Echuca Regional Health

Echuca Regional Health

Clinical Service Plan

2019 - 2023

Supporting everyone to be healthy and live well

CONTENTS

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1 Executive Summary

Echuca Regional Health is an "outer regional health service" providing cross-border health care services for people living in the Shire of Campaspe (Victoria) and in Murray River Council (New South Wales). Services provided include acute inpatient, outpatient, emergency department, haemodialysis, chemotherapy, surgical, maternity, district nursing, community health and aged care services. Echuca Regional Health is located within the Loddon Mallee Primary Care Partnership and Murray Primary Health Network. In 2018, Echuca Regional Health commissioned Biruu.Health to complete a Strategic Services Plan.

1.1 Current service environment

Changing demographics. Echuca Regional Health services a broad, cross-border population that while not expected to significantly grow, is rapidly ageing. Age-related illness including cancer, chronic conditions, and multiple comorbidities will continue to present service delivery challenges.

Location-based challenges. Surrounded by small rural health services, Echuca Regional Health faces further demand increases as the smaller providers continue to close or reduce their role in higher-risk services such as maternity, surgery and urgent care. Echuca Regional Health is the fund holder and leader in the local area health partnership with Swan Hill District Health, Kerang District Health, Cohuna District Hospital, Rochester and Elmore District Health Service, and Kyabram and District Health Service. Eventually the area-based partnership will make joint decisions about referral networks, distribution of services, role delineation and facility planning.

Cross-border challenges. The nearest New South Wales hospital is located one hour away in Deniliquin. Complicated referral pathways due to border-based patient admission restrictions, particularly for mental health services, sometimes mean that patients need to be transferred far from where they live.

Tourism demand. The Murray River environment attracts thousands of tourists each year, and Echuca Regional Health sees increasing service demand particularly during holiday periods and weekends when frequent events are locally held. Injury-related admissions during these periods are frequent.

1.2 Issues to be addressed

The recent redevelopment of the hospital campus has provided for new inpatient units, perioperative facilities, emergency department, front foyer and quiet space. A dedicated space was created for Aboriginal and Torres Strait Islander people attending the health service, supported by the Aboriginal Liaison Service and in partnership with Njernda Aboriginal Corporation to provide further services including home-based palliative care. Significant work has been done on the development of a new wholistic cancer service.

The consultation process revealed some additional high priority issues to be addressed:

- *Size and role of the service*. Significant growth in service demand, coupled with financial stress and responding to the needs of its local community and cross-border residents, have challenged Echuca Regional Health during the last four years. The lack of resources has presented further challenges for service development, new models of care, and participation in regional initiatives
- *Increased demand for services.* Catchment population growth is steady, and the Murray River environment attracts thousands of tourists each year. The number of people aged over 65 will continue to grow
- *Health services in the community.* The community health program needs its own model of care that supports population-focused primary and secondary prevention services working in partnership with primary, secondary and tertiary health care services
- *Emergency department.* Staffing restrictions present several challenges as presentations continue to increase in the emergency department. Current pathways for New South Wales patients presenting with a mental health emergency are complicated by the area mental health service (Bendigo Health) only providing services for Victorian residents
- *Workforce*. One of the high priorities for Echuca Regional Health will be to develop a hybrid specialist / generalist medical workforce profile and to improve relationships and information flows between Echuca Regional Health and the general practices across its catchment communities
- *Mental health services.* The mental health service system is difficult to navigate, and there is limited access to on-site mental health support. People are not able to access public clinical or non-clinical mental health services across the border, even if that cross-border service is their most convenient
- *Facilities and resources.* The next round of facility issues to be addressed includes reducing travel distances across the hospital campus, re-purposing old buildings, increasing office space, and upgrading consulting suites. Glanville House is no longer meeting community and resident expectations. Additional space may also be needed for corporate and back-of-house services and some support services.

1.3 Strategic service plan challenges

Current strategic service plan challenges include:

- *Optimising complex services*, including the emergency department, high-dependency care, obstetrics and paediatrics
- *Partnering with other health services to provide low volume, complex services* for people who need multi-disciplinary elective care in response to complex and sometimes chronic conditions such as cancer, psychiatric illness, or organ failure
- *Improving the efficiency of high volume services* including same day surgeries and day medical procedures such as endoscopy
- *Strengthening primary and community-based services*. Distinct models of care are needed for community health, community-based primary care, community-based acute services, and chronic illness
- *Responding to aged care services demand*, in particular for services delivered at home and in the community.

1.4 Next Steps

In order to respond to increasing demand, Echuca Regional Health will:

- Prepare a medical workforce plan that identifies new models for blended specialist / generalist medical teams in high-priority services
- Review the community health model and build an integrated chronic illness management strategy lead by the community health team
- Review the Victorian capability frameworks for maternity and neonatal services and discuss with Department of Health and Human Services what action would need to be taken to achieve Level 4 maternity services and Level 3 neonatal services. It may be necessary to upgrade the high- dependency unit as part of this process
- Prepare a technology strategy that prioritises investment in clinical, administrative and resource- management systems, as well as medical equipment
- Prepare unit-by-unit plans based on the overall forecasts and strategies discussed in this document. Each plan needs to consider future demand profiles, workforce needs, and technological innovation and change. Particular attention should be paid to general medicine
- Based on the unit-by-unit plans, consider an infrastructure strategy which allocates priority to investment in upgrades, modernisation and expansion of facilities
- Commence discussions with Department of Health and Human Services on appropriate role delineation and care pathways within the Loddon Campaspe Mallee Partnership
- Review and if necessary update the Strategic Plan priorities consistent with the outcomes described in this document
- Consider development of a Medical School in Echuca during the next five to ten years. This would particularly support local young people through medical undergraduate training, internships, and registrar training; and may help to attract more young rural people into medical careers.

2 Introduction

Echuca Regional Health has commissioned Biruu.Health to develop a strategic services plan that considers the current service demand, and anticipates what the future service profile will look like.

2.1 Methodology

This strategic service plan was developed following a wide information gathering process which included consultation with Echuca Regional Health staff, board and volunteers; a public-access consultation meeting; and compilation of publicly available, departmental and hospital-provided data.

Strategic directions were considered by the Board Directors and senior staff at a planning workshop.

A list of people who attended consultation meetings and/or planning workshops is provided at Appendix 1. We thank them for their input.

2.1.1 Data Sources

Data for this document were obtained from several sources, including:

- Publicly available information from the Australian Bureau of Statistics and Victorian Department of Health websites
- Victorian Department of Health, Modelling, GIS & Planning Products website
- Victorian Agency for Health Information (VAHI), Victorian Department of Health and Human Services: hospital-based activity data
- Data provided by Echuca Regional Health.

Table 1 Data sources

Data type	Data source
Population	Population projections were sourced from Victoria in Future 2016, developed by the Department of Transport, Planning and Local Infrastructure. Socio-Economic Indexes for Areas (SEIFA) figures were sourced from the Australian Bureau of Statistics 2011 Census of Population and Housing.
Health status	Data on the health status of the catchment population was accessed through several sources, including: Victorian Health Information Surveillance System (VHISS), Health Intelligence Unit, Prevention and Population Health Branch, Wellbeing, Integrated Care and Aged Division of the Department of Health Victoria;
Victorian Admitted Episodes Dataset	Data provided by Victorian Agency for Health Information (VAHI), Department of Health and Human Services: Admitted episodes provided by Echuca Regional Health to any Victorian or interstate person Admitted episodes provided by Victorian public health services to any person whose postcode of usual residence is within Campaspe Shire
Victorian Emergency Minimum Dataset	Data provided by Victorian Agency for Health Information, Department of Health and Human Services: Emergency episodes provided by Victorian public health services to any person whose postcode of usual residence is within Campaspe Shire
Community health, allied health and aged care services	Provided by Echuca Regional Health. Home care packages data provided by the Australian Institute of Health and Welfare (AIHW), Disability and Ageing Unit.

2.2 Policy environment

2.2.1 Statewide design, service and infrastructure plan for Victoria's health system 2017–2037

The Victorian statewide design, service and infrastructure plan includes five priority areas:

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 recommendations of this service plan align with the State's infrastructure plan by responding to community service demand and ageing demographics, and improving the rural catchment population's access to services by strengthening partnerships and building an integrated chronic disease model.

Echuca Regional Health is delineated as an "outer regional" health service, within the Loddon Campaspe Mallee Partnership area. One goal of the plan is to strengthen regional health systems so that rural Victorians receive more care locally, and can

return home sooner if they are transferred to a larger centre for complex care (page 75). Enablers include:

- Delivery of a wider range of care as a result of technology-enabled, networked service arrangements that boost regional and sub-regional self-sufficiency
- More access to advanced practice roles and medical support for urgent care centres in rural Victoria
- Stronger collaboration for translational research and spread of innovation to regional Victoria
- Reconfiguration of services and facilities adjust to an ageing rural Victorian population.

As an outer regional health service, Echuca Regional Health is required to support its local network of smaller rural health services to provide low-complexity urgent care and acute health services for their own communities.

2.2.2 Echuca Health's role in sub-regional service system

Consistent with the *Statewide design service and infrastructure plan 2017 – 2037*, Echuca Regional Health is the fund holder and leader in the local area. The area health partnership is required to jointly consider service gaps and priorities, and to monitor demand trends. Other members are Swan Hill District Health, Kerang District Health, Cohuna District Hospital, Rochester and Elmore District Health Service, and Kyabram and District Health Service.

Eventually it is expected the area-based partnership will make joint decisions about referral networks, distribution of services, role delineation and facility planning. The Statewide plan (page 97) specifies that each area needs to consider:

- The impact of workforce changes and the extension of access to telehealth
- The implementation of more clearly delineated roles for rural and regional health services, influencing the type and level of services they offer
- The impact of formal networks on referral arrangements and pathways for providing care
- Changes to emergency care, elective surgery and patient transport arrangements
- Changes in services for older people and for maternity and newborn services.

2.2.3 Integrated chronic disease management

The Department of Health and Human Services identifies community health and primary care as key components in an integrated chronic disease management approach that is responsive, person-centred and effective. The aims[1] are to:

- Slow the rate of disease progression while maximising health and wellbeing
- Improve access to quality, integrated multidisciplinary care
- Facilitate client and carer empowerment through self-management programs and approaches
- Actively engage general practitioners as part of a multidisciplinary coordinated approach
- Reduce inappropriate demands on the acute health care system.

2.2.4 Aged care policy in Australia

The Australian Government made significant changes to the funding and policy environment for aged care during the period 2012 to 2014. This group of reforms, known as *Living Longer Living Better*, included:

- Additional support and care to help older people remain living at home
- Additional help for carers to have access to respite and other support
- Establishing a gateway to services to assist older Australians to find information and to navigate the aged care system
- Changes to means testing in home and residential aged care
- Changes to improve services for people with dementia
- Additional funding for the aged care workforce.

Since then, the Australian Government has continued to reform the sector with additional requirements for the care and support of people with dementia, and more initiatives to strengthen the aged care workforce.

Funding models in residential aged care no longer recognise a distinction between "high-level" and "low-level" care. Residents are assessed against the Aged Care Funding Instrument, and a payment is made to the provider based on the assessed care needs of the individual. It is expected that residents will be able to "age-in-place", so that they do not need to relocate to another service type in order to receive higher levels of care. This will have long-term implications for the design of residential aged care facilities operated by Victorian public health services, many of which were designed to be consistent with the previous policy requirements.

[1] < https://www2.health.vic.gov.au/primary-and-community-health/primary-care/integrated-care/integrated-chronic-disease- management/icdm-in-victoria>

The current direction of reform emphasises increased consumer control, through transfer of funding for home care packages directly to the older people themselves. It is expected that these changes will increase competition in the aged care market, and drive higher levels of efficiency and quality. It means that providers will no longer need to apply to the Australian Government for Approvals in Principal to provide home care services, but will attract clients who will have the capacity to purchase services from them.

3 About Echuca Regional Health

Echuca Regional Health is a public health service, governed by an independent Board. It is designated as an "outer regional health service" by the Victorian Department of Health and Human Services, providing health care for people living in the Shire of Campaspe (Victoria) and in Murray River Council (New South Wales). Echuca Regional Health operates a hospital campus in central Echuca, with the following facilities:

- Inpatient units: 26 medical beds including three high dependency; 18 surgical beds; nine maternity beds; 24 sub-acute beds
- Same day medical services: six renal dialysis chairs; four chemotherapy chairs; four dental chairs
- Emergency department: nine cubicles, four short-stay beds
- Surgery: three operating theatres, five recovery beds, and central sterile services department (CSSD). One theatre is not in use
- Aged care: 60 residential beds including 15 high-care places for people with dementia (Glanville House)
- Specialist consulting rooms
- Community health services are co-located with the hospital campus, in the Hopwood Centre.

Echuca Regional Health is the largest employer in Campaspe Shire, employing over 750 staff. The health service has an operating budget of $71 million and returns in excess of $42 million each year to the community in salaries, wages and purchases from local businesses.

The hospital has recently undergone a redevelopment, which was funded in 2011 and included a new emergency department and short stay unit, new inpatient units, new perioperative unit, installation of Magnetic Resonance Imaging and a new foyer with a café and gift shop. The final stage was opened during 2017.

The proposed new cancer and wellness centre will provide day medical services including infusions and chemotherapy, as well as flexible facilities for individual consultations and group programs to support people during and after their cancer treatment. The proposed centre will include dialysis services and specialist consulting rooms as well.

3.1 Strategic priorities

The Strategic Plan (2015 – 2018) included five priorities. Work has been completed under each of these headings:

- Develop services: meeting community need; redesign for efficiency and quality
- Develop our workforce: training, performance culture, sustainability
- Our infrastructure: physical and technical support for quality services; health precinct planning
- Our role: community leadership; teaching hospital
- Take a leadership role: develop enablers which include managing our

finances for sustainability and growth and strengthening partnerships with key organisations.

For the purposes of this Strategic Service Plan, it has been assumed that the strategic priorities will remain relatively consistent during the next five year planning cycle.

3.2 Acute health services

A significant percentage of patients are residents from New South Wales. The nearest hospital in New South Wales is in Deniliquin, a one-hour drive to the north of Echuca.

3.2.1 Surgical Services

Echuca Regional Health provides general surgery, urology, gynaecology, ophthalmology, orthopaedics, vascular and dental surgery. The list will be expanded to include vascular surgery during 2019. Visiting surgeons attend from Bendigo, Melbourne and Shepparton, and the service is supported by general practitioner anaesthetists and general practitioner proceduralists. Echuca Regional Health also provides a surgical service to Rochester and Elmore District Health Service, staffing and operating three days per month; the surgical team includes a general practitioner anaesthetist, one theatre technician, seven nurses and a CSSD technician. Patients attend a pre-operative clinic in Echuca or at their local health service.

Echuca Regional Health has jointly engaged some general surgeons with Bendigo Health. This arrangement provides the surgeons with access to the more-complex surgery provided by Bendigo Health, as well as some high volume less-complex lists at Echuca Regional Health. The focus has been to increase the use of surgeons from Bendigo and reduce the reliance on Melbourne and Shepparton surgeons.

Surgery operates with two of its three theatres and five first-stage recovery beds. Patients are transferred to an inpatient unit or to a second stage recovery unit with four trolleys and six chairs. Theatre is scheduled Monday to Friday 08:00 hours to 17:30 hours, with on call availability 24 hours, seven days per week.

3.2.2 Medical Services

Two physicians visit two days per week, providing ward rounds. Echuca Regional Health has engaged two geriatricians, one providing four sessions per week and one providing two sessions and community- based consultations.

Medical day treatments include oncology and renal dialysis. There are good models of care, and the recently-established care coordination roles are working well. Some of these positions are funded externally: community groups fund a prostate cancer coordinator and the McGrath Foundation funds a breast cancer coordinator. Other coordinators are funded internally. Visiting Medical Officers from St Vincent's Health provide a haematology service; visitors from Bendigo Health provide the oncology service.

Renal dialysis is provided Mondays, Wednesdays and Fridays for one session each day.

3.2.3 Palliative Care

Bendigo Health provides the regional palliative care consultancy service, and most patients remain under the care of their general practitioner and local health service. Echuca Regional Health provides a specialist palliative care nursing service that works with general practitioners and local health services to maintain people's wellbeing at the end of their life, and to help them achieve their end-of-life goals including making real the option to die at home if they wish. The catchment area includes Campaspe Shire, Cohuna area and parts of southern New South Wales.

3.2.4 Diagnostic services

Diagnostic services are provided under contract:

- Imaging provided by Goulburn Valley Imaging Group: x-ray, computerised tomography, magnetic resonance imaging, ultrasound. Available during business hours, although the outsourced provider has recently presented a proposal to extend hours to Saturdays and Sundays. Most weekend demand is for ultrasounds and magnetic resonance imaging
- Pathology: available until 2100 on weekdays and until 1700 on weekends.

3.3 Inpatient services provided by ERH

This section provides a view of admitted activity at Echuca Regional Health over the last three years, with a summary of inpatient separations provided in Table 2 below. Appendix 2 includes a more comprehensive view of admitted inpatient activity at Echuca Regional Health, and by Campaspe Shire residents at other Victorian hospitals.

Overall from 2015/2016 to 2017/2018, inpatient separations at Echuca Regional Health have increased by 15.5 per cent, particularly due to rising demand in same day and multiday medical activity.

