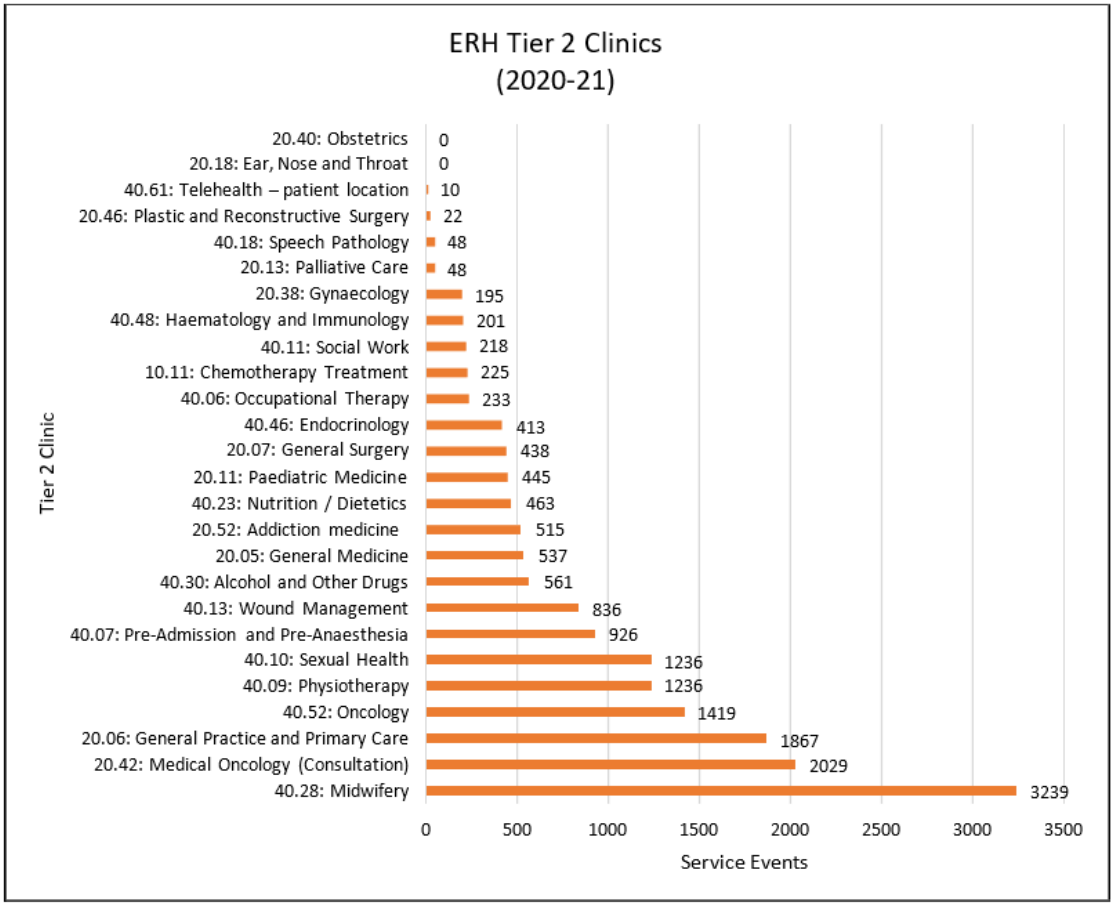


Figure 27 ERH Tier 2 Clinics 20-21 Service Events - Source D

Trends in Non-admitted Services

The five main streams (with 2020-21 attendance volumes and per annum growth) are:

- Midwifery (3,239 attendances, 18%);
- Medical oncology (2,029 attendances, commenced 2019-20);
- General Practice and Primary Care (1,867 attendances, commenced 2020-21);
- Oncology (1,495 attendances, 25%); and
- Physiotherapy (1,236 attendances, 25%)

The catchment population have very limited access to local publicly funded outpatient-based services. As a consequence of this, patients can incur significant out of pocket expenses for much of their non-admitted care or they are required to travel considerable distances to access publicly funded services.

Tier 2 clinics	2016-17	2017-18	2018-19	2019-20	2020-21	*growth* pa.
40.28: Midwifery	1,423	1,882	2,930	2,967	3,239	18%
20.42: Medical oncology				2,105	2,029	-1%
20.06: General Practice and Primary Care	0	0	0	0	1,867	
40.52: Oncology		587	621	1,218	1,419	25%
40.09: Physiotherapy	400	711	396	441	1,236	25%
40.10: Sexual health					1,236	
40.07: Pre-admission and pre-anaesthesia	0	701	3,381	1,308	926	7%
40.13: Wound management					836	
40.30: Alcohol and Other Drugs	0	0	0	586	561	
20.05: General medicine	0	0	0	561	537	
20.52: Addiction medicine				138	515	
40.23: Nutrition/dietetics	18	9	15	127	463	91%
20.11: Paediatric medicine	0	0	0	250	445	
20.07: General surgery	0	0	0	0	438	
40.46: Endocrinology			0	0	413	
40.06: Occupational therapy	158	264	302	158	233	8%
10.11: Chemotherapy treatment		410	293	228	225	-14%
40.11: Social work	15	41	39	33	218	71%
40.48: Haematology and immunology		0	306	180	201	-13%
20.38: Gynaecology					195	
20.13: Palliative care					48	
40.18: Speech pathology	9	9	29	15	48	40%
20.46: Plastic and reconstructive surgery					22	
40.61: Telehealth		0	332	170	10	
20.18: ENT	0	0	0	0	0	
20.40: Obstetrics				4	0	
Total	**2,023**	**4,614**	**8,644**	**10,489**	**16,172**	52%

Table 63 Tier 2 Clinics -ERH Source Victorian Hospital Information Services DH

ERH has been slowly increasing the number of Tier 2 clinics, with a 15 percent per annum increase in the number of service events over the five years from 2016-17 to 2020-21.

Hospital in The Home

HITH provides admitted care to public patients in their home, or other suitable location. HITH is an alternative to an inpatient stay. Patients are still regarded as hospital inpatients and remain under the care of their hospital doctor. Care may be provided by nurses, doctors, or allied health professionals, with additional home supports arranged as required.

Service Profile

The service at ERH is provided seven days per week. Pathways of care include but are not limited to:

- Medical – chronic health conditions, osteomyelitis, CCF, COPD, renal failure, long term antibiotics
- Surgical – Negative-pressure wound therapy (NPWT), drain tube monitoring, complex wound care
- Oncology – chemotherapy disconnects

Daily nursing is provided by a team of clinical nurse specialists (CNSs). Weekly medical reviews occur onsite at ERH in the HITH clinic, currently operating in part of the surgical ward.

HITH co-ordinators work Monday to Friday from 8.00 am to 4.30 pm, with CNS staff on duty seven days per week from 8.00 am to 4.30 pm.

Discharges are planned post medical review.

Trends in HITH Program

In 2020-21, 6.2 percent of separations at ERH were undertaken by HITH.

ERH anticipates that this level of service provision will increase substantially as the Better at Home initiative is extended into other care pathways, including for maternity and cancer services.

	2016-17	2017-18	2018-19	2019-20	2020-21	Raw change	Total change	Annual change
HITH separations (no.)	69	54	102	160	189	120	173.91%	22.33%
HITH separations (%)	2.80%	2.00%	3.50%	5.60%	6.20%			
HITH bed days (no.)	1,118	743	1193	1,430	1,977	859	76.83%	12.08%
HITH bed days (%)	9.40%	6.20%	9.10%	11.10%	14.40%			

Table 64 HITH activity

ERH was awarded Better at Home funding in the 2021-2022 financial year under two key areas of:

1. HITH with an accompanying National Weighted Activity Unit (NWAU) target of 76; and
2. Complex Care with an accompanying NWAU target of 53.

Activity achieved in 2021-2022:

1. HITH achieved 435 NWAU;
2. Complex Care achieved 283 NWAU.

HITH separations 2021-22	Episodes	Bed days
Respiratory	14	191
Cardiac	10	204
Surgical	15	287
Medical	39	527

Table 65 HITH separations

Community Services

Community Services at ERH encompasses multiple programs that deliver ambulatory services to both admitted and non-admitted patients.

Programs include:

- Community Health Integrated Programs (CHIP)
- Home and Community Care for Younger People
- National Disability Insurance Scheme (NDIS)
- Commonwealth Home Support Program
- Healthy Mothers, Healthy Babies
- Integrated family services
- Psychological treatment services
- Clinical care coordination
- Community rehabilitation
- Home care packages

Service Profile

ERH provides state funded primary healthcare and wellbeing, focusing on people with, or at risk of poorer health, under a social model of care.

Ambulatory based services are delivered in the hospital, community and home settings to:

- Facilitate support for people at risk of clinical decline and/or admission to inpatient care;
- Offer a safe and effective substitute for hospital/bed-based care;
- Support the transition between hospital based and community-based services; and
- Improve the health status of individuals and at-risk populations.

Model of Care

Health Independence Programs

Health Independence Program (HIP) is a combination of services designed to meet client needs when transitioning from hospital to home. Following the DH guidelines, the programs aim to facilitate closer alignment between health services, shorten the hospital length of stay and prevent readmissions.

HIP services comprises:

Hospital Admission Risk Program

Hospital Admission Risk Program (HARP) services provide specialist treatment, care planning, education and support to help people with chronic and complex health issues to manage independently in the community and reduce the risk of being admitted to hospital.

HARP services people with chronic and complex health issues such as COPD, heart failure, asthma, providing:

- Short term support and intervention;
- Assessment;
- Integrated care planning and coordination;
- Education and monitoring;
- Service linkages; and
- GP liaison

to enable clients to better manage their condition in the community and reduce avoidable hospital admissions.

The service operates five days per week during business hours, from 7.30 am to 4.00 pm and a morning shift on weekends.