Table 2 Summary of inpatient separations at ERH from 2015/2016 to 2017/2018

	2015/2016	2016/2017	2017/2018	Per cent change 2015/2016 to 2017/2018
Multiday				
Medical	2523	2746	3106	23.1%
Surgical	652	672	729	11.8%
Same day				
Medical	1633	1884	2488	52.4%
Surgical	912	970	942	3.3%
Scopes	1158	1377	1319	13.9%
Renal dialysis	1619	1497	1434	-11.4%
Chemotherapy	825	895	833	1.0%
Other				
Obstetrics	87	62	88	1.1%
Births	384	325	408	6.3%
Unqualified neonates	377	324	408	8.2%
GEM	89	75	102	14.6%
Rehab acute	208	240	225	8.2%
Palliative care	64	67	80	25.0%
Total separations	**10531**	**11134**	**12162**	**15.5%**

**Note: Totals for medical and surgical may differ from other data tables due to obstetrics activity reported separately.*
Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Same day medical/other inpatient separations from people who live in Victoria in Future Small Area (VIFSA[2]) Echuca Town and New South Wales have steadily increased over the past four years (Table 3). In 2017/2018, just over half of same day medical/other separations were from VIFSA[2] Echuca Town residents while a further 23.0 per cent of separations were from people who live in New South Wales.

Table 3 Where patients are coming from for same day medical/other inpatient services* at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or state	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	699	854	935	1281	582	83.3%
New South Wales	407	461	478	582	175	43.0%
VIFSA Rochester District	100	107	171	220	120	120.0%
VIFSA Kyabram District	85	118	119	185	100	117.6%
VIFSA Cobram-Numurkah	58	35	48	50	-8	-13.8%

[2] Victoria in Future Small Area: https://www.planning.vic.gov.au/land-use-and-population-research/victoria-in-future-2016/vif- geographic-areas

VIFSA or state	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Gannawarra Shire	36	43	49	33	-3	-8.3%
VIFSA Rushworth District	8	14	16	25	17	212.5%
Other VIFSA or State	40	51	95	158	118	295.0%
Total	**1433**	**1683**	**1911**	**2534**	**1101**	**76.8%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

VIFSA: Victoria in Future Small Area

Forty-one per cent of same day surgical activity in 2017/2018 was from people who live locally in VIFSA[2] Echuca Town, followed by people who live in New South Wales (21.2 per cent) and VIFSA[2] Rochester District (11.3 per cent) (Table 4).

Table 4 Where patients are coming from for same day surgical inpatient services* at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or state	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	459	375	410	389	-70	-15.3%
New South Wales	271	248	284	200	-71	-26.2%
VIFSA Rochester District	84	101	88	106	22	26.2%
VIFSA Kyabram District	45	46	45	54	9	20.0%
VIFSA Gannawarra Shire	42	47	40	53	11	26.2%
VIFSA Cobram-Numurkah	15	18	9	29	14	93.3%
VIFSA Greater Bendigo Rural	12	7	10	13	1	8.3%
VIFSA Shepparton Town	8	6	11	16	8	100.00%
VIFSA Rushworth	11	6	<5	15	4	36.4%
Other VIFSA or State	83	59	71	67	-16	-19.3%
Total	**1030**	**913**	**970**	**942**	**-88**	**-8.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

VIFSA: Victoria in Future Small Area

During 2017/2018, "Lens Procedures" was the most frequently coded Diagnostic Related Group (DRG) for same day surgical activity at Echuca Regional Health (15.5 per cent of activity), followed by "Other Skin, Subcutaneous Tissue and Breast Procedures" (10.3 per cent), "Diagnostic Curettage and Diagnostic Hysteroscopy" (8.5 per cent) and "Other Skin Grafts and Debridement Procedures" (7.6 per cent) (Table 5).

Table 5 Top Diagnostic Related Groups for same day surgical inpatient activity* at ERH 2014/2015 to 2017/2018

Diagnostic Related Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change 2014/ 2015 to 2017/ 2018	Per cent change
Lens Procedures	135	131	141	146	11	8.1%
Other Skin, Subcutaneous Tissue and Breast Procedures	149	101	93	97	-52	-34.9%
Other Skin Grafts and Debridement Procedures	65	64	83	72	7	10.8%
Hernia Procedures	70	76	74	60	-10	-14.3%
Diagnostic Curettage and Diagnostic Hysteroscopy	77	73	75	80	3	3.9%
Carpal Tunnel Release	58	48	68	59	1	1.7%
Hand Procedures	40	50	46	43	3	7.5%
Abortion W OR Procedures	53	52	51	36	-17	-32.1%
Other Knee Procedures	87	56	52	71	-16	-18.4%
Plastic OR Procedures for Skin, Subcutaneous Tissue and Breast Disorders	31	41	43	31	0	0.0%
Other Vagina, Cervix and Vulva Procedures	19	26	19	27	8	42.1%
Other Uterus and Adnexa Procedures for Non-Malignancy	19	25	23	19	0	0.0%
Lwr Limb Procs W/O Ulcer/Cellulitis W/O (Skin Grafts	11	9	19	19	8	72.7%
Other DRG	216	161	183	182	-34	-15.7%
Total	**1030**	**913**	**970**	**942**	**-88**	**-8.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The average length of stay for multiday and overnight medical/other acute inpatient activity at Echuca Regional Health has decreased by 0.8 days over the last four years, while separations and bed days have continued to increase (Table 6).

Table 6 Average length of stay of multiday/overnight medical and other inpatient activity* at ERH 2014/2015 to 2017/2018

	2014/2015	2015/2016	2016/2017	2017/2018	Change 2014/2015 to 2017/2018	Per cent change
Separations	2285	2560	2780	3151	866	37.9%
Bed days	9355	10179	10319	10525	1170	12.5%
Average length of stay (days)	4.1	*4.0*	*3.7*	*3.3*	*-0.8*	*-18.4%*

**Excludes births and unqualified neonates. Care type 4 only (other acute). Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

3.3.1 Scope procedures same day

Total same day scope procedures (colonoscopy, endoscopy and gastroscopy) have increased by 14.7 per cent overall during the past four years, with a particular increase in colonoscopies performed (Table 7). During 2017/2018, 27.7 per cent of same day scope separations were from New South Wales residents (see Table 31, Appendix 2).

Table 7 Same day scope services at ERH by type of scope procedure 2014/2015 to 2017/2018

Scope Procedure	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Colonoscopy	482	482	656	624	142	29.5%
Endoscopy	421	442	469	463	42	10.0%
Gastroscopy	247	234	252	232	-15	-6.1%
Total	**1150**	**1158**	**1377**	**1319**	**169**	**14.7%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

3.3.2 Births

The number of births at Echuca Regional Health increased by 36.9 per cent over the last four years. Note that Table 8 does not separate single/multiple births (e.g. twins) so the actual number of babies born may be slightly higher.

Table 8 Births at ERH by type of birth 2014/2015 to 2017/2018

Type of birth	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Vaginal Delivery	211	250	217	258	47	22.3%
Caesarean Delivery	87	134	108	150	63	72.04%
Total	**298**	**384**	**325**	**408**	**110**	**36.9%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Thirty-four per cent of births at Echuca Regional Health in 2017/2018 were from women living in Victoria in Future Small Area: Echuca Town, followed by New South Wales (23.0 per cent) and Victoria in Future Small Area: Kyabram District (15.9 per cent) (Table 9).

Over the past four years, births from women living in New South Wales, VIFSA[2] Echuca Town, VIFSA Kyabram District, VIFSA Cobram-Numurkah District and VIFSA Rushworth District all increased. In particular, there was an additional 37 babies born from 2014/2015 to 2017/2018 from New South Wales residents, and a steady annual increase from VIFSA Cobram-Numurkah District residents.

Table 9 Where women are coming from to give birth at ERH 2014/2015 to 2017/2018

VIFSA or state	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	124	159	131	146	22	17.7%
New South Wales	57	66	65	94	37	64.9%
VIFSA Kyabram District	53	65	47	65	12	22.6%
VIFSA Rochester District	46	48	32	37	-9	-19.6%
VIFSA Cobram-Numurkah	6	9	14	25	19	316.7%
VIFSA Rushworth District	<5	11	5	16	12	300.0%
VIFSA Ardmona-Murchison	-	9	11	6	6	N/A
VIFSA Gannawarra Shire	<5	7	6	8	6	300.0%
Other VIFSA or State	6	10	14	11	5	83.3%
Total	**298**	**384**	**325**	**408**	**110**	**36.9%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS
VIFSA: Victoria in Future Small Area

3.3.3 Hospital in the Home (HITH)

From 2014/2015 to 2017/2018, Hospital in the Home (HITH) separations provided by Echuca Regional Health increased by 89.6 per cent, with activity doubling in 2015/2016 from the year prior and remaining relatively steady since. The number of bed days has also increased significantly from 1028 bed days in 2014/2015 to 2084 bed days in 2017/2018 (Table 10).

Table 10 Hospital in the Home (HITH) separations provided by ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	67	125	136	127	60	89.6%
Bed Days	1028	2781	2391	2084	1056	102.7%

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

3.3.4 Chemotherapy

Same day chemotherapy separations increased by 27.6 per cent over the last four years, with the highest number of separations in 2016/2017 (895 separations) (Table 11). Forty-two per cent of chemotherapy separations were from VIFSA[2] Echuca Town residents.

Table 11 Where patients are coming from for same day chemotherapy at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or state	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	253	346	341	354	101	39.9%
New South Wales	243	245	320	213	-30	-12.3%
VIFSA Rochester District	81	95	47	55	-26	-32.1%
VIFSA Kyabram District	30	40	58	111	81	270.0%
VIFSA Gannawarra Shire	21	72	61	64	43	204.8%
VIFSA Cobram-Numurkah District	8	26	64	25	17	212.5%
Other VIFSA or State	17	<5	<5	11	-6	-35.3%
Total	**653**	**825**	**895**	**833**	**180**	**27.6%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS
VIFSA: Victoria in Future Small Area

3.4 Health Services in the community

Echuca Regional Health provides an active inpatient and outpatient allied health service, and a community nursing service that includes District Nursing, palliative care, post-acute care and Hospital in the Home.

Echuca Regional Health provides a wide range of community and allied health services, not limited to:

- Advanced Care Planning
- Community Nursing Service
- Community Rehabilitation Centre
- Complex Care Program
- Dental
- Hospital In The Home
- McGrath Breast Care Nurse
- Palliative Care
- Residential In-Reach
- Women's Health
- Allied Health
- Diabetes
- Dietetics & Nutrition
- Health Promotion
- Occupational Therapy
- Physiotherapy
- Podiatry
- Primary Care
- Speech Pathology

Total occasions of service for nursing community-based services have increased slightly over the last four years, with a particular increase in homecare midwifery services, palliative care, post-acute care and Residential In Reach services (Table 12).

Table 12 Nursing community-based services - occasions of service 2014/2015 to 2017/2018

Service	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Community nursing	8985	8826	9729	8926	-59	-0.7%
Homecare midwifery services	446	473	433	554	108	24.2%
Complex care	1376	1527	1609	1252	-124	-9.0%
Palliative care	2428	3409	4189	2751	323	13.3%
Post-acute care	4121	5324	4972	4343	222	5.4%
Residential In Reach	591	802	519	733	142	24.0%
Hospital in the Home	818	1097	1016	732	-86	-10.5%
Total	**18765**	**21458**	**22468**	**19291**	**526**	**2.8%**

Source: Echuca Regional Health 2018 Annual Report

While total occasions of service for allied health service have decreased over the last four years, there has been a notable increase in community rehabilitation and counselling services, while occupational therapy has significantly decreased (Table 13).

Table 13 Allied health services - occasions of service 2014/2015 to 2017/2018

Department	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Aboriginal Liaison	228	257	376	288	60	26.3%
Alcohol and Other Drugs	477	927	483	381	-96	-20.1%
Community Rehabilitation	8580	9031	9576	9669	1089	12.7%
Counselling	3218	4955	4815	5177	1959	60.9%
Dental services	7319	7006	5937	6013	-1306	-17.8%
Diabetes education	425	378	289	441	16	3.8%
Dietetic services	777	702	692	637	-140	-18.0%
Occupational Therapy	2639	1463	523	609	-2030	-76.9%
Physiotherapy	2733	2518	1998	2169	-564	-20.6%
Podiatry	1048	848	939	1098	50	4.8%
Speech pathology	1188	1097	1050	1040	-148	-12.5%
Women's Health	586	366	318	233	-353	-60.2%
Total	**29218**	**29548**	**26996**	**27755**	**-1463**	**-5.0%**

Source: Echuca Regional Health 2018 Annual Report

Total service hours for a number of allied health services has slightly increased, particularly due to an increase in physiotherapy, podiatry, speech pathology and social work hours (Table 14).

Table 14 Allied health services – service hours 2014/2015 to 2017/2018

Department	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diabetes Education	622	596	481	539	-83	-13.3%
Dietetics	614	570	547	551	-63	-10.3%
Women's Health	698	742	620	520	-178	-25.5%
Occupational Therapy	432	447	313	377	-55	-12.7%
Physiotherapy	1417	1210	1143	1575	158	11.2%
Podiatry*	1110	966	1139	1215	105	9.5%
Speech Pathology	1671	1848	1862	1779	108	6.5%
Social work	991	898	848	1169	178	18.0%
Total	**7555**	**7277**	**6953**	**7725**	**170**	**2.3%**

**HACC funding only*

Source: Echuca Regional Health

The allied health service experiences heavy demand and patients sometimes face long waits for service. There is no psychology service, so patients access mental health plans through their general practitioners, sometimes at some cost.

The longest average wait time for the first appointment for community allied health services is Physiotherapy Women's Health (20 weeks), followed by paediatric speech pathology (15.9 weeks), Specialist Continence Clinic (14.3 weeks) and Pulmonary Rehab Clinic (10.8 weeks). Diabetes education has the shortest wait time at 2.3 weeks (Table 15).

Table 15 Average wait time to 1st appointment for community allied health services

Department	Average wait time to 1st appt (weeks)
Diabetes Education	2.3
Dietetics	5.1
Women's Health	2.5
Occupational Therapy	2.8
Physiotherapy (Adult)	5.2
Physiotherapy Women's Health	20
Physiotherapy (Paediatric)	5.8
Podiatry*	7.5
Speech Pathology (Adult)	2.7
Speech Pathology (Paediatric)	15.9
Social work**	4
Community Rehabilitation	2.9
Specialist Continence Clinic	14.3
Pulmonary Rehab Clinic	10.8

**HACC and CHSP funding only*

***Community programs include EMCP, Generalist Counselling & Family Services*

Source: Echuca Regional Health

The current waiting list for adult dental services indicates a very high number of people waiting for general dental services, with a number of people current waiting longer than the target wait time; in particular, there are currently 204 people waiting for general dental service who have been on the waitlist for longer than 23 months. Denture and priority denture waiting times are currently on target (Table 16).

Table 16 Current adult (age 18+) dental wait times in months

Waitlist	# Waiting	Oldest Date	Longest Wait	Average Wait	Target Wait Time
General	1516	01-09-2016	27.04	13.29	23
Denture	66	02-03-2018	9.07	4.77	22
Priority Denture	19	01-10-2018	2.07	1.20	3

Source: Echuca Regional Health

3.5 Aged Care

Echuca Regional Health provides residential aged care, and transition care. Transition care is provided in the acute medical unit, rather than in the residential aged care service, on contract from Bendigo Health. The model is well respected and there are good relationships between medical staff in the two health services.

3.5.1 Glanville Village

Glanville Village provides 60 rooms for people with high-level care needs, located at the hospital site. One room is dedicated to respite care. In common with many other aged care providers, Glanville Village is finding that more of its residents are arriving close to the end of their life, some referred directly from the Echuca hospital inpatient wards. The skill mix is strong, so Glanville Village is able to provide for people with high-level nursing needs, and well as people with dementia; there is a 15-room dementia service. A number of residents come from the indigenous community, while others have been homeless and/or have had mental health issues. Each resident has a tailored program of leisure and other activities that suit their needs, capacities and interests.

Table 17 shows that over the last four years, the number of respite care days has increased, the average length of stay has decreased, and occupancy has remained high.

Table 17 Glanville Village aged care statistics 2014/2015 to 2017/2018

Financial year	Respite Care (days)	Average LOS (years)	Occupancy
2014/2015	312	4.0	Decanting (from 79 to 60 beds)
2015/2016	257	3.9	97.43%
2016/2017	412	3.3	96.36%
2017/2018	613	3.0	95.03%

Source: Echuca Regional Health

3.6 Emergency Department

The emergency department has nine cubicles, six of which are in use throughout the year. The remaining three cubicles are placed into service during about five weeks of the year coinciding with peak holiday times. One extra staff member is rostered for each of the 101 shifts during which the three additional cubicles are in use; although with more public events scheduled in Echuca and Moama throughout the year, the increased staffing model may be needed more frequently.

Echuca Regional Health has recently engaged a Fellow of the Emergency College of Medicine, who oversees general practitioners and Hospital Medical Officers who support the emergency department to remain operational 24 hours, seven days.

A senior physiotherapist attends the emergency department on Mondays, providing assessment, advice and sometimes treatments for people who have experienced traumas during the weekend.

3.6.1 Emergency Presentations

A more comprehensive view of emergency department activity at Echuca Regional Health is provided in Appendix 4.

From 2014/2015 to 2017/2018, emergency department presentations increased by 16.7 per cent, or 3,019 additional presentations. In 2017/2018, triage category 4 (semi-urgent) presentations represented

45.8 per cent of total presentations, followed by triage category 3 (emergency) (27.3 per cent) and triage category 5 (non-urgent) (18.1 per cent) (Table 18).

Table 18 Emergency presentations at ERH by triage category 2014/2015 to 2017/2018

Triage category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resucitation	32	30	26	33	1	3.1%
Triage category 2: emergency	1210	1112	1374	1827	617	51.0%
Triage category 3: urgent	4128	4675	5147	5773	1645	39.8%
Triage category 4: semi-urgent	8210	8923	9365	9666	1456	17.7%
Triage category 5: non-urgent	4509	4305	4774	3825	-684	-15.2%
Triage category 6: dead on arrival	17	<5	<5	<5	na	na
Total	**18106**	**19048**	**20688**	**21125**	**3019**	**16.7%**

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

3.7 Workforce

The hospital is led by a general practice workforce including eight general practitioner obstetricians and six general practitioner anaesthetists. The medical workforce can be unstable, with many locum practitioners supporting the emergency department when local general practitioners are unable to support roster requirements.

Echuca Regional Health has recently engaged a Fellow of the College of Emergency Medicine to lead the emergency department and a paediatrician who is working to consolidate an appropriate paediatrics model. Further resources will be needed including a wider paediatric-trained nursing and allied health workforce and a larger medical workforce.

Other specialists including physicians and surgeons visiting from Bendigo and Melbourne.

Echuca Regional Health conducts a monthly meeting of hospital-employed medical staff and visiting medical officers who are rural generalists. This forum has been used to canvass issues associated with building a blended workforce, including both specialists and generalists. The health service aims to conduct a medical workforce plan during early 2019, which will develop a blended workforce model that includes general practitioners, specialists and medical trainees. Attention will need to be paid to the training needs of generalists and junior medical staff, with good models available from within the nursing workforce.

3.7.1 Volunteers

Volunteers play an active role in health service policy and program development and in support for people attending at the hospital campus. About 120 people are currently actively engaged as volunteers at the hospital site, with an additional 20 supporting the delivery of pastoral care, and more people engaged in the Seniors Advisory Group and the Glanville Village group. People assist by providing concierge services, coordinating and participating in activities, running meditation sessions, making rounds with goods and food, fundraising, and providing advice to hospital policy makers and administrators. Echuca Regional Health employs a Volunteer Coordinator to recruit, train and work with volunteers. During 2017 8,700 volunteer hours were provided, and during 2018 to date nearly 8,000 hours have been provided.

4 About the catchment

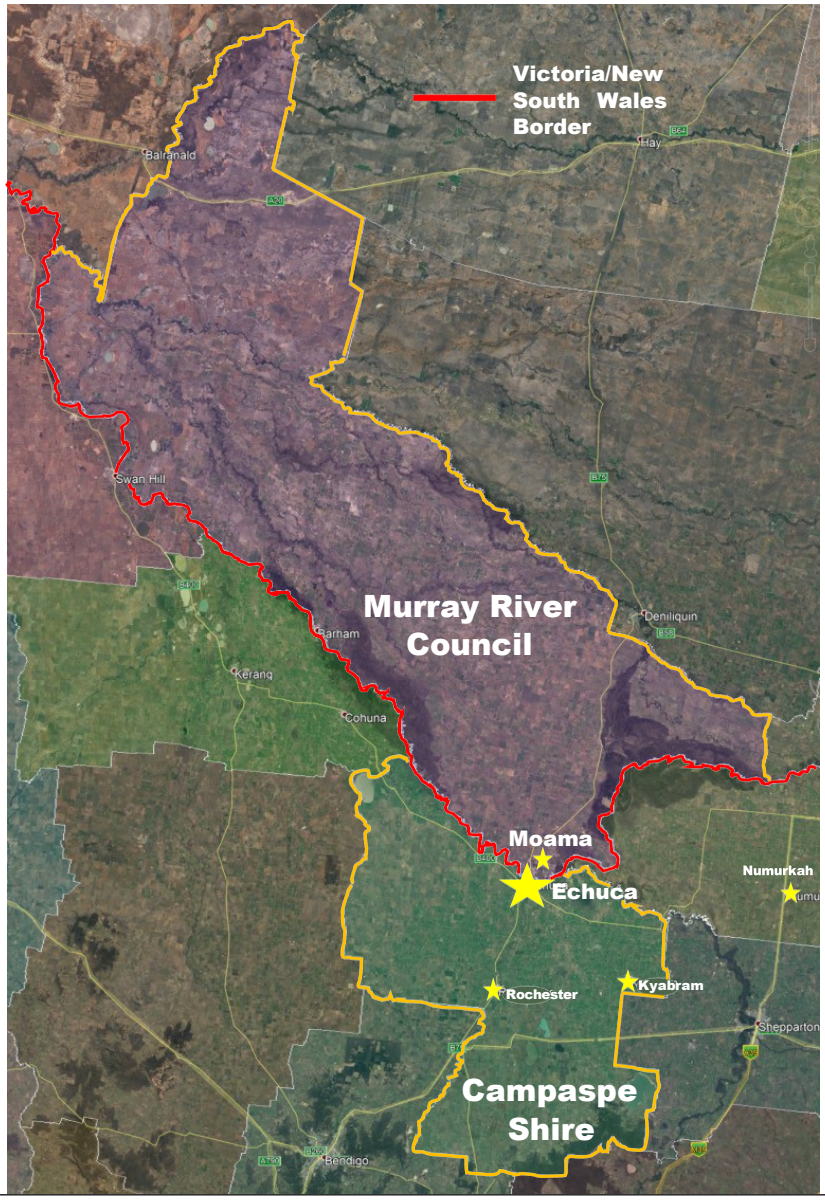
Echuca Regional Health services the Shire of Campaspe, which encompasses an area of 4,518 square kilometres, and the cross-border Murray River Council, with an area of 11,865 square kilometres.

Campaspe Shire is located in Victoria's Loddon Mallee Region, 208km north-west of Melbourne. Townships and small settlements in Campaspe Shire include Echuca, Kyabram and Rochester, amongst others. The estimated population in 2016 was 36,814.

Murray River Council is located along the southern border of New South Wales, with an estimated population of 11,500 in 2016 and approximately 53 per cent of the population residing in Moama[3]; the council was formed in 2016 following the amalgamation of Murray Shire and Wakool Shire. Major townships in Murray River Council include Barham, Mathoura, Moama, Moulamein, Murray Downs, Tooleybuc and Wakool. The Moama and Echuca townships are located directly across the state border from one another, separated by the Murray River.

Figure 1 illustrates the proximity of Echuca in Campaspe Shire (Victoria) and Moama in Murray River Council (New South Wales).

Figure 1 Map of Campaspe Shire (Victoria) and Murray River Council (New South Wales)



Source: VicHealth Map

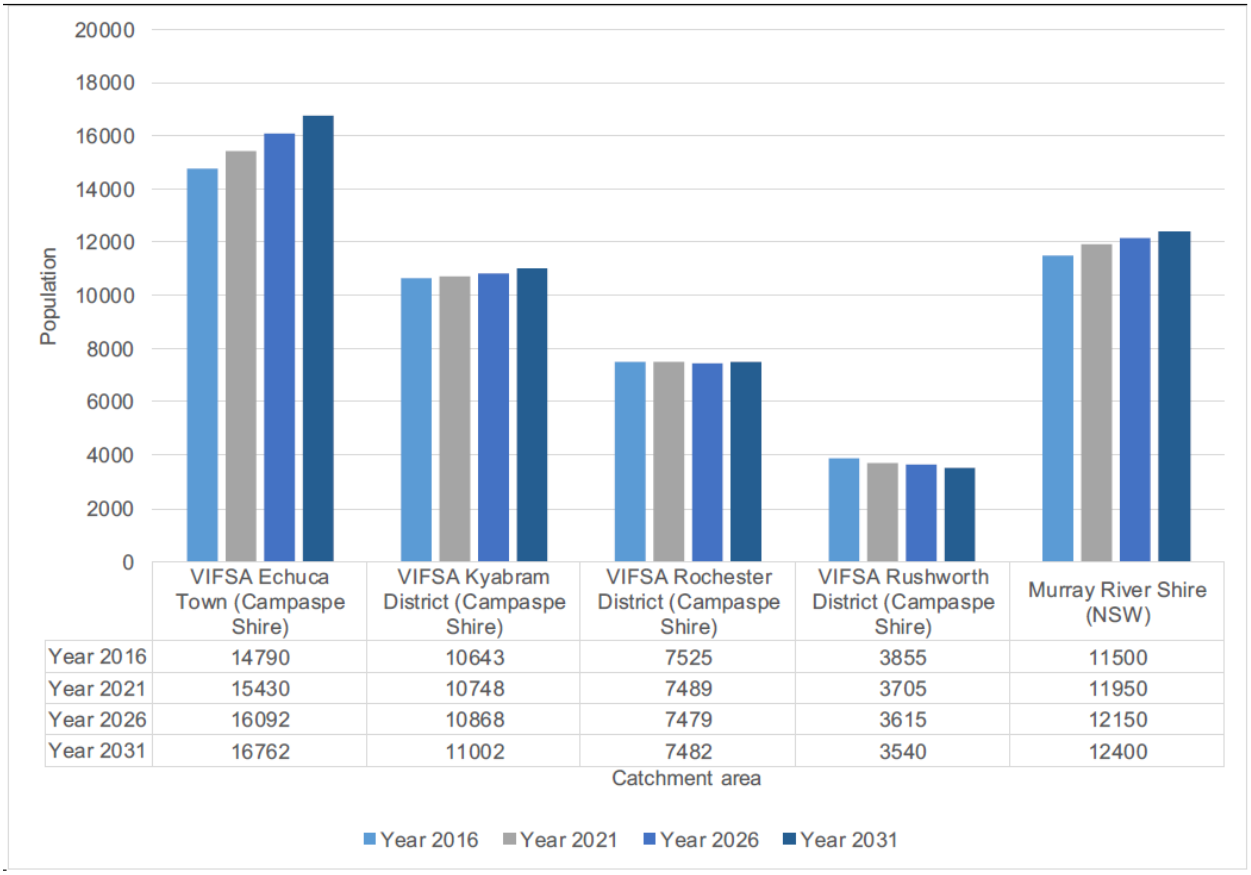
4.1 Demographic change

Echuca Regional Health's catchment population, which for population planning purposes includes Campaspe Shire in Victoria and Murray River Council in New South Wales, is expected to increase by

5.9 per cent overall during the next fifteen years with an additional 2,872 people, or 0.4 per cent annually. In Campaspe Shire, the population within the Victoria in Future Small Areas[2] (VIFSAs) of Echuca Town and Kyabram District is expected to increase, while Rochester District and Rushworth District are forecast to experience a slight population decline (Figure 2).

Murray River Shire is expected to experience a small population increase of around 900 people by 2031. While population forecasts are not available for a smaller geographic area, the REMPLAN Community Profile[3] for Murray River Council estimates that 53 per cent of the council's population in 2016 resided in Moama, or 6,165 people.

Figure 2 ERH catchment population forecasts 2016 to 2031 by Victoria in Future Small Areas (VIFSA) and Local Government Areas



	VIFSA Echuca Town (Campaspe Shire)	VIFSA Kyabram District (Campaspe Shire)	VIFSA Rochester District (Campaspe Shire)	VIFSA Rushworth District (Campaspe Shire)	Murray River Shire (NSW)
Year 2016	14790	10643	7525	3855	11500
Year 2021	15430	10748	7489	3705	11950
Year 2026	16092	10868	7479	3615	12150
Year 2031	16762	11002	7482	3540	12400

Catchment area

Source: Victoria in Future 2016, 2016 New South Wales State and Local Government Area Population and Household Projections, and Implied Dwelling Requirements

While total population growth across the catchment area is low at 0.4 per cent annually, the population aged 65 years and older is expected to increase significantly at 2.5 per cent annually, with an additional 4,926 older people overall (Table 19).

[3] https://www.communityprofile.com.au/murrayriver

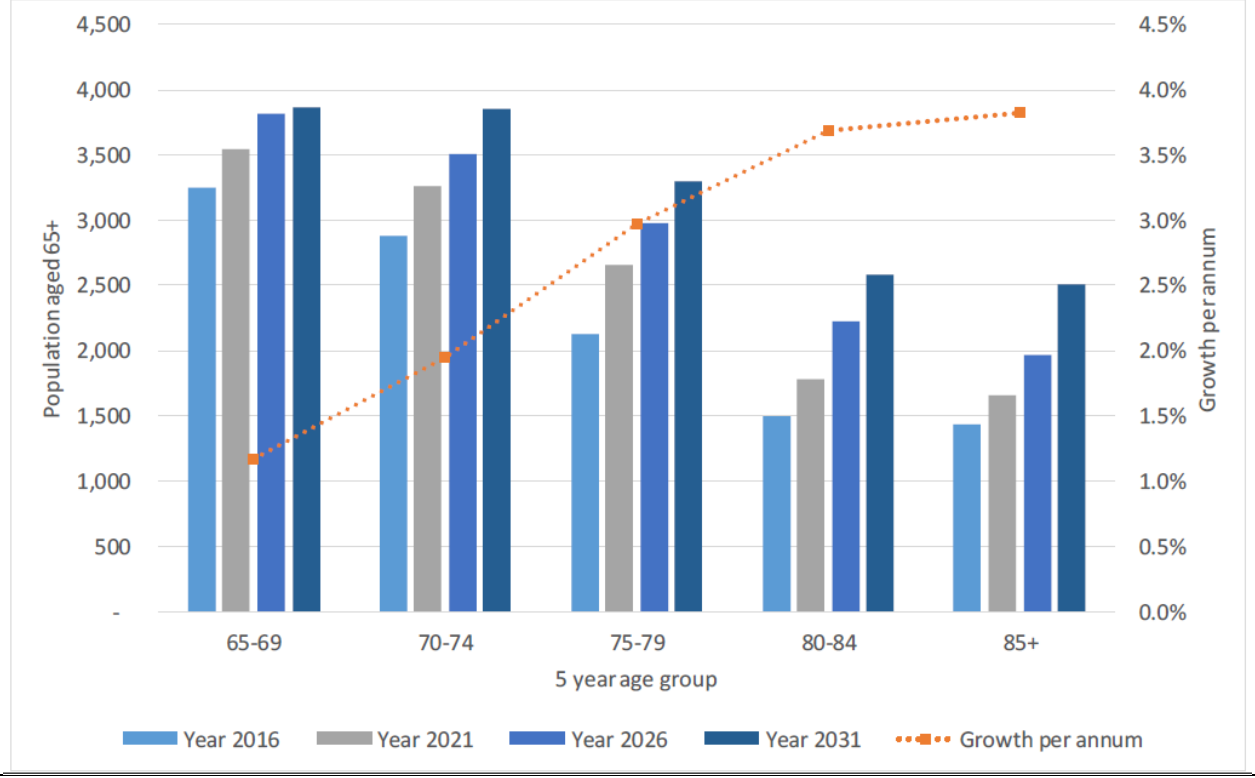
Table 19 ERH catchment population forecasts 2016 to 2031 - persons aged 65 years and older

Financial Year	65-69	70-74	75-79	80-84	85+	Total aged 65+
Year 2016	3249	2886	2123	1502	1431	11192
Year 2021	3540	3257	2662	1780	1657	12896
Year 2026	3813	3515	2983	2226	1969	14506
Year 2031	3871	3855	3296	2584	2513	16118
Difference 2016 to 2031	*621*	*969*	*1173*	*1082*	*1081*	*4926*
Per cent growth 2016 to 2031	*19.1%*	*33.6%*	*55.2%*	*72.0%*	*75.5%*	*44.0%*
Growth per annum	1.2%	1.9%	3.0%	3.7%	3.8%	2.5%

Source: Victoria in Future 2016, 2016 New South Wales State and Local Government Area Population and Household Projections, and Implied Dwelling Requirements

Figure 3 demonstrates the forecast growth in the population aged 65 years and older across the catchment over the next fifteen years.