Post-acute Care

Post-acute Care (PAC) provides community-based services and home-based therapy to help patients recover at home after leaving hospital. It aims to assist people especially if they live alone or otherwise have limited support.

PAC is a brokerage service that provides administration services but not direct clinical care. The service operates five days per week during business hours.

PAC services are available for up to 28 days post hospital stay. PAC services are free; however, clients may be required to contribute to the cost of consumables such as wound dressings.

PAC offers a range of services including:

- Community nursing
- Allied health
- Home and personal care assistance.

Sub-acute Ambulatory Care

The Sub-acute Ambulatory Care (SAC) service is a community rehabilitation program that provides services to clients following a recent event that resulted in injury, hospitalisation or for patients otherwise recovering from illness. Clients attending this service will have a rehabilitation goal to attain maximum functional independence.

Services can be provided at ERH or at home. Services available at ERH are general, pulmonary and cardiac rehabilitation, continence and falls, and balance services.

Residential in-reach

Residential in-reach (RIR) comprises a team of nurses who facilitate the best health outcomes for residents living in local aged care facilities.

The team liaises with medical staff at the ERH and with the resident's GP to provide assessment and treatment of sub-acute medical issues.

The purpose of RIR is to reduce the number of non-acute hospital presentations by providing early intervention and patient focused healthcare and support.

Services include Attending the residential facility to assess the resident;

- Initiating treatment as indicated
- Changing or trouble shooting urinary catheters
- Percutaneous Endoscopic Gastrostomy (PEG) tube management
- Administering intravenous fluids and medications
- Providing priority referral to allied health services
- Referring to palliative care services
- Wound management
- Providing support following the resident's ED or hospital discharge
- Providing advice and education for aged care facility staff
- Facilitating referral to ED or the ERH HITH service as appropriate

Trends in HIP Services

HIP Program	2016-17	2017-18	2018-19	2019-20	2020-21	% Change per annum
HARP	1,240	1,145	1,199	1,370	1,804	7.79%
PAC	3,884	3,837	4,172	3,987	3,485	-2.14%
RIR	448	722	623	623	705	9.49%
SACS	5,899	6,446	5,190	5,807	4,490	-5.31%
Continence	660	717	688	667	855	5.31%
Falls	57	50	259	738	547	57.19%
Sub-total	10,948	12,917	12,131	13,192	11,886	1.66%

Table 66 Trends in HIP programs

The total volume of HIP services at ERH increased by 1.7 percent per annum from 10,948 in 2016-17 to 11,886 attendances in 2018-19.

The HIP program with the largest decline at ERH over the period was SACS, with a reduction of -5.3 percent per annum, followed by PAC (-2.1 percent).

Allied Health Programs

Allied health services are offered as both inpatient and outpatient services at ERH.

Care includes assessment, implementation of therapy and contribution to discharge planning. Outpatient services are provided either as an individual service or as a multidisciplinary program.

Trends in Allied Health Services

Allied Health Services Tier 2	2016-17	2017-18	2018-19	2019-20	2020-21	change per annum
Occupational therapy	158	264	302	158	233	8.08%
Physiotherapy	400	711	396	441	1236	25.31%
Social work	15	41	39	33	48	26.19%
Speech pathology	9	9	29	15	48	39.77%
Nutrition / dietetics	18	9	15	127	463	91.45%

Table 67 Allied Health Service activity

Trends in Funded Community Programs

Monthly referral average	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Change per annum
Falls and balance	2.0	2.0	11.0	12.0	14.0	48%
Dietetics	9.4	14.1	16.0	16.6	36.8	31%
WPMH[37] - PTS General			6.4	7.3	12.4	25%
WPMH - HMHB	5.4	7.2	6.9	8.0	16.0	24%
Diabetes educator	4.9	8.4	7.2	5.8	9.4	14%
Podiatry	6.0	4.8	8.9	5.2	10.7	12%
Occupational Therapy General	26.8	25.2	25.3	19.3	47.2	12%
Speech Pathology General	4.2	3.3	5.8	5.4	5.7	6%
CRC Step Up To Strength	1.2	1.8	2.2	1.0	1.6	6%
Physiotherapy Women's Health	15.0	16.8	15.5	13.9	19.3	5%
WPMH - Integrated Family Services			5.3	5.3	6.0	4%
CRC Specialist Continence	13.7	11.3	12.4	15.3	16.3	3%
Physiotherapy General	37.8	44.5	44.5	42.0	43.2	3%
CRC Pulmonary Rehabilitation	7.9	7.7	10.2	8.6	9.0	3%
Occupational Therapy Paediatric	2.7	2.8	4.4	2.8	2.9	1%
Physiotherapy Paediatric	7.2	8.1	10.8	7.9	7.6	1%

[37] Well-being and Primary Mental Health

Well Women's Health	5.1	5.7	5.0	4.0	5.1	0%
CRC Cardiac Rehabilitation	12.4	13.0	14.1	14.1	12.3	0%
AOD - Counselling Complex - Forensic	0.8	1.5	0.8	1.6	0.7	-3%
WPMH - CCC General			1.8	2.6	1.6	-3%
CRC General	39.8	41.5	30.6	30.9	31.7	-4%
Speech Pathology Paediatric	9.1	7.9	9.0	5.3	6.3	-7%
AOD - Counselling Standard - Forensic	1.5	0.8	1.4	3.8	1.0	-8%
AOD - Care and Recovery - Forensic	1.3	0.7	0.3	0.7	0.2	-31%
AOD - Care and Recovery - Voluntary	0.6	0.1	0.0	0.0	0.0	-100%
AOD - Counselling Complex - Voluntary	0.3	0.1	0.0	0.0	0.0	-100%
ADO - Counselling Standard - Voluntary	0.4	0.0	0.0	0.0	0.0	-100%
Public Fracture Clinic					34.4	NA
WPMH - Generalist Counselling					14.7	NA
WPMH - PTS Children					6.6	NA
WPMH - PTS Aged					0.0	NA
WPMH - Drought Counselling					4.3	NA
WPMH - CDAMS					9.0	NA
ICS Redirected Referrals					13.1	NA
Total	215.4	229.1	255.6	239.2	398.8	13%

Table 68 Community Program Referral activity

Community referral programs increased by 13 percent per annum over the past five years, from 215 to 399 admissions

13. Analysis of Future Situation

13.1 Introduction

The analysis of the future situation will:

- Provide an overview of the projected growth in the catchment;
- Identify the demographics and health and well-being issues in the catchment;
- Identify the projected health service demand;
- Explore the areas identified projected health demand and need;
- Identify the projected health demand and need;
- Identify the catchment issues, 'gaps and drivers;
- Identify the clinical areas the catchment seeks to achieve self-sufficiency in; and
- Identify the sustainability principles.

13.2 Population Growth

The projected population growth has been sourced from Victoria in the Future (2019), NSW population projections by the NSW Department of Planning, Industry and Environment (2019).

The population projections reflect each state government's announced policies and projects. They are influenced by assumptions related to (i) fertility; (ii) mortality; (iii) net overseas migration; and (iv) net internal migration.

The data has been drilled down to various levels:

- Victoria in the Future Small Area (VIFSA)
- Australian Statistical Geography Standard (ASGS) Local Government Areas Projections in NSW

In order to understand the projected timing of growth, the Estimated Resident Population per five years is identified.

Between 2016 and 2036, the number of people residing in the catchment is projected to grow by 3,904 people.

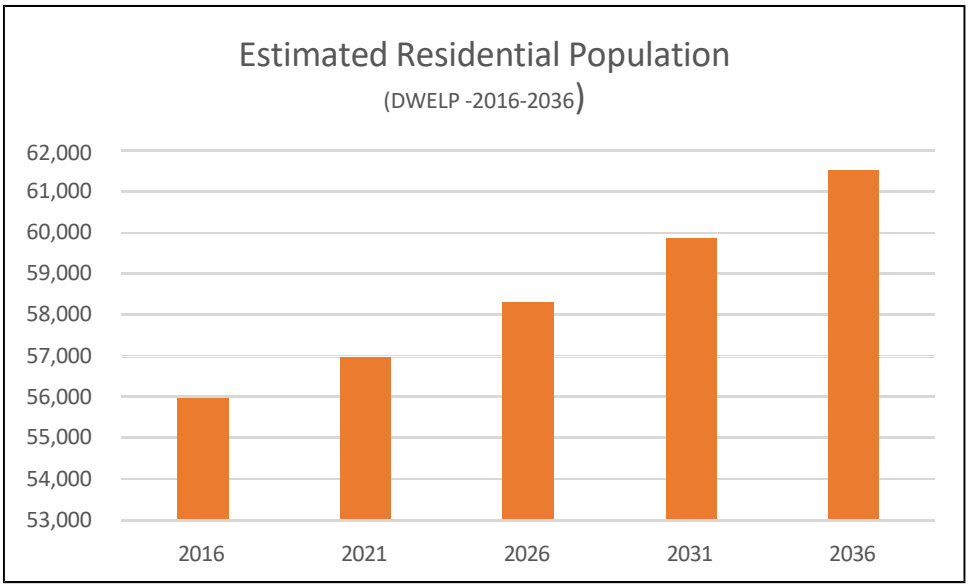


Figure 28 Projected Residential Population

By Local Planning Areas:

Estimated Resident Population	2021	2031	Total Change	Average annual % change
Campaspe	38,358	41,097	3,661	0.62%
Gannawarra	6,596	6,332	-329	-0.34%
Murray River	12,018	12,444	572	0.31%
Total	**56,972**	**59,873**	**3,904**	**0.45%**

Table 69 Population Projections by catchment

The number of residents per household is lower than the relevant state average in all local planning areas.