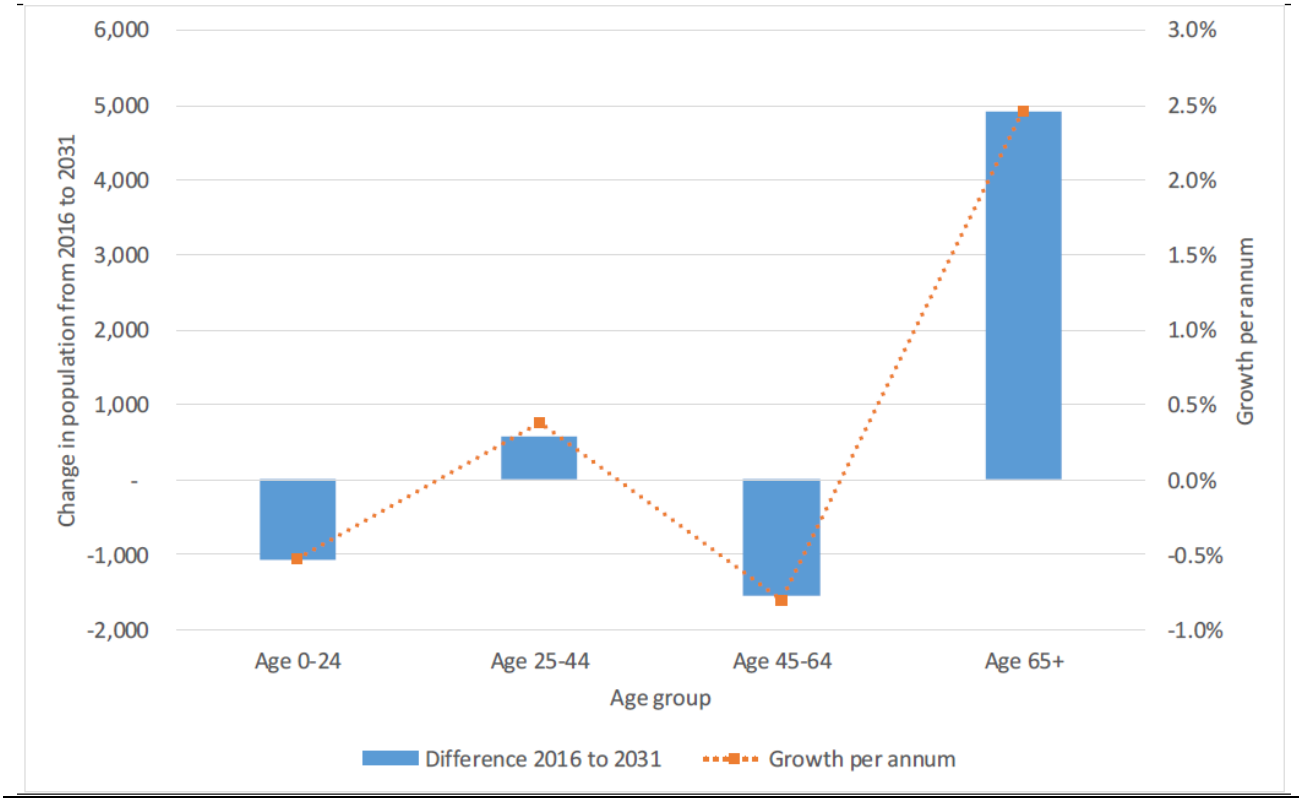
Figure 3 ERH catchment population forecasts 2016 to 2031 - persons aged 65 years and older



Source: Victoria in Future 2016, 2016 New South Wales State and Local Government Area Population and Household Projections, and Implied Dwelling Requirements

Figure 4 illustrates how the vast majority of population growth across the catchment over the next fifteen years is expected from people aged 65 years an older.

Figure 4 ERH catchment population forecasts 2016 to 2031 - change in population by age group



Source: Victoria in Future 2016, 2016 New South Wales State and Local Government Area Population and Household Projections, and Implied Dwelling Requirements

4.2 Other health services in catchment area

4.2.1 Bendigo Health

The Loddon Mallee regional referral hospital is Bendigo Health. There is a good relationship between the two health services, with Transition Care, Aged Care Assessments, community-based palliative care services and medical recruitment activities being conducted in partnership. The Regional Clinical Council works effectively to network services across Loddon Mallee region.

Bendigo Health auspices the Loddon Area Mental Health Service which provides clinical mental health services for children, adolescents, adults and older people throughout Campaspe Shire. Acute inpatient services for adults and older people are provided in Bendigo.

4.2.2 Albury Wodonga Health

Albury Wodonga Health auspices the North East and Border Area Mental Health Service, which provides clinical mental health services for people living in the Murray River Council, many of whose residents turn to Echuca Regional Health. There is a community-based mental health service in Deniliquin, and inpatient adult and older persons' mental health inpatient services are located in Albury. New South Wales residents who present to Echuca Regional Health with a psychiatric emergency may be triaged by Bendigo Health, transported to Albury, then referred to Deniliquin for ongoing care.

4.2.3 Small rural health services

Echuca Regional Health is part of a network of Loddon / Campaspe services including Rochester and Elmore District Health Service, Cohuna District Hospital, Kerang District Health, Kyabram and District Health Service and Swan Hill District Health.

4.2.4 Njernda Aboriginal Corporation

Njernda Aboriginal Corporation operates a community-controlled organisation to run culturally- appropriate services for Yorta Yorta people living in northern Victoria, southern New South Wales and further afield. Services include:

- Family support services and a Family Centre
- A multifunctional Aboriginal Children's Service, providing early years services and child care. Njernda Aboriginal Corporation provides Child First services for Yorta Yorta children, adolescents and families throughout Victoria
- A medical centre that provides a bulk-billed general practice and allied health services for Aboriginal and non-Aboriginal people. Amongst the team of six general practitioners, several have procedural qualifications including anaesthesia and obstetrics. Imaging is provided by Echuca Regional Health under an agreement that eliminates costs to patients
- Dental services are provided in partnership with Rumbalara Aboriginal Corporation, whose clinicians visit from Mooroopna
- Koori Maternity Care, providing midwifery care mostly in the home
- Baroona Health Centre, to reduce alcohol and drug abuse among young Aboriginal people in the Echuca and surrounding areas.

In the 2016 Census, 2.4 per cent of the Campaspe Shire population and 3.2 per cent of the Murray River Council population identified as Aboriginal and Torres Strait Islander[4]. Service staff of Njernda Aboriginal Corporation reported the community has a high need for trauma-informed counselling, grief and loss services, mental health care and alcohol and drug services.

[4] Source: Data by Region, Australian Bureau of Statistics <http://stat.abs.gov.au/itt/r.jsp?databyregion>

4.2.5 Home care package providers

Home care packages include funding, coordinated care and services that help older people continue living at home for as long as possible. There are four levels of care, determined during an aged care assessment, with Level 1 including basic care needs and Level 4 including high-level care needs[5].

Within Campaspe Shire and the Moama area (postcode 2731), 374 people in 2016/2017 and 428 people in 2017/2018 received a home care package (Table 20). During 2017/2018, people living in Campaspe Shire received home care packages from 39 different providers, of which nine providers serviced 75.8 per cent of home care packages; for people living in postcode 2731 (Moama area), there were 12 home care package providers, of which four provided 78.6 per cent of home care packages[6]. Note that Echuca Regional Health is not a home care package provider.

Table 20 Home care packages recipients and levels of care in Campaspe Shire and postcode 2731 (Moama, NSW)

	2016/2017				**2017/2018**		
	Campaspe Shire	**Postcode 2731**	***Total catchment***		**Campaspe Shire**	**Postcode 2731**	***Total catchment***
Level 1	10	1	*11*	Level 1	24	7	*31*
Level 2	207	38	*245*	Level 2	230	56	*286*
Level 3	27	10	*37*	Level 3	24	15	*39*
Level 4	68	13	*81*	Level 4	61	11	*72*
Total	**312**	**62**	***374***	**Total**	**339**	**89**	***428***

Source: Provided by the Australian Institute of Health and Welfare (AIHW), Disability and Ageing Unit, AIHW National Aged Care Data Clearinghouse

[5] Home care package levels information: https://www.myagedcare.gov.au/help-home/home-care-packages/about-home-care- packages

[6] Source: Australian Institute of Health and Welfare (AIHW), Disability and Ageing Unit, AIHW National Aged Care Data Clearinghouse

5 Consultation report

Aspirations for the health service include:

- A stronger cohort of community-based services with access to appropriate community-based infrastructure and resources
- Models of care that underwrite universal access to health care, making the border invisible and doing a better job of care coordination
- Better relationships with other organisations, who know what Echuca Regional Health does and are committed to working together
- Multidisciplinary and interdisciplinary team approaches to care, built on a platform of strong support for disciplines
- A system that allows resources to follow the patient as they move between care types, care settings and care partnerships
- Efficient staffing and infrastructure, including for home-based services
- More-assertive outreach models such as specialists in schools, work with dispersed and vulnerable communities
- More and better educational models for tertiary education, using simulation and videoconferencing, team training, and classroom-based learning
- More specialist services across the life span, using more advanced practitioners
- A seven-day service model supporting responsive admission and discharge planning
- Research ingrained into health service culture, and better partnerships with universities.

5.1 Size and role of service

Echuca Regional Health has been managing significant growth in demand during the last four years. The financial situation has been tight, all services are under stress, and the costs of ambulance transfers out of Echuca is rising. At the same time, Echuca Regional Health has a commitment to responding to the needs of its local community, expressed in its strategic plan, the 2010 business case to expand the hospital campus and the recent submission for development of an integrated cancer centre.

A significant percentage of patients are residents of New South Wales. The nearest hospital in New South Wales is in Deniliquin, a one-hour drive to the north of Echuca. It is recognised that people travel long distances to access health services, including from southern New South Wales. Catchment population growth is steady, and the Murray River environment attracts thousands of tourists each year.

While responding to demand and financial pressures, it has been difficult to make resources available for service development and the implementation of new models of care. It has also been difficult to participate in regional initiatives such as those sponsored by the Palliative Care Consortium.

It would be difficult to expand the size of the service without increasing its capacity to provide for people needing high-complexity services.

5.2 Health services in the community

The role of the community health service has not been clearly defined within the health service, and it has been difficult for the primary care service to balance the needs of hospital inpatients with the demands of a poorly-defined community health program. This means that, while the building blocks exist, Echuca Regional Health has not created an integrated model of care that includes population-focussed primary and secondary prevention services as well as the delivery of primary, secondary and tertiary health care. The services are not yet wholly prepared to provide a comprehensive chronic illness approach consistent with Victorian Government expectations.

5.3 Emergency department

As numbers of presentations continues to increase, Echuca Regional Health will find it more difficult to continue to meet national key performance indicators, unless additional resources are made available.

Approximately 25 per cent of presentations are paediatric, and the presence of a paediatrician on site Mondays to Thursdays 0800 to 1700 has increased capacity to respond to higher-acuity patients.

Associate Nurse Unit Managers are not supernumerary, so can find it difficult to keep track of people in the waiting room, to provide support for junior and locum medical staff, to oversee the most critically ill patients and to monitor their own patients. There are no dedicated resuscitation nurses, and no additional staff to cover for nurses who accompany patients during videoconferences with Bendigo Health.

One of the issues for the emergency service is lack of access to community-based health and support services, particularly for people who present with a mental health emergency. The area mental health service is provided by Bendigo Health, which does not provide services for people who live in New South Wales but who may present to Echuca Regional Health.

Many emergency department patients are people with chronic illness, re-presenting with exacerbations of their conditions, some from long distances. A system of direct admissions for known patients would improve their care and reduce emergency department presentations. Another group of presentations is older people from nursing homes who have experienced a fall, or who have sepsis and/or chronic wounds. Once the person has been cleared to return home they have low priority with the local ambulance service, so can experience significant waits. Sometimes people are transferred to the short stay observation unit during this period of waiting.

5.4 Workforce

One of the key priorities for Echuca Regional Health will be to develop a hybrid specialist / generalist medical workforce profile. Issues to be resolved are:

- Communications between hospital-based and visiting medical staff and general practices that have ongoing responsibility for care for individual patients
- The possible contribution of general practices and visiting rural generalists to a developing model of paediatric care. The model should also include development of paediatric-specialised nursing and allied health teams
- Relationships between hospital-based specialist staff and vising rural generalists, and how a blended workforce model would work for specialised services such as obstetrics and emergency medicine
- The roles of interns and junior medical staff in a blended roster, and management of training for them
- Training needs of rural general practitioners who seek to become visiting medical officers, in generalist roles and/or in proceduralist roles.

In addition and for the benefit of patients, work is needed to improve relationships and information flows between Echuca Regional Health and the general practices across its catchment communities. It is also difficult for Echuca Regional Health to negotiate business-hours access with general practitioners, as they have commitments at their practices.

Many key units within the health service find it difficult to recruit appropriately-skilled medical, nursing and allied health staff, and some units' staffing numbers have remained unchanged for some years. Some units feel they have more junior than senior staff, and find it difficult to retain them.

5.4.1 Teaching, training and research

Echuca Regional Health works with University of Melbourne and La Trobe University to support medical, nursing, allied health and pharmacy training. New training opportunities exist, for instance training health care assistants and technical workers. Echuca Regional Health has found that supporting and training local people for health careers has worked for recruitment and retention, and is consistent with the health service's values and mission. Opportunities exist to expand local training opportunities beyond nursing. Education and training efforts include:

- Engagement in the Regional Undergraduate Student of Nursing (RUSON) program in partnership with other small rural health services in the Loddon sub-region
- Strong recruitment of Hospital Medical Officers, partly because they get broad experience. However, some of them report feeling intimidated by being the only medical officer on roster overnight, covering wards and the emergency department
- Nursing education needs to be expanded, including developing programs for nurses to undertake specialist certificates.

5.5 Mental health services

The Loddon Campaspe / Southern Mallee Area Mental Health Service is auspiced by Bendigo Health, with community-based teams for adults, older people, and children and adolescents in Echuca. Non- clinical services are provided by Grow, St Luke's Community Support and Njernda Aboriginal Cooperative.

People who present to the Echuca Regional Health emergency department with a psychiatry emergency are required to wait for a triage assessment by phone with Bendigo Health, and there is limited access to on site mental health support. The telephone triage service does not operate after hours, although there are attempts to resolve this issue with Bendigo Health. People who need an acute admission travel to Bendigo or to Albury, out of easy access by their families and support networks.

It is difficult to access Mental Health Community Support Services in this sub-region, and there are limited support services for children and young people with mental illness. Murray Primary Health Network has commissioned Echuca Regional Health to provide access to Medicare-funded psychological therapy services and primary mental health clinical care coordination. Njernda Aboriginal Corporation has been commissioned to provide psychological therapy services for children.

Alcohol and drug abuse is an issue in the community, and with a lack of primary care and prevention services, too often brings people into the acute system. In many instances, young people have their first access with the mental health support system as a result of referrals from the justice system.

It is difficult to manage the border; people are not able to access public clinical or non-clinical mental health services across the border, even if that cross-border service is their most convenient.

5.6 Aboriginal liaison officer

Echuca Regional Health recognises that Aboriginal and Torres Strait Islander people in their catchment have multiple needs. The Aboriginal Liaison service helps to meet these needs; introducing Aboriginal and Torres Strait Islander people to members of their care team, helping to explain what is going to happen and working to make sure people have good access to accommodation, financial support, alcohol and drug services, family violence services, youth services, and child protection services.

Echuca Regional Health has a key role as a facilitator and catalyst for better services and better outcomes for local indigenous communities. When considering any particular service, for instance cancer services, renal dialysis, emergency department, and paediatrics, Echuca Regional Health needs to consider how it can provide services on country and out of business hours, rather than necessarily at the hospital Monday to Friday.

Shire of Campaspe has recently run a youth forum where people asked for 24 hour access to services, and youth-focussed centres providing mental health, drug and alcohol services and rehabilitation services.

Echuca Regional Health needs to continue to monitor its palliative approach. Aboriginal and Torres Strait Islander people want to die at home if possible, and Echuca Regional Health needs to work with Njernda Aboriginal Corporation (which operates a primary care service) to provide the platform that enables this: medical and nursing home visits, equipment, advice and support.

Echuca Regional Health has a strong relationship with Njernda Aboriginal Corporation, with shared models such as the audiology and speech pathology service for Aboriginal children. Some of these models are funded using a series of time-limited grants, so the services suffer from lack of continuity. Njernda staff reported that it is important for Aboriginal people to build trust with clinicians, and that intermittent funding can mean there is insufficient time for these trusting clinical relationships to be built.

5.7 Models of care

Boundaries can have an unwanted impact on services, with eligibility for services changing between New South Wales and Victoria.

It would be good to provide more home-based services, building on the existing platforms for palliative care, Hospital Admission Risk Program, and mental health services. New home-based and/or community-based models should be developed for services such as rehabilitation, especially since it is difficult to forecast the necessary size for a rehabilitation service. It is possible that local people are experiencing premature admission to aged care because there are insufficient rehabilitation services.

5.7.1 Community-based nursing services

The Hospital in the Home service does not seem to be used to reduce lengths of stay, and people are still experiencing long stays. Some health services have allocated a physician to provide medical management of patients in the Hospital in the Home program, and this can help to clarify responsibilities. Some respondents wondered if Hospital in the Home could be used as an alternative to hospital admission (maybe with referrals from the emergency department), rather than a post-admission service.

The palliative care system works well for people who need symptom management and information, but struggles to meet the needs of people at the end of their life. Palliative care services are provided Monday to Friday 0800 to 1700, so it can be difficult to support people at home if they do not have access to weekend health services in their own community. Good planning and support for patients, their carers and their health service providers can reduce the need for after-hours advice and/or care.

5.7.2 Community services

There are several barriers to a more-efficient community-based service platform, including lack of access to vehicles, backup, travelling pharmacy services, and an integrated patient management system. As there is a small volume of patients and a large geographical catchment, this can be expensive. Managing the New South Wales / Victoria border can also be an issue for some community- based services, given access and eligibility requirements.

More importantly, the health service has not developed a "community health" approach, including:

- A focus on social models of health and an understanding of the determinants of health
- Multi-disciplinary chronic disease models aiming to eliminate hospitalisations for exacerbations of chronic conditions
- A health promotion model using primary, secondary and tertiary prevention strategies
- Strong partnerships with community agencies who help the health service to engage with young people, vulnerable families, Aboriginal and Torres Strait Islander people, and people with disabilities
- Effective mechanisms to support patients as they transition between inpatient, outpatient and home-based care.

5.7.3 Surgical services

There are several factors contributing to a relatively inefficient theatre flow, and preventing the use of the third theatre:

- There is insufficient equipment in the central sterile supply department: two sterilisers, two washers and two scopes areas. Theatre teams can find themselves waiting for their instruments and equipment to be sterilised and returned
- There is insufficient space in the stage 2 recovery area, and no stage 3 departure area for people whose recovery is shorter. Delays in making space available for people in stage 2 and stage 3 can put pressure on stage 1 recovery and can therefore delay surgeries
- While the Rochester and Elmore District Health Service surgery is appreciated by patients, the absence of staff on these days can put pressure on the Echuca Regional Health surgery service. It can mean there are no staff available to provide backup for staff on leave or on call
- Critical care: the high dependency unit is co-located with the medical inpatient unit, which can mean that very ill surgical patients are being nursed by people with little surgical nursing experience. Surgical nurses can attend with a patient referred to high dependency but may not be replaced within the perioperative unit. No intensive care services are available
- Medical support: general surgeons are reluctant to carry out complex procedures, particularly for patients with co-morbid conditions or frailty. Overnight medical support is provided by HMOs

- As both theatres are in use all week and often after hours, there are very limited opportunities to carry out minor maintenance works. This can mean that an issue deteriorates until it is placing restrictions on patient flow
- Surgeons are managing their own lists, so the perioperative unit is not able to adjust patient attendances so that the theatres are used most effectively. Central management of the general surgery lists would support more-efficient scheduling, allow for better distribution of workload between surgeons, and would create a pool of waiting list patients who could be re-scheduled if necessary to fill all possible sessions.

The limitations of staff and equipment also limit the capacity for Echuca Regional Health to offer new lists in response to community need.

5.7.4 Surgical service

The development of the cancer services proposal currently under consideration by the Victorian Government has prompted the service to question its models of care (what does a "wellness" model mean and how is it different to the current model?) and its service volumes (by how much are we expecting the service to grow?). If Echuca Regional Health is to establish an integrated cancer service it will need survivorship services, and will need more capacity within other acute services such as diagnostic services, pharmacy, inpatient care, surgery, community-based nursing and support, and palliative care.

5.8 Facilities and resources

The recent redevelopment of the hospital campus has provided for new inpatient units, perioperative facilities, emergency department and front foyer. It also provided a quiet space, and a dedicated space for Aboriginal and Torres Strait Islander people attending the health service.

However, the campus layout needs to be reviewed so that travel distances can be reduced and old buildings can be re-purposed. Office space is limited, and consulting suites need to be upgraded. Glanville House is no longer meeting community and resident expectations. Echuca Regional Health has not been in a position to expand corporate and back-of-house services as service activity continues to rise, and some support services will find it difficult to support further increases in demand.

6 Strategic service plan challenges

Echuca Regional Health has experienced strong growth in demand for services during the past three years. It is probably at or close to the limits of what can be achieved within the existing service profile but needs significant upgrades to capacity if it is to expand its role and reach.

6.1 Complex services that need to be optimised

Echuca Regional Health provides a number of complex, high-risk, low-volume and high-cost services including the emergency department, a high dependency unit and an obstetrics service that includes neonatal care. The challenge for this group of services is to achieve a high-enough volume of activity to maintain safe and high-quality care, while managing costs and optimising use of resources. The key issues to be managed are:

- Availability of appropriate specialist staff, preferably living locally
- Availability of general practitioners able and willing to support a more-specialised service system
- College-accredited training opportunities for medical trainees
- Availability of appropriately-skilled nursing and allied health staff, with access to medical support as needed
- Clinical and support networks and backup from Bendigo Health and metropolitan tertiary health services.

6.1.1 Emergency department

New staffing models and models of care in the emergency department may help to reduce pressures, for instance engagement of more resuscitation-trained nurses, inclusion of allied health practitioners and mental health workers in the care team. Emergency services for children and adolescents need to be improved.

Echuca Regional Health now has a Fellow of the College of Emergency Medicine and is able to provide a more-complex medical service including support for intubated patients; this in turn supports higher- acuity surgery so that Echuca Regional Health could reduce its role in the delivery of low-complexity surgery, while reducing demand for surgical services at Bendigo Health. The emergency department is a key resource for people living outside Echuca as well.

6.1.2 Critical care

In order to upgrade from high-dependency to intensive care, Echuca Regional Health would need to roster senior medical and nursing staff on site 24/7. In the absence of an intensivist, Echuca Regional Health would be able to roster anaesthetists and emergency physicians. Nurses with critical care training would be needed on every shift, whether or not there is a current intensive care patient. Medical support and advice would be needed 24/7. There is also an increased need

for allied health services, particularly physiotherapy. However, it is noted an intensive care unit is a recruitment positive for nursing and allied health staff.

6.1.3 Obstetrics

Echuca Regional Health is considering increasing its more-complex maternity services (currently Level 3, increase to Level 4; increase neonatal from Level 2 to Level 3); this would reduce demand at Bendigo Health, and would reduce the need for women moderately-risky pregnancies to travel to Bendigo for obstetric care. Expanding maternity services also enables Echuca Regional Health to continue to provide and expand its primary services for women with low-risk pregnancies, and reduces transport risks for women and babies whose condition deteriorates during labour and delivery. There is some available capacity within inpatient services to accommodate an expanded service. Some of the additional maternity services to be included with a higher complexity service include:

- Lactation support services
- Domiciliary services
- Exploring the area of infant mental health.

6.1.4 Obstetrics

Echuca Regional Health now employs a paediatrician and could expand the paediatrics service. This includes developing paediatric streams and specialties within emergency department, inpatient services, surgical services and community-based primary care services.

6.2 Low volume complex services that need to be provided in partnership with other health services

Low volume complex services are a group of services provided for people who need multi-disciplinary elective care in response to complex and sometimes chronic conditions such as cancer, psychiatric illness, or organ failure. The catchment for this group of patients is wider, and some patients may have relationships with a number of primary and tertiary health services apart from Echuca Regional Health. As an indicator of the value of addressing the needs of these people, we have estimated that about 20 beds each year are dedicated to people whose hospitalisation may have been avoidable (see Appendix 4 for more detail). Better models of care for this group of people will free up resources within Echuca Regional Health, as well as providing better experiences and health outcomes for these patients.

The key challenge is to create and maintain multi-disciplinary team approaches within Echuca Regional Health and to create seamless patient pathways with external partners including primary care providers, small rural health services within the Murray catchment, and Bendigo Health.

The National Safety and Quality Health Service Standards includes Standard 5: comprehensive care. This is defined as "coordinated delivery of the total health care required or requested by a patient…aligned with the patient's expressed goals of care and health care needs, considering the impact of the patient's health issues on their life and wellbeing, and clinically appropriate outcomes"[7].

Echuca Regional Health has a complex care team, working with a case management model and in partnership with local providers. While the number of patients with complex conditions has increased, no additional funding is available for this cohort. It can be difficult to access services in the community, so it may be advantageous for Echuca Regional Health to provide some services directly, such as disability services, new ambulatory clinics, long-term domiciliary supports.

High priority services are:

- Cancer: the proposed cancer and wellness centre will provide care for larger numbers of people receiving more-complex treatments. This will increase the flow of people to emergency department, inpatient services and survivorship services
- Palliative care: a new coordinator has recently been appointed who will be working with general practitioners and other primary and tertiary care providers to develop better care pathways for patients receiving palliation
- Respiratory services and coordinated care for people with chronic obstructive pulmonary disease: new models are needed to keep people out of hospital
- Mental health services: the Loddon Campaspe / Southern Mallee Area Mental Health Service is auspiced by Bendigo Health, with a community-based team in Echuca providing mental health services for children, adolescents, adults and older people. Echuca Regional Health has a role through its primary care, community health and emergency services to support people with mental illness, and needs to collaborate with Bendigo Health to achieve a locally-responsive service model that complements Echuca Regional Health's growing roles particularly in paediatric and geriatric care. A key partnership would be with Njernda Aboriginal Corporation, who report there is a high need for mental health services, provided in a cross-border partnership.

New roles may be needed, some of which could be filled by volunteers; in particular, there is a need for medical advocacy for people with complex care needs.

6.3 High volume services that need to be made more efficient

Greater efficiency is needed in high volume services including same day surgeries and day medical procedures (e.g. endoscopy). Theatre services are constrained by facilities, equipment and staff.

Currently two (of three) theatres are in use, and same-day surgery is provided in Rochester.

[7] <https://www.nationalstandards.safetyandquality.gov.au/5.-comprehensive-care>

Echuca Regional Health has recently completed a theatre efficiency review which found that improvements to patient records systems and a stable workload over time will provide efficiency gains. It is necessary to understand the interactions between different actions that could be taken:

- If higher-acuity services are expanded, this will flow on to theatre in the form of increased demand for more-complex and/or specialist surgery
- There is a lag between recruitment and establishment of high-functional theatre teams: it is important to maintain a steady workflow so that staff are not lost during periods of low activity
- The surgical inpatient unit is currently operating on a five-day model with weekend back-up from the maternity unit. If surgical volumes and/or complexity increases, a dedicated surgical unit could operate seven days
- In order to open the third theatre, facility improvements are needed. It may be more effective to consider a complete redevelopment of the perioperative suite
- The future size and nature of the surgical service may be influenced by role delineation discussions within the proposed locality plan for the Murray sub-region.

Dialysis services currently operate as efficiently as possible, providing two sessions per day, three days per week. Future demand for dialysis is difficult to predict given the national decline in end-stage renal disease, which may be slowed by the ageing of the population. If needed, throughput can be increased by instituting a six-day model.

6.4 High volume services that need to be made more efficient

The roles and functions of primary and community-based services are poorly understood and not differentiated from each other. In order to make this service system more effective, Echuca Regional Health will distinguish between models for:

- **Community health**: this model has a population focus, aiming for better health and wellbeing for at-risk groups of people within the community. This service type includes some individual and group-based episodic early intervention services, as well as integrated health promotion coordinated through the Primary Care Partnership. It focusses on the social determinants of health, including by advocating for and working in partnership to achieve better living conditions for communities
- **Community-based primary care** provides episodic allied health and nursing services for people with an existing condition. These services could be funded through the Medicare Benefits Schedule, if they are prescribed by a general practitioner. This funding approach could free resources for other demands
- **Community-based acute health services** use the community-based primary care services to get people out of hospital sooner, under the supervision of hospital-based medical officers. Programs include Post Acute Care and Hospital in the Home, both of which rely on the District Nursing Service and community-based allied health services. Hospital in the Home is

treated as an admitted service; investment in this program can help to reduce lengths of hospital stay and improve outcomes for patients

Chronic illness model: the Department of Health and Human Services has developed an integrated chronic disease management model, which aims to build a responsive, person-centred and effective system of care to improve health outcomes and quality of life for people with chronic disease. An example is the stomal therapy and wound management clinic, which provides patient education, pre-operative and post-operative care, identification of skin issues, and advocacy with the Ostomy Associations. The wound management clients receive specialised treatment for complex wounds, chronic wounds and lower leg wounds; including assessment and treatment, biofilm management and options for compression treatment. This clinic works with other specialist services including vascular health services, general practices, lymphoedema and lipoedema services, medical care, allied health and diabetes services.

Consideration should be given to the establishment of a program or unit called "Echuca Community Health" or similar, to provide leadership and focus for the population health programs and community- based health promotion and disease prevention services. This program would work closely with other community-based primary and acute health services.

6.5 Aged care services

Aged care is undergoing significant policy and funding reform, with the goal of providing older people and their families with more options and more support to live independently. While Echuca Regional Health will continue to be in the business of aged care, the future size and shape of the service will be influenced by a number of factors:

- Public sector providers of residential aged care are able to provide for people with greater needs arising from physical frailty and/or cognitive decline. Victorian Government policy is to retain a role in the delivery of aged care in order to provide for those people who may not find suitable services in the private sector
- However, Echuca Regional Health will continue to compete with private providers who have access to funds for better facilities
- Recommendations from the coming Royal Commission into aged care may provide a catalyst for change and for development of new service model
- Echuca Regional Health will need to work out how to respond to growing demand for services at home and in community settings, using the person-directed care model where older people have access to resources to purchase services from the provider of their choice.

Table 21 shows that the age 70+ population in the catchment region (Campaspe Shire and Murray River Council) has an estimated need for 635 aged care beds and 357 community-based aged care packages, according to 2016 population estimates. While the current estimated number of aged care beds exceeds 2016 population demand, an additional 220 beds will be needed by 2026 according to estimated population growth. Demand for community-based aged care packages is also expected to grow.

Table 21 Aged care resources model: 2016, 2026 and 2031 populations in Campaspe Shire and Murray River Council

	2016	Current	2026	2031
Population aged 70 years and older	7942	-	10693	12247
Estimated aged care beds*	635	664	855	980
Estimated community-based aged care packages*	357	-**	481	551

**Notes: Commonwealth aged services planning benchmarks based on 80 beds and 45 community-based aged care packages per 1000 people aged 70+. Of the 80 residential places, it is expected 78 would be permanent places*

***There are currently 428 home care package recipients living in Campaspe Shire and postcode 2731 (Moama area) – see section 4.2.5*

Source: Victoria in Future 2016, Department of Environment, Land, Water and Planning

In order to achieve a continuum of high-quality aged care services, Echuca Regional Health would need to:

- Become an Approved Provider of home care and/or flexible care, under the *Aged Care Act 1997*. Application for Approval can be made at any time, and providers no longer need to apply for allocation of home care places
- Present a business case to the Department of Health and Human Services for the redevelopment of Glanville House to meet contemporary models of care, such as ageing-in-place, creation of smaller self-contained groups of residents, and compliance with dementia-friendly design principles.

6.6 Enablers

In order to achieve these clinical outcomes, Echuca Regional Health will need to invest in new and emerging technologies to enhance clinical care and hospital administration. As a first priority, these include:

- Integrated patient record systems, within an information and communications technology environment that supports hospital-based and community-based workers
- Better administrative systems that support better information flow and more seamless models of care
- Appropriate medical and surgical equipment and systems to support care for patients with increasingly-complex needs
- Information systems that support more efficient operation, including systems to better manage human and physical resources and to monitor and reduce usage of water and power.

Echuca Regional Health will also need to invest in:

- A flexible and contemporary fleet service and sufficient storage capacity to support an increased number of clinicians working remotely
- Specialised workforce profiles: some services cannot rely on bank and casual staff, and need appropriately-skilled staff on site and/or readily available on call
- Role delineation agreements with the Department of Health and Human Services and with other health services in the region.

6.7 Next steps

This Strategic Service Plan provides an overview of Echuca Regional Health's current profile, configuration and size; and provides a forecast of increasing demand for more services and more- complex services based on population and clinical projections. In order to respond to that increasing demand, Echuca Regional Health will:

- Prepare a medical workforce plan that identifies new models for blended specialist / generalist medical teams in high-priority services including emergency medicine, paediatric medicine, surgery, critical care, and obstetrics
- Review the community health model and build an integrated chronic illness management strategy lead by the community health team in partnership with primary care, allied health and acute health programs
- Review the Victorian capability frameworks for maternity and neonatal services (attached at Appendix 6) and discuss with Department of Health and Human Services what action would need to be taken to achieve Level 4 maternity services and Level 3 neonatal services. It may be necessary to upgrade the high-dependency unit as part of this process
- Prepare a technology strategy that prioritises investment in clinical, administrative and resource- management systems, as well as medical equipment
- Prepare unit-by-unit plans based on the overall forecasts and strategies discussed in this document. Each plan needs to consider future demand profiles, workforce needs, and technological innovation and change. Particular attention should be paid to general medicine, which plays a key role in reducing the time spent by older people in particular in the emergency department
- Based on the unit-by-unit plans, consider an infrastructure strategy which allocates priority to investment in upgrades, modernisation and expansion of facilities
- Commence discussions with Department of Health and Human Services on appropriate role delineation and care pathways within the Loddon Campaspe Mallee Partnership Review and if necessary update the Strategic Plan priorities consistent with the outcomes described in this document

- Consider development of a Medical School in Echuca during the next five to ten years. This would particularly support local young people through medical undergraduate training, internships, and registrar training; and may help to attract more young rural people into medical careers.