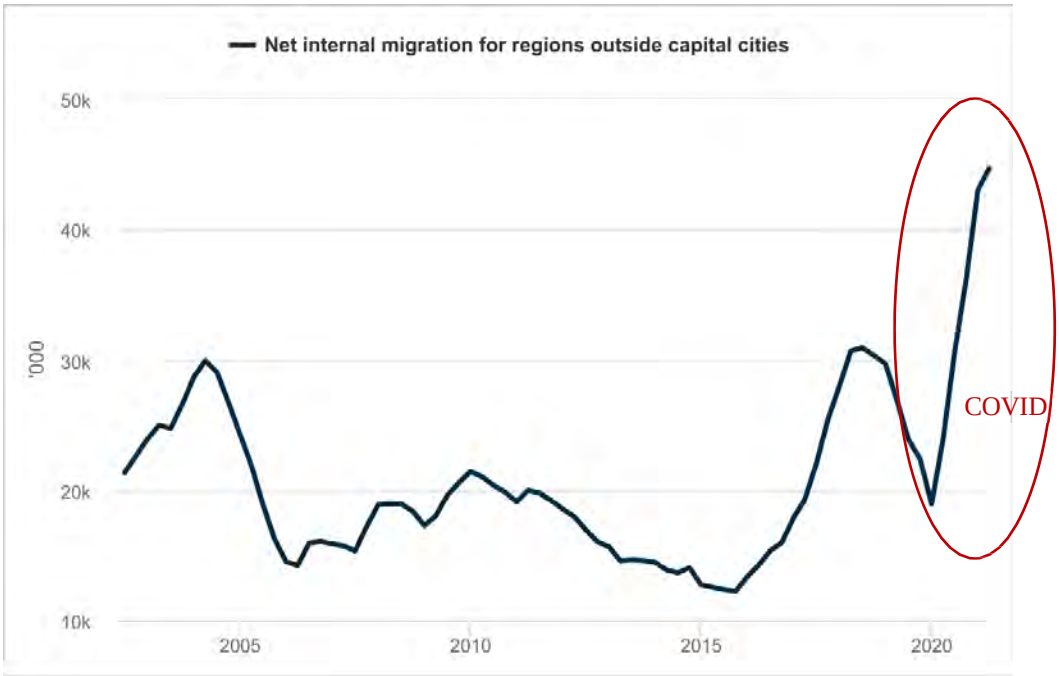
Local Planning Area	2036
Campaspe	2.34
Murray River	2.22
Gannawarra	2.24
Regional Victoria	**2.26**
Victoria	**2.46**

Table 70 Projected Household size

The impact of COVID has also seen residents departing Melbourne and settling in regional Victoria. The number of capital city residents moving to a regional area is now higher than it was prior to the onset of the pandemic.

Along with a continued low level of departures from regions to capital cities, this has contributed to a record increase in net internal migration for regional areas.

This was almost double the net internal migration for regional areas in March 2020[38].This migration is not represented in the data but should be recognised as having a significant impact on the local regional population.



Key service delivery implications associated with the population growth

- According to DWELP projections, minimal growth will occur across the catchment in the 10 years until 2031. In total, the catchment population will grow by 3,904 people between 2021 and 2036. This is accumulative annual growth of 0.45 percent. If COVID growth continues, the numbers of people moving to the area will be significantly higher than currently forecast.
- Local areas that have a projected decrease in their population numbers over the period are Deniliquin and Gannawarra Shire.
- Echuca remains the most appropriate location for the delivery of health services in the catchment. By 2036, over 50 percent of the total catchment population will reside in Echuca / Moama. It will have the greatest increase in resident population of 1,913 people in the period 2021 to 2036.

[38] https://population.gov.au/data-and-forecasts/data-and-forecasts-data-release-prime-release-march-2021.html

The following table projects the estimated number of residents by age group and identifies associated growth per five-year interval.

The aging of the catchment population from 2021 to 2031 should be noted. All age groups after 70 years are projected to increase in numbers.

Age	2021	2026	2031	2036	Overall change 2021 to 2036
00-04	4,483	4,437	4,461	4,532	49
05-09	5,215	4,539	4,526	4,548	-667
10-14	5,526	5,200	4,566	4,562	-964
15-19	5,281	5,390	5,155	4,588	-693
20-24	4,753	4,615	4,797	4,698	-55
25-29	4,514	4,768	4,708	4,911	397
30-34	4,440	4,781	5,043	5,014	574
35-39	4,567	4,744	5,111	5,333	766
40-44	4,610	4,864	5,071	5,426	816
45-49	5,174	4,637	4,912	5,112	-62
50-54	5,762	5,225	4,717	5,000	-761
55-59	6,414	5,869	5,373	4,887	-1,528
60-64	6,480	6,476	5,977	5,516	-963
65-69	6,322	6,594	6,634	6,179	-142
70-74	5,543	5,969	6,277	6,335	792
75-79	4,439	4,911	5,351	5,665	1,226
80-84	2,894	3,522	3,960	4,376	1,482
85+	2,600	2,896	3,500	4,187	1,587

Table 71 Projected Population growth by age

Child And Youth

The number of children and youth (0-24 years) residing in the catchment is projected to **decrease** by approximately 2,330 people by 2036.

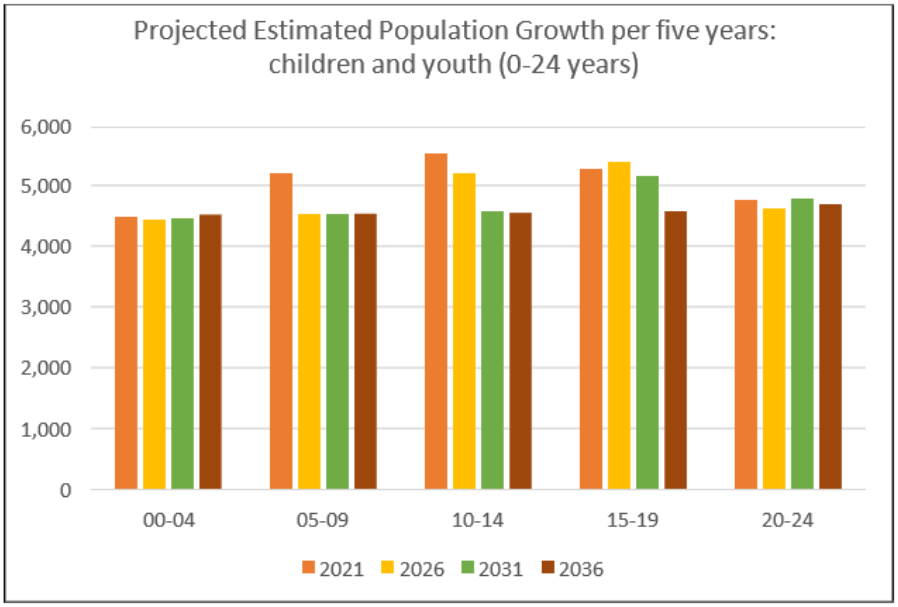


Figure 29 Projected Population Growth child and youth

The early years of a child's life provide the foundation for future health, development and well- being. The transitions from childhood to adolescence to independent adulthood are also crucial periods for establishing positive health and social behaviours.[39]

Children aged 0 to 12 years covers the developmental stages from the antenatal period and infancy through to the end of primary school. According to AIHW, in a national study (2020) of Australian young people's perspective, health ranked as the second most important domain, after family. Good health influences how children feel and go about their daily lives, as it can affect participation in family life, schooling, social and sporting activities.[40]

The foundations for good health start during the antenatal period, and the first years of life. Maintaining a healthy lifestyle during pregnancy contributes to better outcomes for the baby and the mother. Smoking during pregnancy is associated with poorer perinatal outcomes such as low birthweight, perinatal death and sudden infant death syndrome (SIDS). Teenage mothers are also more likely to have low birthweight babies and are themselves a vulnerable population who may experience a greater risk of socioeconomic disadvantage.

The health of a baby at birth is a key determinant of subsequent health and wellbeing. Low birthweight has been associated with increased risk of coronary heart disease, diabetes, hypertension and stroke in adulthood. As children grow, immunisation protects them from harmful, and potentially fatal diseases.

The impact of 'Adverse Childhood Experiences' (ACEs) can have serious impacts on later life development of chronic diseases, mental health issues and problematic social functioning. There is an increasing body of evidence on the nature and impact of ACEs on health and functioning, the neurophysiological mechanisms underlying these impacts, and factors that can protect

[39] https://www.aihw.gov.au/reports-data/population-groups/children-youth/overview
[40] https://www.aihw.gov.au/reports/australias-health/health-of-children

against these impacts. While children from lower socio-economic positions may be at greater risk, individuals across all demographics can be exposed to ACEs. An estimated 72 percent of Australian children have been exposed to at least one ACE, with a higher rate in some vulnerable Australian populations.[41]

Chronic conditions that particularly affect children, such as asthma and diabetes, cancer, mental illness, and disability have a substantial impact on a child's overall quality of life. They can require considerable disease management and affect physical, social and emotional development, schooling attendance and education outcomes. There may also be an impact on family life, parental health and employment if time off work is needed for caring responsibilities, with a potential flow-on effect for household finance. This illustrates the inter-relationship of health with other domains of wellbeing.

Poor oral health is also associated with increased risk of chronic disease later in life, including stroke and cardiovascular disease (AIHW 2019). Children with poor oral health are also more likely to miss school and perform poorly in school (Jackson et al. 2011).[42]

Adolescence through to young adulthood is a critical period in a person's life. It is a time for finishing school, pursuing further training and education, entering the workforce, transitioning from dependence to independence and forming relationships. The foundations for future health and wellbeing are also laid down at this time.

Across the ages of 0-24 years a person would access a variety of services, many of which vary with age. The table below identifies some of the services required during childhood (by age group).