Appendix 1 Consultation Participants

People Consulted

Name	Organisation	Position
Liz Hamilton	Bendigo Health	Exec Director, Healthy Communities and Continuing Care
Andrew Kallaur	DHHS	Manager Performance Quality and Governance
Vicki Mason	City of Greater Bendigo	Director Health and Wellbeing
Nick Bush	Echuca Regional Health	Chief Executive Officer
June Dyson	Echuca Regional Health	Executive Director of Nursing
Dr Glenn Howlett	Echuca Regional Health	Executive Director of Medical Services
Robyn Rudge	Echuca Regional Health	Executive Director of Finance and Corporate Services
Mark Hooper	Echuca Regional Health	Chief Engineer
Louise Brennan	Echuca Regional Health	Interim Director – Community Services
Helen Thomson	Echuca Regional Health	Deputy Director of Nursing
Susanna Barry	Echuca Regional Health	Director
Cr Chris Bilkey	Echuca Regional Health	Director
John Quirk	Echuca Regional Health	Chairman
Larna Tarrant	Echuca Regional Health	Junior Vice President
Jillian Hammit	Echuca Regional Health	Director
Shane Weller	Echuca Regional Health	Director
Amanda Shand	Echuca Regional Health	Director
Kerri Brown	Njernda Aboriginal Corporation	Alcohol and other drugs counsellor
Brenda Fehring	Njernda Aboriginal Corporation	HACC Program Support Worker
Anne Munzel	Njernda Aboriginal Corporation	Practice Manager

Group Meetings

Staff Groups	Community meeting: Wednesday 14 November 2018	Volunteers meeting: 14 November 2018
After Hours manager	Pamela Taggert, Moama	Colin Hicks
Departments Heads	Denis Hucker, Moama	Dennis King
Quality Unit	Barb Grey, Echuca	Robin Donaldson
Board of Management	Jackie Warren, Murray River Council	Carmel Rice
Primary Care	Judy Cook	Janette Stickland
Medical Officers	John Quirk, President	Malcom McKey
Theatre	Nick Bush, CEO	Peter Edwards
Emergency Department		Mary Boek
Corporate Services		Shari Butcher, Volunteer Coordinator
HiTH, post acute care, community oncology		

Planning workshop, 4 December 2018

Name	Position
John Quirk	Chairman
Geoff Kelly	Senior Vice President
Larna Tarrant	Junior Vice President
Greg Dwyer	Treasurer
Chris Bilkey	Director
Susanna Barry	Director
Jillian Hammit	Director
Shane Weller	Director
Suzanne Mulcahy	Director
Amanda Shand	Director
Sydney Paul	Director
Monica Morgan	Director
Nick Bush	Chief Executive
Dr Glenn Howlett	Executive Director of Medical Services
June Dyson	Executive Director of Nursing
Robin Rudge	Executive Director of Finance and Corporate Services
Louise Brennan	Interim Director – Community Services
Helen Thomson	Deputy Director of Nursing
Alison Hallahan	Principle, Biruu Health

Appendix 2 Admitted episodes

This chapter provides two views of service delivery data:

- Services provided by Echuca Regional Health, including services provided to Campaspe Shire residents and services provided to residents of other Victorian local government areas and other States and Territories, particularly people who live in the cross-border Murray River area
- Services provided to residents of Campaspe Shire, by other Victorian health services.

Echuca Regional Health: Admitted episodes

This section looks at all admitted inpatient activity at Echuca Regional Health from 2014/2015 to 2017/2018.

Same day inpatient activity at ERH

During the last four years, same day medical/other inpatient activity at Echuca Regional health has increased by 76.8 per cent, with the greatest increase in type of admission being "emergency admission through emergency department at this hospital", followed by a gradual annual increase in elective admissions (Table 22). Note that this activity excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis.

Table 22 Same day medical/other inpatient activity* at ERH by type of admission 2014/2015 to 2017/2018

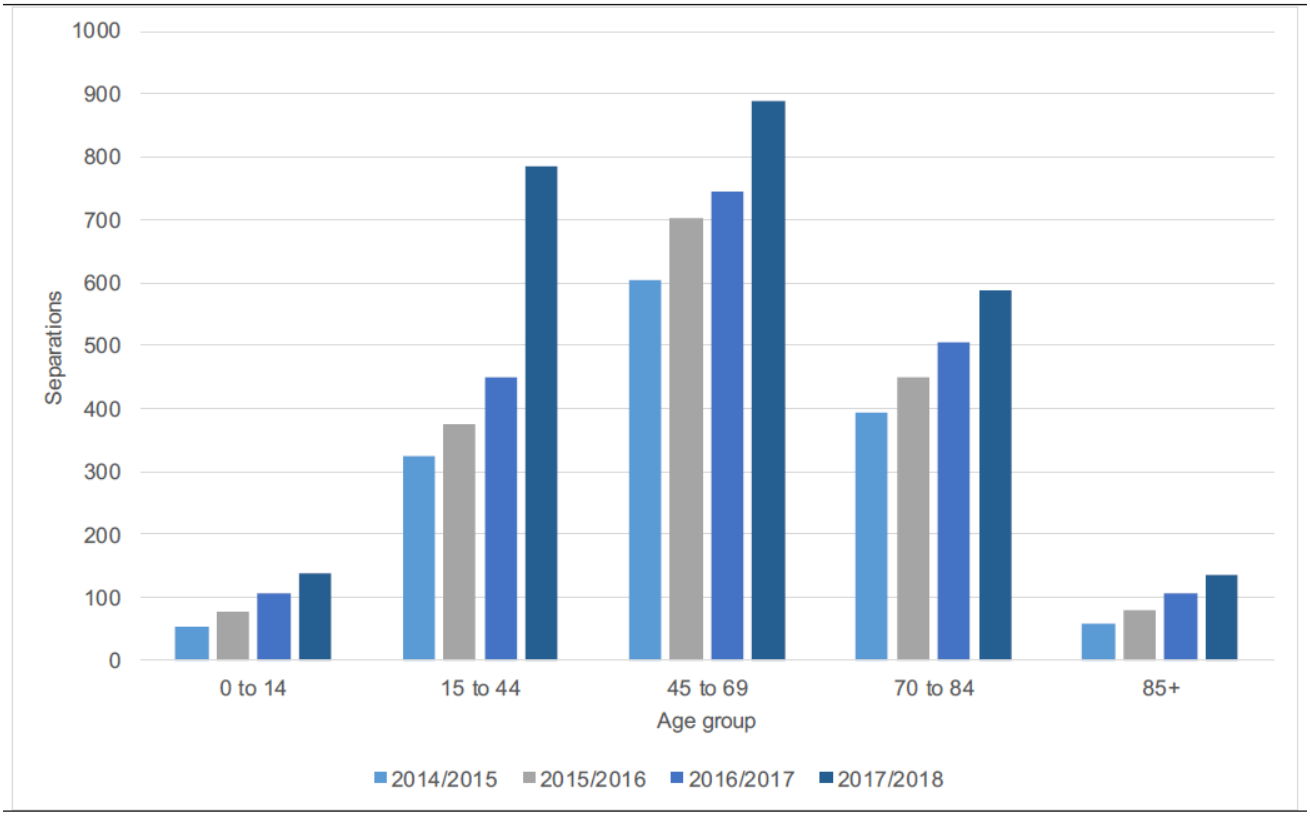
Admission Type	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Elective Admission	1228	1446	1478	1566	338	27.5%
Emergency admission through emergency department at this hospital	159	187	405	925	766	481.8%
Maternity	39	49	27	42	3	7.7%
Other admission	7	<5	<5	<5	<10	N/A
Total	**1433**	**1683**	**1911**	**2534**	**1101**	**76.8%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Figure 5 indicates that same day medical/other inpatient activity at Echuca Regional Health has increased across all age groups over the last four years, with a particularly large spike in admissions from persons aged 15 to 44 years old in 2017/2018. Last year, inpatient activity from people aged 45 to 69 years old accounted for 35.1 per cent of same day medical/other inpatient activity.

Figure 5 Same day medical/other inpatient activity* at ERH by age group 2014/2015 to 2017/201



Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

During 2017/2019, same day medical/other inpatient activity within the Major Diagnostic Category of "Diseases & Disorders of Blood, Blood Forming Organs, Immunological Disorders" accounted for 26.6 per cent of activity, followed by "Diseases & Disorders of the Nervous System" (10.6 per cent) and "Diseases & Disorders of the Musculoskeletal System & Connective Tissue" (6.7 per cent) (Table 23).

Table 23 Same day medical/other inpatient activity* at ERH by Major Diagnostic Category 2014/2015 to 2017/2018

Major Diagnostic Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of Blood, Blood Forming Organs, Immunological Disorders	400	510	591	673	273	68.3%
Diseases & Disorders of the Nervous System	191	224	177	268	77	40.3%

Table 23 Same day medical/other inpatient activity* at ERH by Major Diagnostic Category 2014/2015 to 2017/2018

Major Diagnostic Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of the Musculoskeletal System & Connective Tissue	109	120	145	171	62	56.9%
Diseases & Disorders of the Kidney & Urinary Tract	99	100	139	143	44	44.4%
Pregnancy, Childbirth & the Puerperium	86	121	112	98	12	14.0%
Endocrine, Nutritional & Metabolic Diseases & Disorders	48	106	99	99	51	106.3%
Diseases & Disorders of the Digestive System	56	65	90	247	191	341.1%
Diseases & Disorders of the Ear, Nose, Mouth & Throat	71	78	95	128	57	80.3%
Factors Influencing Health Status & Other Contacts with Health Services	87	69	69	80	-7	-8.0%
Diseases & Disorders of the Male Reproductive System	56	70	70	76	20	35.7%
Diseases & Disorders of the Circulator System	25	33	73	234	209	836.0%
Neoplastic Disorders (Haematological & Solid Neopalsms)	64	64	62	15	-49	-76.6%
Other MDC	141	123	189	302	161	114.2%
Total	**1433**	**1683**	**1911**	**2534**	**1101**	**76.8%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Same day medical/other inpatient separations from people who live in VIFSA Echuca Town and New South Wales have steadily increased over the past four years (Table 24).

Twenty-three per cent of separations were from people who live in New South Wales in 2017/2018.

Table 24 Where patients are coming from for same day medical/other inpatient services* at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	699	854	935	1281	582	83.3%
New South Wales	407	6	478	582	175	43.0%
VIFSA Rochester District	100	107	171	220	120	120.0%
VIFSA Kyabram District	85	118	119	185	100	117.6%
VIFSA Cobram-Numurkah District	58	35	48	50	-8	-13.8%
VIFSA Gannawarra Shire	36	43	49	33	-3	-8.3%
VIFSA Rushworth District	8	14	16	25	17	212.5%
Other VIFSA or State	40	51	95	158	118	295.0%
Total	**1433**	**1683**	**1911**	**2534**	**1101**	**76.8%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Same day surgical inpatient activity at Echuca Regional Health has decreased slightly over the last four years by 8.5 per cent, with most same day surgical separations being elective admissions (Table 25).

Table 25 Same day surgical inpatient activity* at ERH by type of admission 2014/2015 to 2017/2018

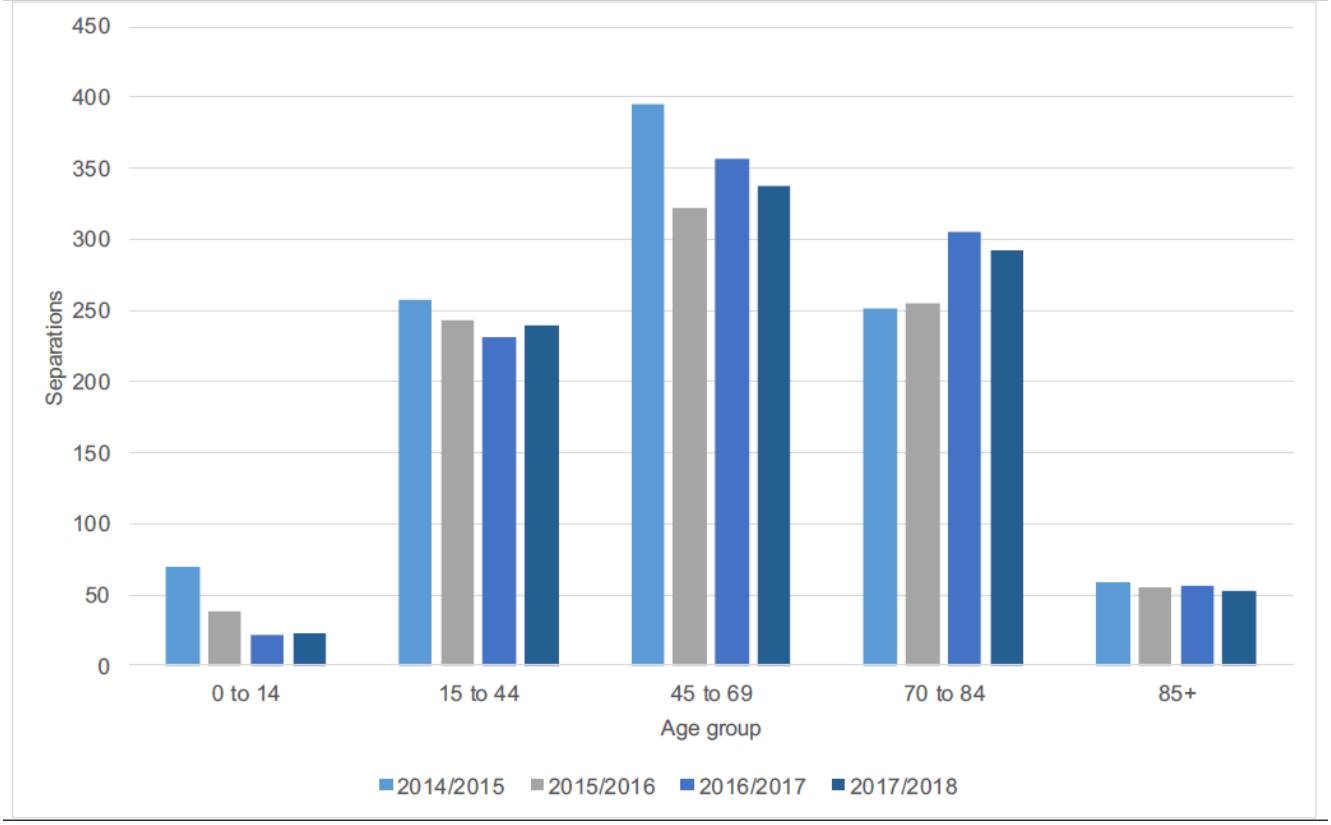
Admission type	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Elective Admission	992	865	927	897	-95	-9.6%
Emergency admission through emergency department at this hospital	33	47	43	45	12	36.04%
Other admission	5	<5	-	-	-5	N/A
Total	**1030**	**913**	**970**	**942**	**-88**	**-8.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Same day surgical inpatient activity has fluctuated across the age groups over the last four years (Figure 6).

Figure 6 Same day surgical inpatient activity* at ERH by age group 2014/2015 to 2017/2018



*Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis
Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

During 2017/2018, "Lens Procedures" was the most frequently coded Diagnostic Related Group (DRG) for same day surgical activity at Echuca Regional Health (15.5 per cent of activity), followed by "Other Skin, Subcutaneous Tissue and Breast Procedures" (10.3 per cent), "Diagnostic Curettage and Diagnostic Hysteroscopy" (8.5 per cent) and "Other Skin Grafts and Debridement Procedures" (7.6 per cent) (Table 26).

Table 26 Top Diagnostic Related Groups for same day surgical inpatient activity* at ERH 2014/2015 to 2017/2018

Diagnostic Related Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Lens Procedures	135	131	141	146	11	8.1%
Other Skin, Subcutaneous Tissue and Breast Procedures	149	101	93	97	-52	-34.9%
Other Skin Grafts and Debridement Procedures	65	64	83	72	7	10.8%
Hernia Procedures	70	76	74	60	-10	-14.3%

Diagnostic Related Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diagnostic Curettage and Diagnostic Hysteroscopy	77	73	75	80	3	3.9%
Carpal Tunnel Release	58	48	68	59	1	1.7%
Hand Procedures	40	50	46	43	3	7.5%
Abortion W OR Procedures	53	52	51	36	-17	-32.1%
Other Knee Procedures	87	56	52	71	-16	-18.4%
Plastic OR Procedures for Skin, Subcutaneous Tissue and Breast Disorder	31	41	43	31	0	0.0%
Other Vagina, Cervix and Vulva Procedures	19	26	19	27	8	42.1%
Other Uterus and Adnexa Procedures for Non-Malignancy	19	25	23	19	0	0.0%
Lwt Limb Procs W/O Ulcer/Cellulitis W/O (Skin Grafts and Sev CC) W/O Cat CC	11	9	19	19	8	72.7%
Other DRG	216	161	183	182	-34	-15.7%
Total	**1030**	**913**	**970**	**942**	**-88**	**-8.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Forty-one per cent of same day surgical activity in 2017/2018 was from people who live locally in VIFSA Echuca Town, followed by people who live in New South Wales (21.2 per cent) and VIFSA Rochester District (11.3 per cent) (Table 27).

Table 27 Where patients are coming from for same day surgical inpatient services* at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	459	375	410	389	-70	-15.3%
New South Wales	271	248	284	200	-71	-26.2%
VIFSA Rochester District	84	101	88	106	22	26.2%
VIFSA Kyabram District	45	46	45	54	9	20.0%
VIFSA Gannawarra Shire	42	47	40	53	11	26.2%
VIFSA Cobram-Numurkah District	15	18	9	29	14	93.3%
VIFSA Greater Bendigo Rural	12	7	10	13	1	8.3%
VIFSA Shepparton Town	8	6	11	16	8	100.0%

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Rushworth District	11	6	<5	15	4	36.4%
Other VIFSA or State	83	59	71	67	-16	-19.3%
Total	**1030**	**913**	**970**	**942**	**-88**	**-8.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Chemotherapy same day at ERH

Same day chemotherapy separations increased by 27.6 per cent over the last four years, with the highest number of separations in 2016/2017 (895 separations) (Table 28). Forty-two per cent of chemotherapy separations were from VIFSA Echuca Town residents.

Table 28 Where patients are coming from for same day chemotherapy at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	253	346	341	354	101	39.9%
New South Wales	243	245	320	213	-30	-12.3%
VIFSA Rochester District	81	95	47	55	-26	-32.1%
VIFSA Kyabram District	30	40	58	111	81	270.0%
VIFSA Gannawarra Shire	21	72	61	64	43	204.8%
VIFSA Cobram-Numurkah District	8	26	64	25	17	212.5%
Other VIFSA or State	17	<5	<5	11	-6	-35.3%
Total	**653**	**825**	**895**	**833**	**180**	**27.6%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Haemodialysis same day at ERH

Same day haemodialysis separations at Echuca Regional Health have gradually decreased over the past four years, in particular from people who live in New South Wales (Table 29).