Age Group	Key services accessed / required
0 - 24 years	▪ Acute (including emergency) ▪ Allied health services ▪ Disability support services ▪ Community ▪ Primary care ▪ Illness and injury care ▪ Medical care ▪ Mental health services ▪ Surgical services ▪ Chronic disease management (e.g. diabetes)
0 – 4 years	▪ Audiology ▪ Immunisations ▪ Paediatrics (acute and community) ▪ Prevention services ▪ Mental health services
5 – 9 years	▪ Audiology ▪ Immunisations ▪ Paediatric healthcare

[41] https://emerginginds.com.au/resources/background-to-aces-and-impacts
[42] https://www.aihw.gov.au/reports/children-youth/australias-children/contents/executive-summary

	▪ Paediatrics (acute and community) ▪ Prevention services ▪ Mental health services
10 – 14 years	▪ Drugs and alcohol counselling and education ▪ Medical services ▪ Mental health services ▪ Paediatric healthcare
15 – 19 years	▪ Drugs and alcohol counselling and education ▪ Medical services ▪ Maternity services ▪ Ante-natal, birthing and post-natal care ▪ Mental health services ▪ Sexual health education and care
20 – 24 years	▪ Drugs and alcohol counselling and education ▪ Medical services ▪ Maternity services ▪ Ante-natal, birthing and post-natal care ▪ Mental health services ▪ Sexual health education and care

Adults (Working Age)

The number of adults (aged 25 to 64 years) residing in the catchment is projected to decrease with a decrease of approximately 760 people to 2031.

The age periods which shows growth across the catchment is 25 to 44 years, all other age groups have a decrease in population numbers.

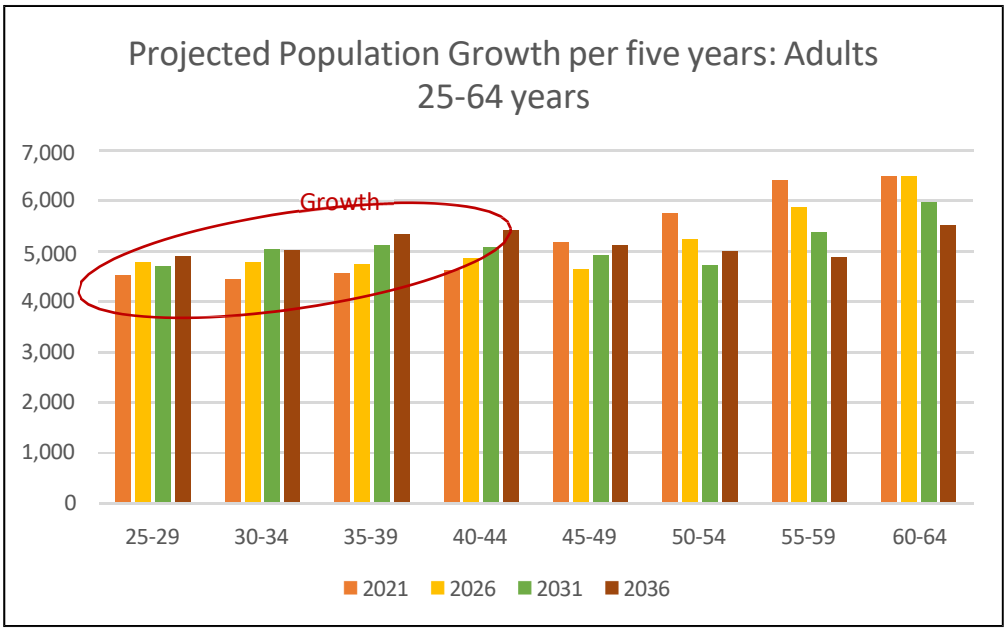


Figure 30 Projected population growth Adult

From the age of 25 years to 65 years is notionally identified as the 'working age' population.

The term 'working age' implies a focus on the labour force including employment, unemployment and underemployment. Life milestones during this life stage includes having children, getting married and / or divorced, becoming a single parent and home ownership.

The working-age population includes men and women in their 40s, 50s and 60s who may be helping support teenage children or children in their 20s and 30s who are still living at home, as well as providing care for younger children, ageing parents, and in some cases partners and young children from second and third families as well.

According to AIHW, in 2015 suicide and self-inflicted injuries was the leading cause of burden in young people aged 25–44, back pain and problems emerged as the second leading cause of burden for adults aged 25–44 and 45–64. Coronary heart disease was the leading cause of burden in adults aged 45–64, and Australians aged 65 and over.

Similar to children and youth, the services required during adulthood vary according to age.

Age Group	Key services accessed / required
25 – 64 years	Acute (including emergency) Allied health services Disability support services Drug and alcohol counselling Elective hospital care Fertility services Primary care Illness and injury care Ante-natal, birthing and post-natal care Medical care Mental health services Preventative care Sexual health Specialist services
25 – 34 years	Drugs and alcohol counselling and education Fertility services Medical services Ante-natal, birthing and post-natal care Mental health services Illness and injury care Sexual health education and care
35 - 44 years	Drugs and alcohol counselling and education Medical services Maternity services Fertility services Ante-natal, birthing and post-natal care Mental health services Sexual health education and care
45 – 54 years	Drugs and alcohol counselling and education Medical services Mental health services Oncology

Age Group	Key services accessed / required
55 – 64 years	Drugs and alcohol counselling and education Medical services Mental health services Oncology Primary care Specialist health services Social support groups

Older Adults

The number of residents aged 65 years and above is expected to grow by approximately 1950 people. This age group will make up 29 percent of the population in 2036 projections, this is much greater than the overall projected Victorian population of 18 percent people aged over 65 years. This will have major implications on the ERH service requirements into the future.

Women in the catchment are expected to live longer than men. The higher than state average number of Aboriginal and Torres Strait Islander population will also impact the types of service required in the catchment into the future. Indigenous populations have a higher mortality rate and lower life expectancy than non-indigenous Australians.

Older Australians are a diverse group, with different ages and socioeconomic backgrounds and different life experiences and lifestyles. These factors all influence the ageing process. From the age of 65 years, various life changes occur including retirement, financial stress related to reduced income, changes in roles and relationships associated with exiting the workforce and downsizing to a smaller property or moving into residential aged care.

During this stage the prevalence of managing multiple chronic illnesses increases, a person's ability to continue living independently may reduce and the risk of social isolation becomes more prevalent. Patterns of usage and length of stay also appears to be higher in later years.

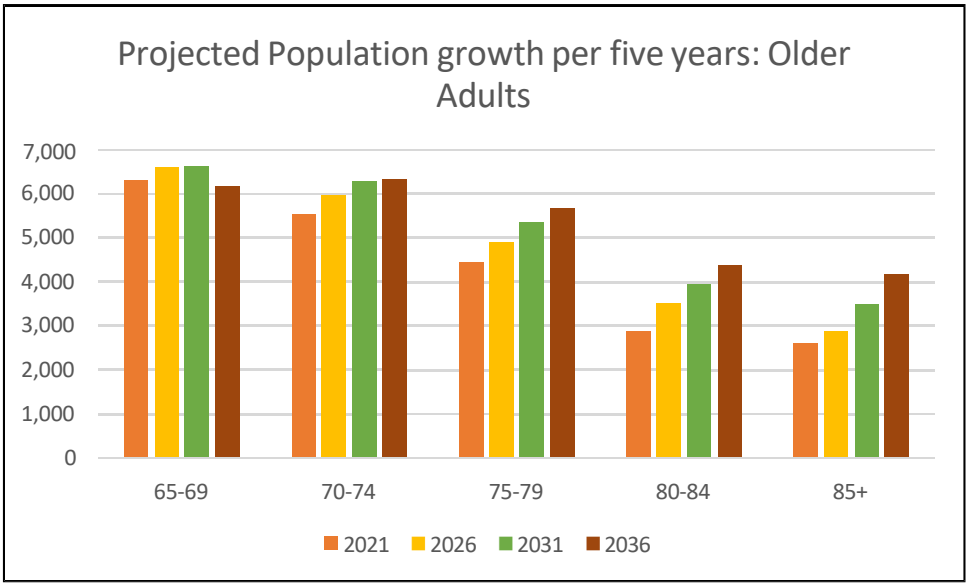


Figure 31 Projected population Older Adults

The table below identifies some of the services required during older adulthood (by age group)

Age Group	Key services accessed / required
65+ years	Acute (including emergency) Aged Care assessment Services Allied health service Assisted living support Disability support services Drug and alcohol counselling Elective hospital care Geriatric services Illness and injury care Medical care Mental health services Palliative care Primary care Preventative care Residential care Sub-acute services

Key service delivery implications All Ages

- Demand for primary and community services will remain stable or slightly increase based on population projections
- Demand for allied health services will increase slightly based on populations projections
- Demand for Emergency and Elective Services will increase slightly based on population projections
- The location of service delivery should remain in Campaspe based on the population projections increasing in this region.

Children and Youth

- Demand for children and youth services will remain stable assuming the current level of service is sufficient
- Demand for mental health services among youth will remain stable assuming the current level of service is sufficient
- Demand for paediatric hospital service will remain stable assuming the current level of service is sufficient.

Adults

- Mortgage and rental stress as well as psychological distress may have an increased impact on the community's quality of care.
- Demand for chronic disease management will increase as the current supply is not meeting demand/
- Demand for maternity services will remain stable
- Demand for carers respite and workers supporting carers will increase

Older Adults

- Increased demand for aged care assessment services, residential aged care, home, and community care
- Increases support for clients seeking to remain living in the community for longer
- Potential increase in hospital demand due to chronic and complex disease as well as increased life expectancy. Older people account for a high proportion of hospitalisations
- Increased requirements for services that target people in their senior years and / or pensioners

13.3 Future Demographics and Wellbeing Methodology

The future demographics of the catchment be explored by noting the current demographics in the catchment. The analysis assumes that the issues currently impacting the community's quality of life will continue to be an issue into the future.

The projected demographics reflect findings from the current situation and some additional information, including a snapshot of the overall burden of disease in Australia, assuming the catchment would mirror the snapshot.

Future Demographics

Burden of disease analysis is the best measure of the impact of different diseases or injuries on a population. It combines the years of healthy life lost due to living with ill health (non-fatal burden) with the years of life lost due to dying prematurely (fatal burden). Fatal and non-fatal burden combined are referred to as total burden, reported using the disability-adjusted life years (DALYs) measure.[43]

The disease groups causing the most burden (DALY) in 2015 were cancer (18 percent of the total burden), cardiovascular diseases (14 percent), musculoskeletal conditions (13 percent), mental and substance use disorders (12 percent) and injuries (8.5 percent). Together, they accounted for around two-thirds of the total burden in Australia.

Males and females experienced the majority of their burden from the same disease groups. However, cancer, cardiovascular diseases and injuries accounted for a greater proportion of the total burden in males, while musculoskeletal and neurological conditions accounted for more of the total burden in females.

[43] https://www.aihw.gov.au/reports/australias-health/burden-of-disease

Figure 32 Leading causes of total burden of disease by age group 2015 in Australia

The following table lists the assumed future demographic issues of the catchment based on the current situation and information provided.

Demographic Issue	Assumptions based in the current situation	Health and wellbeing implications
Socio-economic disadvantage	The level of socio-economic disadvantage will remain high for the catchment[44]	▪ Higher risk factors for poor health and chronic disease ▪ Higher smoking rates ▪ Higher cancer rates ▪ Higher mortality ▪ Poorer oral health ▪ Higher levels of psychological distress and mental illness ▪ Social isolation ▪ Family Violence

[44] Clients assisted by specialist homelessness services in Campaspe (rate per 10,000 people) was almost double the rest of Victoria

Demographic Issue	Assumptions based in the current situation	Health and wellbeing implications
Burden of disease [45]	The burden of disease will remain high for the catchment	▪ Ambulatory care sensitive conditions (ACSC) – hospital admissions will remain high
Health literacy	Health Literacy across the catchment will remain unchanged	▪ Less informed regarding their health ▪ Less likely to access health services ▪ More likely to access primary health care from the acute service system
Access to primary care	The number of General Practitioners will remain low across the catchment	▪ Less likely to have a usual GP or place of care ▪ More likely to go to an ED because no GP is available
Indigenous populations[46]	Lower income and educational levels, higher rates of unemployment and youth disengagement (compared to the general population).	▪ Increased Chronic and complex conditions ▪ Culturally safe service delivery ▪ Higher mental health and AOD service requirements ▪ Higher likelihood to be hospitalised than non-indigenous Australians. ▪ Higher than average need for dialysis services ▪ Difficulties engaging with mainstream services ▪ Homelessness ▪ Less control over their health and wellness ▪ Poor health literacy ▪ Sexual health
Rural location	Unchanged.	▪ Barriers to accessing service close to home ▪ Decreased information sharing between health providers ▪ Higher rate of potential preventable hospitalisations
English proficiency	The catchment will continue to have a higher than the state average of people who have low English proficiency	▪ Demand for language assistance services and health literacy support will remain
Fertility rate	The fertility rate will remain above the state average in the catchment. (2.07 compared to 1.63)	▪ Demand for ante-natal, birthing, and post-natal health services.
Sole parent families	The percentage of households headed by a sole parent will remain three times the state average (6.1% compared to 2.7%)	▪ Demand for bulk billing services, public sector health services, public dental services, and social support services
Disability support	The catchment will continue to have a high proportion of people requiring disability support	▪ Demand for NDIS services and public health services

Table 72 Demographic Assumptions

[45] The Acute ACSC hospital admission rates per 1,000 persons in Campaspe is 17 persons compared to 11 for the rest of Victoria
[46] The Aboriginal and Torres Strait Islander population is 5.5% of the total population within the catchment, this is more than five times the Victorian population average (0.8%)

Future Health and Well-being Issues

The exploration of the future health and wellbeing issues in the catchment will be divided into the following components:

- Health conditions;
- Health behaviours;
- Children and young people's characteristics; and
- Aged and disability characteristics.

For the purpose of exploring the future health and well-being issues in the catchment, the Clinical Services Plan will consider what the situation would be in the future if the current situation continues.

Methodology

The identification of the future health and wellbeing issues has been sourced from the Campaspe LGA profile. The Victorian state average has been used as the guide to determine if a particular health behaviour or condition is an issue.

The scenario assumes that the current situation in the Campaspe region will remain the same (10 years in the future). This assumes that the current health and well-being issues that are impacting the community would remain the same.

Health Conditions

The following conditions will continue to be in similar numbers compared to the Victorian state average.

- Diabetes – 6 percent of the Campaspe population compared with 5.9 percent nationally[47]
- Hypertension – 23.4 percent of persons aged 18 years and over compared with 23 percent for Victoria[48]
- Obesity – 37.4 percent aged 18 years and over, this is significantly higher compared with 31.3 percent in Victoria
- The rate of heart related hospital admissions in Campaspe (50.1 per 10,000 persons) is significantly higher than the Victorian average (40.6 per 10,000 persons). Campaspe has a heart disease mortality rate of (64.2 per 100,000 persons) compared to the Victorian average (60.2 per 100,000 persons)[49]
- All cancers – 12 percent above the Australian average.
    - Head and neck cancers – 16 percent above the national average;
    - Lung Cancer – 26 percent above the national average
    - Bowel Cancer – 13 percent above the national average
    - Leukemia – 6 percent above the national average[50]

[47] https://map.ndss.com.au/#!/
[48] https://www.heartfoundation.org.au/health-professional-tools/interactive-heart-map-australia
[49] https://www.heartfoundation.org.au/health-professional-tools/interactive-heart-map-australia
[50] https://atlas.cancer.org.au/app

Health Behaviours

The following conditions will continue to be in greater numbers compared to the Victorian State average.

- Increased lifetime risk of alcohol related harm considered to be risky to health, 69.7 percent compared with 59.5 percent (Victoria);
- Current smokers, people aged 18 years and over – 15.9 percent compared with 15.5 percent (Victoria);[51]
- Echuca has a rate of physical inactivity (70 percent), which is significantly higher than the national average (66 percent).
- Adult population daily consumption of sugar sweetened soft drinks is 18 percent in Campaspe compared with 10.1 percent in Victoria[52]
- Adult population complied with fruit consumption guidelines is 42.8 percent in Campaspe compared with 43.2 percent in Victoria
- Adult population complied with vegetable consumption guidelines is 5.4 percent in Campaspe similar with 5.4 percent in Victoria.

Mortality

Early deaths (0 years to 70 years) rate per 100,000 persons will continue to occur in the region at a greater rate than the rest of Victoria.

- Ischemic Heart Disease 25.6 (Campaspe) compared with 20.1 (Victoria)
- All Cancers 110.5 (Campaspe) compared with 93.6 (Victoria)
- Lung Cancer 21.8 (Campaspe) compared with 18.7 (Victoria)
- Breast Cancer 19.3 (Campaspe) compared with 15.8 (Victoria)
- Colorectal Cancer 6.8 (Campaspe) compared with 9 (Victoria)
- Respiratory Diseases 16.3 (Campaspe) compared with 15.3 (Victoria)
- Diabetes 7.5 (Campaspe) compared with 5.5 (Victoria)
- Suicide 17.3 (Campaspe) compared with 10.1 (Victoria)

[51] https://www.atlasesaustralia.com.au/ahpc/aust-health-tracker-area.html
[52] VPHS 2017

Key Health implications

- A wide range of health issues are impacting the quality of life of persons residing in the region, many of which are associated with poor lifestyle, health behaviours, economic circumstances and most are preventable.
- Financial stress, poor health literacy and language barriers maybe negatively impacting the community's health and wellbeing.
- A considerable proportion of the community are living on limited income and do not have Private Health Insurance. This is increasing the need for public health services.
- Life expectancy characteristics are poor; this is influenced by the health conditions, health behaviours as well as the demographics noted earlier.

CONCLUSION

The findings suggest the issues currently impacting the community will continue to be issues into the future. The organisational response will need to consider how the health service will work with the community and other health, social and community care organisations to improve the community health outcomes.

Projected Health Service Demand

The service plan will explore the health service demand projections for the following service types:

- Emergency Services
- Inpatient Services
- Outpatient Services
- Ambulatory Services

Methodology

The projections include residents living within the catchment, although it should be noted that the population does increase in size significantly during holiday season and with seasonal workers.

The inpatient and emergency service forecasts are obtained from the VAED data sets.

The projections are as requested to 2031/32.

Projected ED Demand

Methodology

Past activity data of public hospital emergency department services used for projection is extracted from the Victorian Emergency Minimum Dataset (VEMD) from 2006-07 to 2019-20 (14 years). The base year has been chosen to be 2019-20 but replacing March to June 2020 data with March to June 2019 data; this composite data will still be referred as 2019-20x. This will provide a model with more recent campus flows but with COVID-19 impacts on activity minimised.

This means that projected population census data for June 2019 will be aligned with activity data in 2019-20x.

Over the five years 2015-16 to 2020-21, ED presentations in Victoria increased by an average of 3.7 percent per annum. Catchment data indicates that ERH increased by 2.9 percent per annum during this period, recording 27,778 presentations in 2019-20, lower than the state average.

According to the VAHI projections, over the decade to 2036-37:

- The ERH Emergency Department is projected to grow incrementally, increasing by 1.21 percent per annum.
- ED demand is projected to increase over the next fifteen years at close to current presentations of 23,000 to 27,500 per annum.

	2019-20	2026-27	2031-32	2036-37	Raw change	Total change	Annual change
ED Attendances	22,961	24,563	26,002	27,508	4,547	19.80%	1.21%

Table 73 Projected ED attendances

Projected Inpatient Demand

Methodology

The Inpatient Projection Model utilisation rate (separations per 1,000 population) and average length of stay at a state-wide level for all combinations of age, gender, stay type and clinical related group. Other measures and variables for future years are derived and apportioned using information derived from the last available historic year also referred as the base year.