Table 29 Where patients are coming from for same day haemodialysis at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
New South Wales	1004	862	644	466	-538	-53.6%
VIFSA Echuca Town	501	552	490	474	-27	-5.4%
VIFSA Rochester District	153	38	153	289	136	88.9%

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Loddon Shire	127	141	104	-	-127	-100.0%
VIFSA Gannawarra Shire	-	<5	77	129	129	N/A
Other VIFSA or State	13	25	29	76	63	484.6%
Total	**1798**	**1619**	**1497**	**1434**	**-364**	**-20.2%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Scope procedures same day at ERH

Total same day scope procedures (colonoscopy, endoscopy and gastroscopy) have increased by 14.7 per cent overall during the past four years, with a particular increase in colonoscopies performed (Table 30).

Table 30 Same day scope services at ERH by type of scope procedure 2014/2015 to 2017/2018

Scope Procedure	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Colonoscopy	482	482	656	624	142	29.5%
Endoscopy	421	442	469	463	42	10.0%
Other admission	247	234	252	232	-15	-6.1%
Total	**1150**	**1158**	**1377**	**1319**	**169**	**14.7%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

During 2017/2018, 43.5 per cent of same day scope separations at Echuca Regional Health were from people living in VIFSA Echuca Town, followed by New South Wales (27.7 per cent) and VIFSA Rochester District (10.1 per cent) (Table 31).

Table 31 Where patients are coming from for same day scope procedures at ERH by Victoria in Future Small Area (VIFSA) 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	539	543	671	574	35	6.5%
New South Wales	309	342	364	366	57	18.4%
VIFSA Rochester District	145	112	139	133	-12	-8.3%
VIFSA Gannawarra Shire	51	51	57	67	16	31.4%
VIFSA Kyabram District	40	44	60	62	22	55.0%
VIFSA Cobram-Numurkah District	17	19	25	25	8	47.1%
VIFSA Rushworth District	6	10	11	29	23	383.3%

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Greater Bendigo Rural	12	8	12	16	4	33.3%
Other VIFSA or State	31	29	38	47	16	51.6%
Total	**1150**	**1158**	**1377**	**1319**	**169**	**14.7%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Appendix 3 Where Campaspe Shire residents attend for inpatient care

This section looks at where Campaspe Shire residents are going for hospital services outside of Echuca Regional Health.

Same day inpatient activity outside of ERH

Over the last four years, same day medical/other inpatient separations by Campaspe Shire residents outside of Echuca Regional Health has increased by 14.0 per cent overall, with nearly all activity within the care program "Other care (Acute) including Qualified Newborn"; as such, the subsequent tables in this section only include this care type (Table 32).

Table 32 Same day medical/other inpatient separations* by Campaspe Shire residents outside of ERH by care program 2014/2015

Care Program	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Other care (Acute) including Qualified Newborn	1992	1909	2194	2340	348	17.5%
Other program (e.g. acute adult mental health, palliative care, etc)	66	<5	20	7	-59	-89.4%
Total	**2058**	**1912**	**2214**	**2347**	**289**	**14.0%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

During 2017/2018, Kyabram and District Health Service provided 21.9 per cent of same day medical/other inpatient separations to Campaspe Shire residents outside of Echuca Regional Health, followed by private hospitals (21.0 per cent), The Bendigo Hospital (19.7 per cent) and Goulburn Valley Health [Shepparton] (17.1 per cent) (Table 33).

Table 33 Where Campaspe Shire residents are going for same day medical/other inpatient services outside of ERH 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
PRIVATE	442	464	472	492	50	11.3%
Kyabram & District Health Service	376	378	457	513	137	36.4%
Bendigo Hospital, The	303	319	400	461	158	52.1%
Goulburn Valley Health (Shepparton)	327	292	395	399	72	22.0%
Rochester & Elmore District Health Service	104	80	63	81	-23	-22.1%
Alfred, The (Prahran)	123	71	67	42	-81	-65.9%

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Royal Children's Hospital (Parkville)	50	62	46	94	44	88.0%
St Vincent's Hospital	52	50	59	57	5	9.6%
Royal Melbourne Hospital – City Campus	68	44	65	40	-28	-41.2%
Peter MacCallum Cancer Institute (East Melbourne)	28	25	42	23	-5	-17.9%
Austin Hospital	33	16	14	17	-16	-48.5%
Cohuna District Hospital	8	10	19	10	2	25.0%
Royal Dental Hospital (Melbourne)	6	10	11	12	6	100.00%
Monash Medical Centre (Clayton)	9	14	9	7	-2	-22.2%
Royal Women's Parkville	8	7	9	9	1	12.5%
Other campus	55	67	66	83	28	50.9%
Total	**1992**	**1909**	**2194**	**2340**	**348**	**17.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis. Care type 4 only (other care (acute) including Qualified Newborn).*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Over the last four years, same day medical/other separations by Campaspe Shire residents outside of Echuca Regional Health within the Diagnostic Related Group "Red Blood Cell Disorders" increased by

79.6 per cent; this Diagnostic Related Group was coded within 15.8 per cent of separations in 2017/2018, followed by "Dental Extractions and Restorations" (8.2 per cent) which also increased over the last four years (Table 34).

Table 34 Same day medical/other inpatient separations* by Campaspe Shire residents outside of ERH by Major Diagnostic Category (MDC) and Diagnostic Related Groups (DRGs) 2014/2015 to 2017/2018

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of Blood, Blood Forming Organs, Immunological Disorders	**279**	**246**	**403**	**458**	**179**	**64.2%**
Red Blood Cell Disorders	206	203	348	370	164	79.6%
Reticuloendothelial and Immunity Disorders	51	39	50	69	18	35.3%
Coagulation Disorders	22	<5	5	19	-3	-13.6%

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of the Circulatory system	**260**	**239**	**239**	**326**	**66**	**25.4%**
Circulatory Disorders	109	85	114	130	21	19.3%
Arrhythmia, Cardiac Arrest and Conduction Disorders, Major Complexity	48	56	50	68	20	41.7%
Chest Pain	50	54	45	69	19	38.0%
Syncope and Collapse	12	14	9	13	1	8.3%
Other DRG	41	30	21	46	5	12.2%
Diseases & Disorders of the Ear, Nose, Mouth & Throat	**192**	**198**	**274**	**243**	**51**	**26.6%**
Dental Extractions and Restorations	150	151	188	193	43	28.7%
Other Ear, Nose, Mouth and Throat Disorders	20	15	18	11	-9	-45.0%
Other DRG	22	32	68	39	17	77.3%
Diseases & Disorders of the Kidney & Urinary Tract	**194**	**205**	**225**	**220**	**26**	**13.4%**
Cystourethroscopy for Urinary Disorder, Sameday	132	132	154	133	1	0.8%
Other Kidney and Urinary Tract Disorders	21	30	23	43	22	104.8%
ESW Lithotripsy	14	13	12	8	-6	-42.09%
Kidney and Urinary Tract Infections	5	10	15	15	10	200.00%
Kidney and Urinary Tract Signs and Symptoms	9	6	6	11	2	22.2%
Other DRG	13	14	15	10	-3	-23.1%

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of the Musculoskeletal System & Connective Tissues	**212**	**139**	**144**	**160**	**-52**	**-24.5%**
Other Sameday Treatment for Musculoskeletal Disorders	127	68	68	89	-38	-29.9%
Infusions for Musculoskeletal Disorders, Sameday	59	52	51	46	-13	-22.0%
Musculoskeletal Injuries, Sameday	24	19	25	24	0	0.0%
Femoral Fractures, Transferred to Acute Facility <2 Days	<5	-	-	<5	N/A	N/A
Diseases & Disorders of the Nervous System	**148**	**141**	**127**	**164**	**16**	**10.8%**
Cranial and Peripheral Nerve Disorders	37	39	35	41	4	10.8%
Degenerative Nervous System Disorders	11	13	13	24	13	118.2%
Headache	21	14	12	15	-6	-28.6%
Multiple Sclerosis and Cerebellar Ataxia	39	33	32	34	-5	-12.8%
Seizures	8	5	10	11	3	37.5%
Other DRG	32	37	25	39	7	21.9%
Diseases & Disorders of the Digestive System	**98**	**102**	**118**	**121**	**23**	**23.5%**
Abdominal Pain and Mesenteric Adenitis	22	19	20	27	5	22.7%
Inflammatory Bowel Disease W CC	28	35	48	59	31	110.7%
Oesophagitis and Gastroenteritis	11	13	10	17	6	54.5%
Other Digestive System Disorders	28	29	28	15	-13	-46.4%
Other DRG	9	6	12	<5	N/A	N/A
Factors Influencing Health Status & Other Contacts with Health Services	**117**	**100**	**107**	**108**	**-9**	**-7.7%**
Other Factors Influencing Health Status	112	89	95	100	-12	-10.7%
Other DRG	5	11	12	8	3	60.0%
Diseases & Disorders of the Respiratory System	*65*	*73*	*82*	*77*	*12*	*18.5%*
Diseases & Disorders of the Male Reproductive System	*68*	*61*	*75*	*84*	*16*	*23.5%*
Neoplastic Disorders (Haematological & Solid Neoplasms)	*68*	*63*	*71*	*84*	*16*	*23.5%*

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Endocrine, Nutritional & Metabolic Diseases & Disorders	*50*	*64*	*72*	*77*	*27*	*54.0%*
Diseases & Disorders of the Skin, Subcutaneous Tissue & Breast	*99*	*70*	*42*	*48*	*-51*	*-51.5%*
Mental Diseases & Disorders	*28*	*53*	*66*	*28*	*0*	*0.0%*
Diseases & Disorders of the Hepatobiliary System & Pancreas	*31*	*41*	*28*	*33*	*2*	*6.5%*
Injuries, Poisonings & Toxic Effects of Drugs	*22*	*39*	*37*	*31*	*9*	*40.9%*
Pregnancy, Childbirth & the Puerperium	*23*	*24*	*21*	*23*	*0*	*0.0%*
Other MDC	*38*	*5*	*63*	*55*	*17*	*44.7%*
Total	**1992**	**1909**	**2194**	**2340**	**348**	**17.5%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis. Care type 4 only (other care (acute) including Qualified Newborn).*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The number of same day surgical separations by Campaspe Shire residents receiving services outside of Echuca Regional Health fluctuated over the past four years (Table 35).

Table 35 Where Campaspe Shire residents are going for same day surgical inpatient services outside of ERH 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
PRIVATE	974	895	1017	943	-31	-3.2%
Kyabram & District Health Service	552	311	319	342	-210	-38.0%
Bendigo Hospital, The	119	143	149	145	26	21.8%
Goulburn Valley Health (Shepparton)	123	132	161	132	9	7.3%
Castlemaine Health	43	64	98	95	52	120.9%
Benalla Health	40	51	64	84	44	110.0%
Peter MacCallum	48	31	31	26	-22	-45.8%
Royal Victorian Eye & Ear Hospital,	17	18	25	23	6	35.3%
Royal Children's Hospital [Parkville]	18	14	20	30	12	66.7%
Royal Women's Parkville	20	14	23	12	-8	-40.0%
Rochester & Elmore District Health	29	25	-	8	-21	-72.4%

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
St Vincent's Hospital	12	6	15	15	3	25.0%
Alfred, The [Prahran]	9	6	9	8	-1	-11.1%
Other campus	48	50	69	46	-2	-4.2%
Total	**2052**	**1760**	**2000**	**1909**	**-143**	**-7.0%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis. Care type 4 only (other care (acute) including Qualified Newborn).*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Table 36 provides a view of same day surgical separations by Campaspe Shire residents at select other Victorian hospitals in 2017/2018. Some notable same day surgical activity includes a large number of Campaspe Shire resident separations for Lens Procedures and minor complexity knee procedures at private hospitals and Kyabram and District Health Service.

Table 36 Same day surgical separations by Campaspe Shire residents at select Victorian hospital campuses in 2017/2018 by clinical specialty and DRG

Clinical specialty and top DRGs	PRIVATE	Kyabram & District Health Service	Bendigo Hospital, The	Goulburn Valley Health (Shepparton)	Castelmaine Health	Benalla Health
Ophthalmology	**365**	**147**	**23**	**51**	**19**	**84**
Lens Procedures	300	143	22	49	18	80
Glaucoma and Complex Cataract Procedures	24	<5	<5			
Other	41	<5		<5	<5	<5
Orthopaedics	**113**	**20**	**22**	**13**	**<5**	
Other Knee Procedures, Minor Complexity	50	19	<5	<5	<5	
Local Excision & Removal of Internal Fixation Device, Except Hip & Fmr, Min Comp	17		15	6		
Other	46	<5	<5	<5		
Plastics	**111**	**56**	**<5**	**10**	**7**	
Other Skin Grafts and Debridement Procedures, Minor Complexity	37	33		<5	<5	
Plastic OR Procs for Skin, Subcutaneous Tissue and Breast Disorders, Minor Comp	31	6	<5	<5	<5	
Hand Procedures	21	8	<5	<5	<5	
Other	22	9	<5	<5	<5	
Gynaecology	**102**	**36**	**31**	**8**	**17**	
Other Uterus and Adnexa Procedures for Non-Malignancy, Minor Complexity	29	7	6	<5	7	
Other Female Reproductive System OR Procedures, ,Minor Complexity	24					

Clinical specialty and top DRGs	PRIVATE	Kyabram & District Health Service	Bendigo Hospital, The	Goulburn Valley Health (Shepparton)	Castelmaine Health	Benalla Health
Diagnostic Curettage and Diagnostic Hysteroscopy	20	11	11	<5	<5	
Other Vagina, Cervix and Vulva Procedures	12	8	10	<5	<5	
Other	17	10	<5	<5	5	
General surgery	**94**	**37**	**23**	**30**	**6**	
Other Skin, Subcutaneous Tissue and Breast Procedures, Minor Complexity	40	26	<5	8	<5	
Vein Ligation and Stripping	11			<5		
Other	43	11	21	21	<5	
ENT	**66**	**16**	**10**	**<5**	**39**	
Myringotomy W Tube Insertion	29	<5			27	
Tonsillectomy and Adenoidectomy	11	<5			9	
Other Ear, Nose, Mouth and Throat Procedures, Minor Complexity	10	6	<5		<5	
Other	16	5	7	<5	<5	
Neurosurgery	**57**	**25**	**<5**	**<5**	**<5**	
Carpal Tunnel Release	43	20	<5	<5	<5	
Other	14	5	<5	<5	<5	
Urology	14	<5	12	8	5	
Obstetrics	10	<5	9	6		
Cardiology	5		7			
Vascular	<5			<5		
Other/ungroupable	<5		<5			
Total	**943**	**342**	**145**	**132**	**95**	**84**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis. Care type 4 only (other care (acute) including Qualified Newborn).*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

"Lens Procedures" was the most frequently coded Diagnostic Related Group for same day surgical separations by Campaspe Shire residents outside of Echuca Regional Health, representing one-third (32.8 per cent) of separations in 2017/2018, followed by "Other Skin, Subcutaneous Tissue and Breast Procedures" (5.3 per cent) (Table 37).