Over the period 2019-20 to 2036-37, there is a moderate growth projected in acute separations with ERH acute separations projected to increase by 1.55 percent per annum from 18,185 to 27,638

	2019-20	2026-27	2031-32	2036-37	Raw change	Total Change	Annual change
Acute Separations	13,202	14,628	15,858	16,895	3,694	28%	1.55%

There is an increase in demand projected across medical (1.2 percent per annum) and surgical (1.8 percent per annum) specialty groups.

Projections by Medical Specialties

Projected trends by medical-type MCRGs are summarised below:

MCRGs with a projected growth rate (highlighted in bold) between 2019-20 and 2036-37 more than 1.8 percent per annum include:

- Endocrinology, 2.6 percent per annum;
- Renal medicine, 2.6 percent per annum;
- Haematology, 2.6 percent per annum;

- Rheumatology, 2.3 percent per annum;
- Gastroenterology, 2.2 percent per annum;
- Neurology, 2.1 percent per annum;
- Chemotherapy and radiotherapy, 2.1 percent per annum (note: radiotherapy 0%); and
- Immunology & Infections, 2.0 percent per annum.

MRCG	2019-20	2026-27	2031-32	2036-37	Change pa.
4. Endocrinology	233	291	331	363	**2.6%**
12. Renal Medicine	48	60	68	74	**2.6%**
7. Haematology	432	533	606	667	**2.6%**
15. Rheumatology	64	76	84	94	**2.3%**
5. Gastroenterology	246	290	326	356	**2.2%**
11. Neurology	444	522	581	632	**2.1%**
10. Chemotherapy and radiotherapy	1,095	1,308	1,440	1,548	**2.1%**
8. Immunology and infections	309	362	400	432	**2.0%**
14. Respiratory medicine	584	644	709	770	1.6%
13. Dialysis	1,713	1,942	2,110	2,206	1.5%
17. General medicine	621	674	728	778	1.3%
9. Oncology	128	136	145	153	1.0%
1. Clinical cardiology	391	398	419	441	0.7%

Table 74 Projected acute separations by medical MCRG, 2019-20 to 2036-37

Projections by Surgical Specialties

MCRGs with a projected growth rate (highlighted in bold, blue) between 2019-20 and 2036-37 in excess of 1.8% per annum (and a minimum projected volume of more than 40 separations) include:

- Ophthalmology, 2.2 percent per annum; and
- Plastic and reconstructive surgery, 1.9 percent per annum

MRCG	2019-20	2026-27	2031-32	2036-37	Change pa.
6. Diagnostic GI endoscopy	1,314	1,455	1,570	1,664	1.40%
31. General surgery	812	880	945	1,005	1.26%
26. Orthopaedics	642	703	762	817	1.43%
36. Obstetrics	531	499	509	509	-0.25%
29. Urology	332	372	405	430	1.53%
28. Plastic and reconstructive surgery	320	365	404	438	**1.87%**
35. Gynaecology	315	307	314	318	0.06%
21. Upper GIT surgery	183	189	199	208	0.75%
27. Ophthalmology	172	208	233	250	**2.20%**
20. Colorectal surgery	120	127	134	140	0.93%

25. ENT	71	77	85	92	1.55%
24. Dentistry	46	41	40	40	-0.69%
30. Vascular surgery	40	40	41	42	0.29%

Table 75 Projected acute separations by surgical MCRG, 2019-20 to 2036-37

ERH is focused on growing the services that will have the greatest impact on health outcomes within the community now and into the future, with the aim of increasing the clinical capability of these services and ensuring access to services closer to home.

The services which will be the focus over the next 10 years include:

INPATIENT

- Maternity, neonatal, and paediatric services, constituted as a Women's and Children's service;
- HDU transition to an ICU service capability, as part of a Critical Care service in association with the ED; expansion of surgical service.

DAY SERVICES

- Day oncology services;
- Day surgery and endoscopy services;
- Renal services.

Projections by Sub-acute Demand

Sub-acute demand for bed-based services is projected to increase by 2.25 percent per annum over the period 2036-37.

Subacute care stream	Activity measure	2019-20	2026-27	2031-32	2036-37	Change per annum
Rehabilitation	separations	273	326	364	398	2.25%
Palliative care	separations	72	81	90	98	1.85%
GEM	separations	152	174	196	219	2.16%

Projections by Community Clinic Demands

The number of Tier 2 Clinics at ERH has doubled over the past five years from 14 clinic streams (2,023 contacts) to 27 clinic streams (16,172 contacts). Growth of 52 percent per annum in clinic contacts has occurred.

Although growth of clinics is unlikely to continue at this rate, the demand for public funded clinics is likely to increase over the next 10 years.

13.4 Self Sufficiency and Service Sustainability Principles

Self Sufficiency

Self Sufficiency is an indicative measure of access by residents of a primary catchment to their local service for clinical services. It assumes that availability / capacity levels of a particular clinical service influences or determines how many residents of a primary catchment receive that service at their local health service.

Self-sufficiency is calculated as the percentage of residents receiving public health services in total and those that receive that locally (as differentiated from those who get care elsewhere)

As a general aim, 70 percent of residents in a primary catchment should receive 70 percent[53] of those public health services they require from their local health service. This allows freedom of choice and appropriate referral outside of the catchment

The following table reflects the proportion of public health service separations for residents of the ERH catchment that occurred in public hospitals in the 2016-2020, inclusive of private patients who accessed services from the public system.

This table highlights that there are pockets of very low self-sufficiency across various specialties.

Type	MRCG	ERH Total	Out of Catchment Public Hospitals	Total public Hospitals	Self Sufficiency
Medical-type MRCG	10. Chemotherapy & Radiotherapy	842	939	1,781	47.3%
	11. Neurology	581	339	920	63.2%
	17. General Medicine	538	439	977	55.1%
	14. Respiratory Medicine	449	674	1,123	40.0%
	1. Clinical Cardiology	369	441	810	45.6%
	7. Haematology	358	668	1,026	34.9%
	5. Gastroenterology	252	306	558	45.2%
	8. Immunology & Infections	233	204	437	53.3%
	9. Oncology	227	269	496	45.8%
	4. Endocrinology	160	175	335	47.8%
	12. Renal Medicine	62	219	281	22.1%
	15. Rheumatology	16	124	140	11.4%
	2. Interventional Cardiology	0	506	506	0.0%
	3. Dermatology	0	56	56	0.0%
	Total	**4,087**	**5,359**	**9,446**	**43.3%**
	31. General Surgery	922	666	1,588	58.1%

[53] DH Metropolitan Health Plan Technical Paper May 2011 - Self-sufficiency is an important concept in service planning. Self-sufficiency refers to the ability of a service, within a particular area, to provide a minimum and appropriate level of service, both in amount and type, required by the local community. A benchmark level of 70 per cent is proposed as the level of self-sufficiency required in an area to meet the minimum appropriate levels of services.

Type	MRCG	ERH Total	Out of Catchment Public Hospitals	Total public Hospitals	Self Sufficiency
Surgical-type MRCG	6. Diagnostic GI Endoscopy	705	1,097	1,802	39.1%
	26. Orthopaedics	673	1,308	1,981	34.0%
	36. Obstetrics	501	276	777	64.5%
	20. Colorectal Surgery	413	95	508	81.3%
	30. Vascular Surgery	402	142	544	73.9%
	28. Plastic & Reconstructive Surgery	313	447	760	41.2%
	35. Gynaecology	279	421	700	39.9%
	29. Urology	205	525	730	28.1%
	27. Ophthalmology	165	803	968	17.0%
	21. Upper GIT Surgery	82	166	248	33.1%
	25. Ear, Nose & Throat	49	364	413	11.9%
	24. Dentistry	29	182	211	13.7%
	23. Neurosurgery	27	163	190	14.2%
	18. Breast Surgery	19	70	89	21.3%
	22. Head and Neck Surgery	5	67	72	6.9%
	33. Extensive Burns	4	6	10	40.0%
	19. Cardiothoracic Surgery	0	85	85	0.0%
	34.Tracheostomy	0	10	10	0.0%
	Total	**4,793**	**6,893**	**11,686**	**41.0%**
13. Dialysis		1720	1254	2974	57.8%
10. Chemotherapy & Radiotherapy		842	939	1781	47.3%
37. Qualified Neonate		0	95	95	0.0%
32. Transplantation		0	4	4	0.0%

Table 76 Catchment self-sufficiency per specialty, acute care episodes, all Campaspe and Gannawarra residents

An approach to improving sub-specialist availability to patients is to develop models of care that incorporate telehealth consultation services, in collaboration with other health services and healthcare providers. ERH already has a track-record in this regard in the provision of specialist stroke services, for example.

Medical Self-sufficiency

The overall level of self-sufficiency for medical MCRGs is 46.8 percent, which is much lower than expected. The catchment public hospital self-sufficiency was highest for the following acute medical specialties:

- Neurology, 63.2 percent;
- General medicine, 55.1 percent;
- Immunology and infections, 53.3 percent;

The five acute medical specialties with the lowest self-sufficiency were:

- Dermatology, 0.0 percent;
- Rheumatology, 11.4 percent;

- Renal medicine, 22.1 percent; and
- Respiratory medicine, 40.0 percent.

Surgical Self-Sufficiency

The overall level of self-sufficiency for surgical MCRGs is 41.0 percent, which is much lower than expected. The catchment public hospital self-sufficiency was highest for the following acute surgical specialties:

- Colorectal surgery, 81.3 percent;
- Vascular surgery, 73.9 percent;
- Obstetrics, 64.5 percent; and
- General surgery, 58.1 percent.

The five acute surgical specialties with the lowest self-sufficiency were:

- Cardiothoracic surgery, 0 percent;
- Tracheostomy, 0 percent.
- Head and neck surgery, 6.9 percent;
- ENT, 11.9 percent; and
- Dentistry, 13.7 percent.

The extremely low level of self-sufficiency for cardiothoracic surgery, tracheostomy and neurosurgery are appropriate given the complex and quaternary nature of care required for these specialty groups.

Less complex surgeries should be undertaken at ERH to improve the level of self-sufficiency for acute medical and surgical care.

Dialysis Self-sufficiency

The relatively low level of self-sufficiency for dialysis (57.8 percent) needs consideration and attention should be focused on increasing the availability of this service closer to home. With the commencement of the newly built Cancer and Wellness Centre at ERH, the number of chairs available for renal dialysis has not been increased. A review of the hours for this service should be undertaken.

Chemotherapy and Radiotherapy Self-sufficiency

The rate of self-sufficiency for chemotherapy and radiotherapy at 47.3 percent is well below the expected 70 percent and attention should be focused on an increase to enhance local access to chemotherapy.

Obstetric Self-sufficiency

ERH has a relatively low self-sufficiency for obstetric care (67.8 percent). All higher risk pregnancies are required to access care at a higher-level service such as Bendigo Health or Goulburn Valley Health (GVH). Twenty-five percent of all births for local women was undertaken at either of these hospitals.

Neonatal Self-sufficiency

ERH does not have a Special Care Nursery (SCN), with all neonates requiring that level of care being transferred to a higher-level facility. Qualified neonates have a self-sufficiency of 15.9 percent.

Paediatric Self-sufficiency

Limited specialist paediatric services are accessible at ERH, with most paediatric patients accessing care at other health services. The overall level of self-sufficiency for paediatric patients is 25 percent. The paediatric self-sufficiency was highest for the following clinical specialties with over 50 separations:

- General surgery, 47.1 percent
- Dentistry, 32.8 percent; and
- General medicine, 30.4 percent.

The clinical specialties with the lowest self-sufficiency for paediatrics are:

- Orthopaedics, 6.1 percent;
- ENT, 14.5 percent; and
- Respiratory medicine, 14.6 percent.

Sub-acute Self-sufficiency

Overall catchment public hospital self-sufficiency for subacute services is 66.6 percent. Specific self-sufficiency levels by subacute care streams are:

- GEM has a self-sufficiency at 66.0 percent, and should be between 85 to 90 percent;
- Rehabilitation was slightly below expected self-sufficiency at 60.1 percent, and should be around 80 percent;
- Palliative care has 83.1 percent self-sufficiency which is appropriate.

Inflows and Outflows

In 2019-20, ERH provided 1,190 acute separations to patients not residing in the catchment. They represent 10 percent of the total separations of the hospital. This is not surprising considering the seasonal fluctuations of holiday makers in the area.

The most notable inflow of 3,134 separations, accounting for 25 percent of catchment hospital activity, comes from interstate localities, including the shire of Murray River.

The flow of catchment residents to acute public hospitals outside the catchment totalled 6,235 separations. Bendigo Hospital is the predominant destination, accounting for 2,479 separations or 13.4 percent of the out of catchment flow.

Appendix 1 - Assumptions guiding the project

<table>
<tr><th>Assumption</th><th>Guideline/Rule</th><th>Definition</th><th>Rationale</th></tr>
<tr><td>1. Catchment</td><td>Planning for capital resources will be based on the defined primary catchment for the health service in question</td><td>A service plan requires a defined geographical area. This defined geographical area should be agreed prior to any data analysis and should consider primary catchment and out of primary catchment.

A primary catchment is those SLAs which the health service in question provides the highest proportion of in-patient separations as recorded by VAED in the most recent edition.

Primary catchment may vary for different clinical services provided by the same health service.

Out of primary catchment considers those separations which originate from SLAs outside the defined primary catchment. These are sometimes referred to as ‘in flows’ to a health service. There can be appropriate
inflows and non-desirable inflows.</td><td>DH will be the determinant of which SLAs will be considered as the primary catchment for any given health service. Some of the data that is published does not utilise SLAs in this instance refer the second assumption.

Although service plans do not automatically lead to or guarantee a capital solution, they do often recommend increases in capital resources to meet projected demand. To ensure the same population hence need is not counted twice by adjoining health services it is essential that a clear delineation of which health service can account for which SLA is made. This prevents a double allocation of resources by the two (or more) health agencies to meet the projected need of a single population</td></tr>
<tr><td>2. In-flows and Outflows</td><td>Health services will account for (i) 70% of outflows (i.e., People currently accessing services outside the catchment) from the primary catchment; and (ii) 30% of in-flows (i.e., people travelling into the catchment) to receive services from in the catchment – when conducting health service planning</td><td><table><tr><th>TERM</th><th>DEFINITION</th></tr><tr><td>Inflow</td><td>Those patients who present at a health service and whose place of residence is outside of that health service’s primary catchment</td></tr><tr><td>Outflow</td><td>Those patients who reside within health service’s primary catchment and present to another health service</td></tr></table></td><td>Residents of Victoria are free to attend whichever health service they choose, and regularly do so for a variety of reasons.
Despite this DH aims to achieve optimum access to local health services for all residents. However, outflows are appropriate when the resident of one primary catchment attends a different health service to access specialist or tertiary services not provided by the local health service.</td></tr>
<tr><td>3. Data – Historical and Forecast</td><td>Service planning will be mainly based on most recent ABS data as well as AIHW, PHIDU and VAED and VEMD and VINAH data sourced from the Northern Mallee Regional Service Plan. Future forecasts are</td><td>The primary source of current and forecast inpatient data is the Victorian Admitted Episode Dataset (VAED) patient separations.

The primary source of current and forecast Emergency Department data is the Victorian</td><td>Whilst is accepted that there are multiple stockpiles of data measuring various activities and different aspects of demographic information available, DH utilises a single</td></tr>
</table>

Assumption	Guideline/Rule	Definition	Rationale
	based on which future resource needs will be calculated.	Emergency Management Dataset (VEMD) patient presentations. The primary source of current and forecast outpatient data is the Victorian Integrated Non-Admitted Health dataset (VINAH) patient attendances. The primary demographic data has been obtained from the Australian Bureau of Statistics dataset (ABS).	forecast methodology for its planning. This ensures consistency with projected need.
4. Hospital in the Home (HITH)	Hospital in the home separation activity included in forecast separation activity will include virtual HITH beds. HITH will be used as a substitution strategy instead of an acute inpatient bed when appropriate.		
5. Self Sufficiency	Where appropriate for those services appropriate to be delivered by the health service, planning should seek to attain 70% self-sufficiency for those services.	Self-sufficiency is an indicative measure of access by residents of a primary catchment to their local health service for clinical services. It assumes that availability/capacity levels of a particular clinical service influences or determines how many local residents receive that service at their local health service. Self-sufficiency is calculated as the percentage of residents receiving public health care in total and those that receive that care locally (as differentiated by those that get that care elsewhere).	As a general aim, 70% of residents in a primary catchment should receive 70% of those public health services they require from their local health service] This allows for freedom of choice and appropriate referral/presentation outside of the catchment. In order to seek improvements in access to services and appropriate flows where possible, when planning for appropriate levels of service delivery/availability, plans should seek to achieve 70% self-sufficiency or higher.
6. Private Service Provision	Service Plan will consider private service provision (both current and proposed) when considering health service need of the primary catchment and endeavour to continue a mix of private and public utilisation ratio	ERH will provide health interventions fully funded by funds other than state public allocations (e.g. Commonwealth MBS, Private Insurance, NDIS).	The public/private service provision mix is important in health communities. It is a vital component of the health system and assists in alleviating demand for the public health system. Total VAED data inclusive of private separations can be used to identify potential gaps in the public services locally. Generally, the plan considers whether 45% of local separations are provided by the public sector.

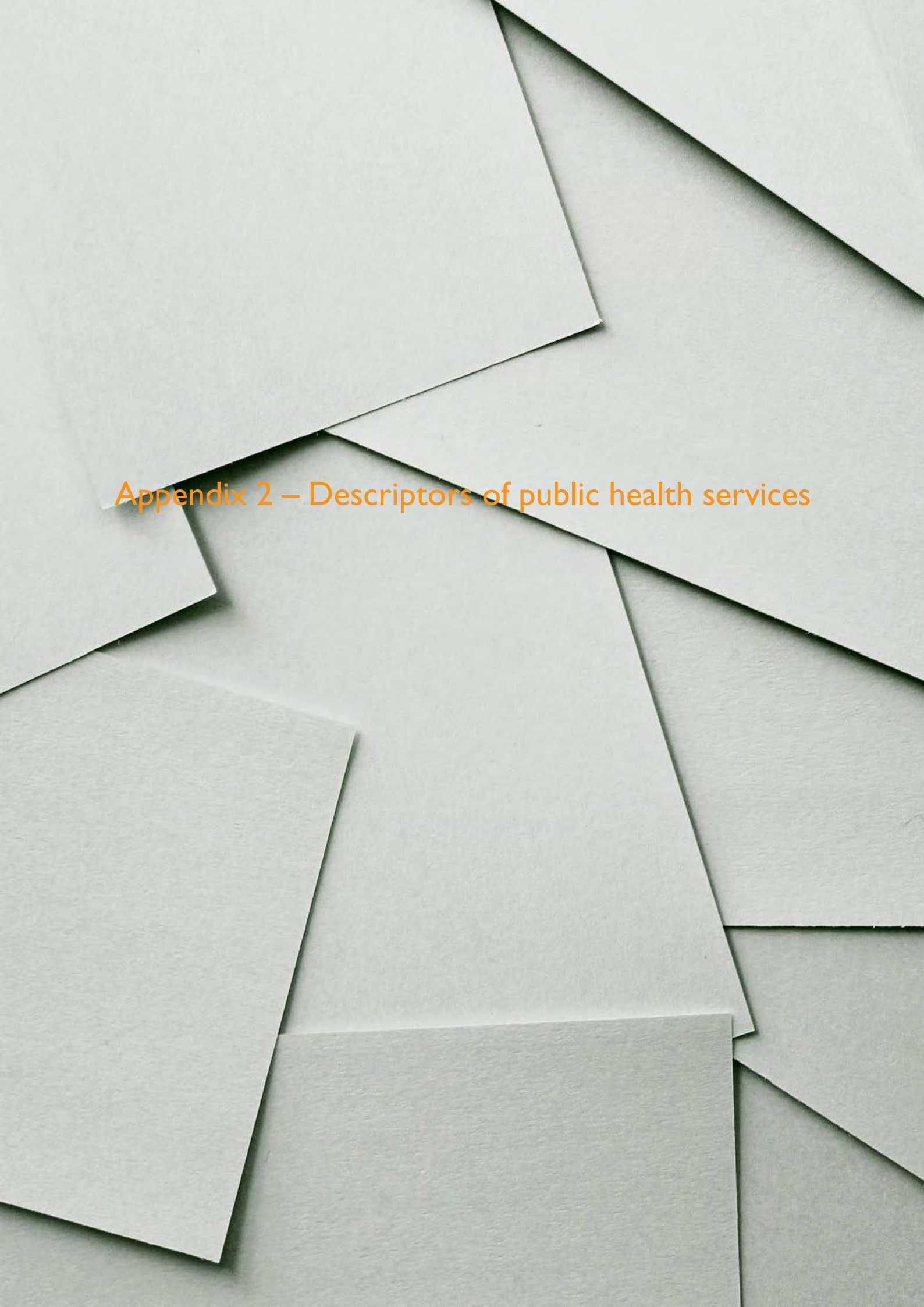
Assumption	Guideline/Rule	Definition	Rationale
7. Unqualified Neonates	When using VAED forecasting to calculate future POC requirements, unqualified neonates are to be excluded from the data used., i.e., only qualified neonates will be included in the calculations.	An unqualified neonate is a newborn infant who requires no special or separate care post birthing.	Current and forecast data excludes unqualified neonates as the separation is already in data under maternity (this avoids double counting). A POC for a qualified neonate in cot.
8. Renal Haemodialysis	DH Renal Program uses a unique methodology when forecasting demand for renal haemodialysis. On a two session per day scenario one haemodialysis chair will service two patients. On a three session per day scenario one haemodialysis chair will service three patients. Patients should not travel more than one hour each way to access dialysis services. 40-50% of individuals requiring haemodialysis should be planned to receive such service via home-based haemodialysis service.	The provision of renal haemodialysis as a day procedure in an ambulatory setting.	Haemodialysis services are based on an emerging model of care. Whilst no person requiring haemodialysis is waiting to receive the service, some patients may need to travel more than the recommended one hour to access the service.
9. Occupancy Rates	Only the occupancy rates provided by DH will be used for forecasting future capacity requirements to meet forecast demand per relevant treatment streams.	Occupancy rates is a weighting applied to POC forecasts to account for required redundancy which accounts for POC vacancies time due to cleaning, administration and flex need.	Service models for clinical services differ from type to type, depending on the service provided, location, hours of operation etc. To ensure consistent and fair estimation of POC required to meet future demand is maintained, DH has established benchmarks for most services which indicates the minimum occupancy rate which will be accepted when calculating resource need.
10. Baseline Capacity	The baseline capacity is the current available physical bed capacity. This should include unused current physical capacity.		Activity associated with ED same day/overnight admissions for adult and paediatric patients should be calculated to identify only separations not patients admitted to an inpatient ward. Whilst this activity does not contribute to bed capacity calculations, this should still be separately documented and analysed as part of the modelling.
11. Change in capacity to meet future demand.	The change in capacity required to meet future demand should be calculated by quantifying the incremental capacity required to meet forecast demand growth and the		

<table>
<tr><th>Assumption</th><th>Guideline/Rule</th><th>Definition</th><th>Rationale</th></tr>
<tr><td></td><td>capacity required to achieve benchmark occupancy rates.</td><td></td><td></td></tr>
<tr><td>12. Additional built capacity to meet future demand</td><td>The change in built capacity required to meet future demand is the total additional capacity required to meet future demand, less currently unused capacity available.</td><td></td><td>It is important to match available and required capacity at the functional level. For example, medical and surgical inpatient beds are interchangeable whereas medical and surgical same day beds may not be interchangeable.</td></tr>
<tr><td>13. Operating Rooms/Endoscopy Rooms/Procedure Rooms</td><td>The number of operating rooms required will be influenced by
a) The projected number of interventions required according to data from VAED database and a review of data for the internal hospital database
b) The agreed number of cases per sessions
c) The agreed number of sessions per day; and
d) The agreed number of weeks the operating room will operate per year.
e) Number Operating Rooms = a/(b x c x d)</td><td></td><td></td></tr>
<tr><td>14. Emergency cubicles</td><td>One emergency cubicle for each 1,100 presentations per annum.</td><td></td><td></td></tr>
<tr><td>15. Bed availability and occupancy rates</td><td>When calculating the current capacity of a service, facility or ward it is important to consider: (i) the number of days a bed is available per year (otherwise referred to as available beddays); and (ii) the occupancy rate. These respective figures assist in determining the current capacity of a unit or health service as well as the resources required to deliver services in the future. (Accounting for differences in service activity).</td><td><table><tr><th>TERM</th><th>DEFINITION</th></tr><tr><td>Available Beddays</td><td>The number of days a bed is available each year</td></tr><tr><td>Occupancy Rate</td><td>Measure of bed utilisation used to calculate the ‘total bed capacity of a service, facility or ward’</td></tr></table></td><td>The number of days a bed is available, and the occupancy rate differs according to the various treatment streams. It is important that these variations are considered when calculating the resources required for the treatment/s streams that re being considered.</td></tr>
</table>

Days/ Years available and Occupancy rates by treatment stream

The table below identifies the number of days a bed is available and the corresponding occupancy rate for various treatment streams.

	Treatment stream	Availability	Occupancy	Modelled department
01	Emergency multiday medical	365	0.85	07. Medical/Surgical/ICU
02	Non-emergency multiday medical	365	0.85	07. Medical/Surgical/ CU
03	Emergency multiday surgical	365	0.85	07. Medical/Surgical/ICU
04	Non-emergency multiday surgical	365	0.85	07. Medical/Surgical/ICU
06	Chemotherapy sameday	240	1.80	02. Oncology
07	Haematology sameday	240	2.0	02. Oncology
08	Renal and peritoneal dialysis	313	2.0	01. Renal Dialysis
09	Emergency sameday medical	365	1.5	08. Emergency Department and Med Short Stay
10	Non-emergency sameday medical	240	2.0	08. Emergency Department and Med Short Stay
12	Emergency sameday surgical	365	1.5	03. Day Procedures
13	Non-emergency sameday surgical	240	2.0	03. Day Procedures
14	Endoscopy sameday	240	2.0	03. Day Procedures
16	Caesarean delivery	365	0.80	09. Maternity
17	Vaginal delivery	365	0.80	09. Maternity
18	Maternity sameday	240	2.0	09. Maternity
19	Maternity multiday	365	0.78	09. Maternity
20	Mental health (MH funded)	365	0.95	Exclude form allocations
21	Alcohol and drug	365	0.85	07. Medical/Surgical/ICU
22	Interim Care	365	0.95	14. GEM/Restorative Care
23	GEM	365	0.95	14. GEM/Restorative Care
24	Rehabilitation	365	0.95	15. Rehabilitation
25	Palliative care	365	0.90	16. Palliative Care
27	Paediatrics multiday	365	0.85	10. Paediatrics
28	Paediatrics sameday	240	2.0	10. Paediatrics
29	Qualified neonates	365	0.75	11. Neonatal
30	Unqualified neonates	365	0.75	Exclude from allocation
11	Sameday – overnight ED	365	1.5	Exclude from allocation
31	Sameday – overnight ED paediatrics	365	1.5	Exclude from allocation



Appendix 2 – Descriptors of public health services

The table below provides a descriptor of various types of health services (with the exception of registered community health centres)

Classification	Descriptor
Specialist Health Service	Specialises in a cohort or specific clinical stream/s as core business. Treats the most complex patients, accepting referrals from across the state. Requires highly specialised skills, technology and supporting infrastructure.
Tertiary Health Service	Provides comprehensive range of services, with highly specialised service units and ;large patient volumes. Accepts referrals from other health services to provide the most complex and specialist care
Major Metropolitan Health Service	Provides a wide range of high-level services and manages large patient volumes, although not the extent of tertiary health services.
Regional Health Service	Regional Health Services are the first referral point for higher complexity patients from sub-regional and local health services. They provide clinical advice and specialist support, when required to Sub-regional and local health services. They are located in large regional towns.
Sub-Regional Health Service	Sub-Regional Health Services provide low to moderate complex ambulatory and/or inpatient care services to its local communities, in partnership with primary care. Most have a major focus on providing public residential aged care. They are located within medium to large towns across Victoria.
Local Health Service	Local Health Services provide low complex ambulatory and/or inpatient care services for its local communities in partnership with primary care. Most have a major focus on providing public residential aged care. They are located within medium to large towns across Victoria.
Small Rural Health Service	Local Health Services have few beds and provide care for few admitted patients.

Appendix 3 – Stakeholder Engagement

Board Directors
CEO
Executive
Maternity and Neonatal Services Reference Group
Department of Health
Emergency Department
Rehabilitation Unit
Medical Unit
High Dependency Unit
Perioperative Unit
Surgical Unit
Maternity Unit
Community Services
Allied Health
Senior Medical Staff
Consumer Advisory Group
Health Information Services
CEO Cohuna District Hospital
CEO Rochester and Elmore District Health Service
CEO Bendigo Health
Bendigo Mental Health
Cancer Services Model of Care Consultant
Elective Surgery Reform Project Lead Loddon Mallee Health Service Partnership
The University of Melbourne
Latrobe University
Ambulance Victoria