Table 37 Same day surgical inpatient separations* by Campaspe Shire residents outside of ERH by Major Diagnostic Category (MDC) and Diagnostic Related Groups (DRGs) 2014/2015 to 2017/2018

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of the Eye	**619**	**556**	**689**	**719**	**100**	**16.2%**
Lens Procedures	553	481	578	627	74	13.4%
Retinal Procedures	13	13	33	18	5	38.5%
Glaucoma and Complex Cataract Procedures	8	13	18	32	24	300.00%
Other Corneal, Scleral and Conjunctival Procedures	13	11	16	18	5	38.5%
Other DRG	13	14	16	6	-7	-53.8%
Diseases & Disorders of the Skin, Subcutaneous Tissue & Breast	**565**	**338**	**339**	**265**	**-300**	**-53.1%**
Other Skin, Subcutaneous Tissue and Breast Procedures	373	129	121	101	-272	-72.9%
Other Skin Grafts and Debridement Procedures	93	112	124	83	-10	-10.8%
Plastic OR Procedures for Skin, Subcutaneous Tissues and Breast Disorders	74	63	63	49	-25	-33.8%
Other DRG	398	163	152	133	-265	-66.6%
Diseases & Disorders of the Musculoskeletal System & Connective Tissue	**245**	**221**	**244**	**237**	**-8**	**-3.3%**
Other Knee Procedures	113	93	105	85	-28	-24..08%
Hand Procedures	58	48	57	40	-18	-31.0%
Local Excision and Removal of Internal Fixation Devices, Except Hip & Femur	29	35	32	45	16	55.2%
Other DRG	46	45	50	67	22	48.9%
Diseases & Disorders of the Female Reproductive System	**196**	**219**	**219**	**205**	**9**	**4..6%**
Other Uterus and Adnexa Procedures for Non-Malignancy	54	73	80	76	22	40.7%
Diagnostic Curettage and Diagnostic Hysteroscopy	56	56	49	49	-7	-12.5%
Other Vagina, Cervix and Vulva Procedures	26	31	41	37	11	42.3%
Other Female Reproductive System OR Procedures	39	40	29	25	-14	-35.9%

MDC/DRGs (grouped)	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Endoscopic and Laparoscopic Procedures, Female Reproductive System	17	16	15	16	-1	-5.39%
Other DRG	21	19	20	18	-3	-14.3%
Diseases & Disorders of the Ear, Nose, Mouth & Throat	**101**	**119**	**160**	**150**	**49**	**48.5%**
Myringotomy W Tube Insertion	37	50	81	67	30	81.1%
Tonsillectomy and/or Adenoidectomy	15	8	25	25	10	66.7%
Other Ear, Nose, Mouth and Throat Procedures W/O CC	13	12	23	24	11	84.6%
Mouth and Salivary Gland Procedures	9	15	14	11	2	22.2%
Sinus and Complex Middle Ear Procedures	9	15	14	11	2	22.2%
Other DRG	60	82	102	87	27	45.0%
Diseases & Disorders of Nervous System	**88**	**73**	**94**	**90**	**2**	**2.3%**
Carpal Tunnel Release	72	58	77	70	-2	-2.8%
Other DRG	16	15	17	20	4	25.0%
Pregnancy, Childbirth & the Puerperium	**51**	**52**	**47**	**32**	**-19**	**-37.3%**
Abortion W OR Procedures	5	51	6	3	-21	-41.2%
Other DRG	-	<5	<5	<5	N/A	N/A
Diseases & Disorders of the Digestive System	*44*	*42*	*53*	*41*	*-3*	*-6.8%*
Diseases & Disorders of the Kidney & Urinary Tract	*34*	*34*	*38*	*28*	*-6*	*-17.6%*
Diseases & Disorders of the Male Reproductive System	*41*	*22*	*25*	*36*	*-5*	*-12.2%*
Diseases & Disorders of the Circulatory System	*18*	*29*	*27*	*30*	*12*	*66.7%*
Injuries, Poisonings & Toxic Effects of Drugs	*12*	*12*	*19*	*19*	*7*	*58.3%*
Factors Influencing Health Status & Other Contacts with Health Services	*12*	*8*	*12*	*18*	*6*	*50.0%*
Other MDCs	*26*	*35*	*34*	*39*	*13*	*50.0%*
Total	**2052**	**1760**	**2000**	**1909**	**-143**	**-7.0%**

**Excludes same day births, unqualified neonates, scopes (endoscopy, gastroscopy, colonoscopy), chemotherapy, radiotherapy and dialysis. Care type 4 only (other care (acute) including Qualified Newborn).*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Chemotherapy same day outside of ERH

Chemotherapy separations by Campaspe Shire residents outside of Echuca Regional Health increased by 49.4 per cent over the last four years (Table 38).

During 2017/2018, The Bendigo Hospital, Goulburn Valley Health [Shepparton] and private hospitals provided the majority of chemotherapy separations outside of Echuca Regional Health. Over the past four years, chemotherapy separations at private hospitals, Peter MacCallum Cancer Institute and St Vincent's Hospital more than doubled.

For reference, during 2017/2018 Echuca Regional Health provided 526 chemotherapy separations to Campaspe Shire residents, and a further 213 chemotherapy separations to New South Wales residents (see Table 28).

Table 38 Where Campaspe Shire residents are going for same day chemotherapy outside of ERH by campus 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Bendigo Hospital, The	250	190	282	296	46	18.4%
Goulburn Valley Health (Shepparton)	209	276	247	189	-20	-9.6%
PRIVATE	94	61	112	192	98	104.3%
Peter MacCallum Cancer Institute (East Melbourne)	58	75	99	132	74	127.6%
St Vincent's Hospital	<5	7	50	105	-	2525.0%
Kyabram & District Health Service	-	-	21	86	86	N/A
Austin Hospital	33	37	9	21	-12	-36.4%
Mercy Hospital for Women	17	13	13	29	12	70.6%
Royal Children's Hospital (Parkville)	19	20	11	16	-3	-15.8%
Other campus	40	56	21	16	-24	-60.0%
Total	**724**	**735**	**865**	**1082**	**358**	**49.4%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Haemodialysis same day outside or ERH

Haemodialysis separations by Campaspe Shire residents outside of Echuca Regional Health increased by 18.1 per cent over the last four years, with the majority of separations provided by Kyabram and District Health Services (Table 39).

Table 39 Where Campaspe Shire residents are going for same day haemodialysis outside of ERH by campus 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Kyabram & District Health Service	1014	1232	1606	1474	460	45.4%
Cohuna District Hospital	147	157	153	155	8	5.4%
Goulburn Valley Health [Shepparton]	156	66	68	73	-83	-53.2%
Bendigo Hospital, The	100	19	23	25	-75	-75.0%
Other campus	56	23	10	12	-44	-78.6%
Total	**1473**	**1497**	**1860**	**1739**	**266**	**18.1%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Scope procedure same day outside ERH

Campaspe Shire residents receiving scope services (gastroscopy, colonoscopy and endoscopy) outside of Echuca Regional Health primarily received services at private hospitals (34.3 per cent of separations), Kyabram and District Health Services (23.6 per cent) and Goulburn Valley Health [Shepparton] (16.9 per cent) (Table 40).

Table 40 Where Campaspe Shire residents are going for same day scope procedures* outside of ERH by campus and type of scope 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
PRIVATE	**360**	**424**	**420**	**363**	**3**	**0.8%**
Gastroscopy	146	190	174	150	4	2.7%
Colonoscopy	122	154	152	133	11	9.0%
Endoscopy	92	80	94	80	-12	-13.0%
Kyabram & District Health Service	**275**	**287**	**333**	**250**	**-25**	**-9.1%**
Gastroscopy	109	107	84	101	-8	-7.3%
Colonoscopy	134	151	202	121	-13	-9.7%
Endoscopy	32	29	47	28	-4	-12.5%
Goulburn Valley Health [Shepparton]	**143**	**154**	**219**	**179**	**36**	**25.2%**
Gastroscopy	71	81	107	89	18	25.4%
Colonoscopy	45	45	82	62	17	37.8%
Endoscopy	27	28	30	28	1	3.7%

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Rochester & Elmore District Health Service	**133**	**116**	**38**	**93**	**-40**	**-30.1%**
Gastroscopy	46	46	18	22	-24	-52.2%
Colonoscopy	56	49	13	49	-7	-12.5%
Endoscopy	31	21	7	22	-9	-29.0%
Bendigo Hospital, The	**71**	**40**	**75**	**86**	**15**	**21.1%**
Gastroscopy	26	18	31	39	13	50.0%
Colonoscopy	27	18	32	29	2	7.4%
Endoscopy	18	<5	12	18	0	0.0%
Other campus	*54*	*57*	*82*	*87*	*33*	*61.1%*
Total	**1036**	**1078**	**1167**	**1058**	**22**	**2.1%**

**Includes gastroscopy, colonoscopy and endoscopy procedures Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

Births outside of ERH

Births by Campaspe Shire women outside of Echuca Regional Health decreased by 24.3 per cent over the last four years (Table 41).

Table 41 Where Campaspe Shire women are giving birth outside of ERH by campus 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Goulburn Valley Health [Shepparton]	98	72	61	54	-44	-44.9%
Bendigo Hospital, The	25	32	33	46	21	84.0%
PRIVATE	28	22	27	18	-10	-35.7%
Other campus	18	16	13	10	-8	-44.4%
Total	**169**	**142**	**134**	**128**	**-41**	**-24.3%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Multiday/overnight inpatient activity of ERH

Multiday/overnight inpatient separations by Campaspe Shire residents outside of Echuca Regional Health increased by 6.4 per cent over the last four years (Table 42).

Table 42 Multiday/overnight inpatient separations* by Campaspe Shire residents outside of ERH by care program 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Other care (Acute) including Qualified Newborn	5210	5379	5501	5438	228	4.4%
Medical	*2777*	*2814*	*2907*	*2932*	*155*	*5.6%*
Surgical	*2158*	*2301*	*2315*	*2233*	*75*	*3.5%*
Other	*275*	*264*	*279*	*273*	*-2*	*-0.7%*
Designated Rehabilitation Program/Unit – Level 2	147	153	190	188	41	27.9%
Acute Adult Mental Health Service	132	122	151	203	71	53.8%
Geriatric Evaluation and Management Program	55	46	63	56	1	1.8%
Palliative Care Program	30	31	35	46	16	53.3%
Acute Aged Persons Mental Health Service (APMH)	38	18	18	19	-19	-50.0%
Maintenance Care	16	18	22	36	20	125.0%
Other care program	23	44	29	26	3	13.0%
Total	**5651**	**5811**	**6009**	**6012**	**361**	**6.4%**

**Excludes unqualified neonates and births*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The average length of stay by Campaspe Shire residents receiving overnight or multiday medical/other services outside of Echuca Regional Health decreased by approximately one day over the last four years; there were 14.5 per cent fewer bed days despite a 5.0 per cent increase in separations (Table 43).

Table 43 Average length of stay of multiday/overnight medical and other inpatient separations* by Campaspe Shire residents outside of ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	3052	3078	3186	3205	153	5.0%
Bed days	16955	14538	16509	14502	-2453	-14.5%
Average length of stay (days)	**5.6**	**4.7**	**5.2**	**4.5**	**-1.0**	**-18.6%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

The average length of stay by Campaspe Shire residents receiving overnight or multiday surgical services outside of Echuca Regional Health remained steady around 4.4 days over the last four years (Table 44).

Table 44 Average length of stay of multiday/overnight surgical inpatient separations* by Campaspe Shire residents outside of ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	2158	2301	2315	2233	75	3.5%
Bed days	9414	9998	10202	9722	308	3.3%
Average length of stay (days)	**4.4**	**4.3**	**4.4**	**4.4**	**0.0**	**-0.2%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

In 2017/2018, 26.8 per cent of multiday/overnight surgical inpatient separations by Campaspe Shire residents outside of Echuca Regional Health was within the clinical specialty "orthopaedics", followed by "general surgery" (20.4 per cent) and "urology" (8.6 per cent) (Table 45).

Of the 598 orthopaedics separations in 2017/2018, 128 separations were for minor complexity knee replacement, 89 separations were for minor complexity hip replacement, and 52 separations were for minor complexity humerus, tibia, fibula and ankle procedures. For general surgery activity in 2017/2018, 59 separations were for minor complexity hernia procedures, 47 separations were for minor complexity laparoscopic cholecystectomy, and 41 separations were for minor complexity major procedures for breast disorders[8].

Table 45 Multiday/overnight surgical inpatient separations* by Campaspe Shire residents outside of ERH by clinical specialty 2014/2015 to 2017/2018

Clinical specialty	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Orthopaedics	543	589	630	598	55	10.1%
General surgery	518	538	474	455	-63	-12.2%
Urology	217	198	214	192	-25	-11.5%
Ent	161	181	175	171	10	6.2%
Plastics	170	179	159	130	-40	-23.5%
Cardiology	121	145	155	153	32	26.4%
Gynaecology	123	133	119	137	14	11.4%
Neurosurgery	84	89	135	106	22	26.2%
Vascular	77	97	91	63	-14	-18.2%
Cardio-thoracic	54	65	50	59	5	9.3%

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

[8] Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

In 2017/2018, 14.7 per cent of multiday or overnight medical/other inpatient separations by Campaspe Shire residents outside of Echuca Regional Health was within the clinical specialty "respiratory", followed by "general medicine" (13.9 per cent) and "cardiology" (12.4 per cent) (Table 46).

Table 46 Multiday/overnight medical and other inpatient activity* by Campaspe Shire residents outside of ERH by clinical specialty 2014/2015 to 2017/2018

Clinical specialty	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Respiratory	467	537	570	471	4	0.9%
General medicine	370	416	507	447	77	20.8%
Cardiology	418	385	405	397	-21	-5.0%
Gastroenterology	390	337	361	349	-41	-10.5%
Neurology	194	180	199	227	33	17.0%
Orthpaedics	179	171	180	189	10	5.6%
Haematology	109	124	119	219	110	100.9%
Urology	124	94	144	107	-17	-13.7%
Psychiatry	93	113	135	113	20	21.5%
Ent	79	108	87	108	29	36.7%
Endocrinology	90	82	73	83	-7	-7.8%
Neonatology	83	57	64	79	-4	-4.8%
Rheumatology	72	69	56	80	8	11.1%
Obstetrics	78	72	62	60	-18	-23.1%
Nephrology	87	76	46	43	-44	-50.6%
Oncology/radiology	25	25	85	91	66	264.0%
Other clinical specialty	194	232	93	142	-52	-26.8%
Total	**3052**	**3078**	**3186**	**3205**	**153**	**5.0%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

Births at ERH

Births at Echuca Regional Health increased by 36.9 per cent over the last four years. Note that Table 47 does not separate single/multiple births (e.g. twins) so the actual number of babies born may be slightly higher.

Table 47 Births at ERH by type of birth 2014/2015 to 2017/2018

Type of birth	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Vaginal delivery	211	250	217	258	47	22.3%
Caesarean delivery	87	134	108	150	63	72.4%
Total	**298**	**384**	**325**	**408**	**110**	**36.9%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Thirty-four per cent of births at Echuca Regional Health in 2017/2018 were from women living in VIFSA Echuca Town, followed by New South Wales (23.0 per cent) and VIFSA Kyabram District (15.9 per cent) (Table 48).

Over the past four years, births from women living in New South Wales, VIFSA Echuca Town, VIFSA Kyabram District, VIFSA Cobram-Numurkah District and VIFSA Rushworth District all increased. In particular, there was an additional 37 babies born from 2014/2015 to 2017/2018 from New South Wales residents, and a steady annual increase from VIFSA Cobram-Numurkah District residents.

Table 48 Where women are coming from to give birth at ERH 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	124	159	131	146	22	17.7%
New South Wales	57	66	65	94	37	64.9%
VIFSA Kyabram District	53	65	47	65	12	22.6%
VIFSA Rochester District	46	48	32	37	-9	-19.6
VIFSA Cobram-Numurkah District	6	9	14	25	19	316.7%
VIFSA Rushworth District	<5	11	5	16	12	300.0%
VIFSA Ardmona-Murchison District	-	9	11	6	6	N/A
VIFSA Gannawarra Shire	<5	7	6	8	6	300.0%
Other VIFSA or State	6	10	14	11	5	83.3%
Total	**298**	**384**	**325**	**408**	**110**	**36.9%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Muiltday/overnight inpatient activity at ERH

During 2017/2018, 79.6 per cent of multiday/overnight inpatient activity at Echuca Regional Health was "medical", followed by "surgical" (17.1 per cent) and "other" (3.3 per cent). Total multiday/overnight inpatient activity increased by 35.0 per cent overall during the four year period (Table 49).

Table 49 Multiday/overnight inpatient activity* at ERH by type of Diagnostic Related Group 2014/2015 to 2017/2018

DRG Type	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Medical	2348	2821	3035	3412	1064	45.3%
Surgical	717	653	678	731	14	2.0%
Other	109	98	122	141	32	29.4%
Total	**3174**	**3572**	**3835**	**4284**	**1110**	**35.0%**

**Excludes births and unqualified neonates*
Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The majority (88.7 per cent) of multiday/overnight inpatient activity at Echuca Regional Health that was designated medical/other was within the "other care (acute) including qualified newborn" care program (Table 50). Separations across all care programs for multiday/overnight medical or other inpatient activity have increased over the last four years, particularly within the "designated rehab – level 2" and GEM care programs.

Table 50 Multiday and overnight medical/other inpatient activity* at ERH by care program 2014/2015 to 2017/2018

Care program	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Other care (acute) inc. qualified newborn	2285	2560	2780	3151	866	37.9%
Designated rehab – level 2	89	208	236	224	135	151.7%
Palliative care program	50	63	66	76	26	52.0%
Geriatric evaluation and management	33	88	75	102	69	209.1%
Total	**2457**	**2919**	**3157**	**3553**	**1096**	**44.6%**

**Excludes births and unqualified neonates*
Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Note that the remaining tables and figures in this section include only separations within the "Other care (acute) inc. qualified newborn" care program.

The average length of stay for multiday/overnight surgical inpatient activity at Echuca Regional Health has gradually decreased over the last four years (Table 51). While the number of multiday/overnight surgical separations has only slightly increased, the total number of bed days has decreased by 18.2 per cent overall.

Table 51 Average length of stay of multiday/overnight surgical inpatient activity* at ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	717	652	673	730	13	1.8%
Bed days	2215	1958	1895	1812	-403	-18.2%
Average length of stay (days)	*3.1*	*3.0*	*2.8*	*2.5*	*-0.6*	*-19.7%*

**Excludes births and unqualified neonates. Care type 4 only (other acute) - less than 5 separations per year were designated a different care type.*
Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The top Diagnostic Related Groups (DRGs) for multiday/overnight surgical inpatient activity at Echuca Regional Health in 2017/2018 were "Hernia Procedures" (11.6 per cent), "Laparoscopic Cholecystectomy" (10.5 per cent), "Knee Replacement" (9.3 per cent) and "Appendicectomy" (9.0 per cent) (Table 52).

Table 52 Top Diagnostic Related Groups (DRGs) for multiday/overnight surgical inpatient activity* at ERH 2014/2015 to 2017/2018

DRG	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Laparoscopic Cholecystectomy	62	69	80	77	15	24.2%
Hernia Procedures	62	62	78	85	23	37.1%
Appendicectomy	60	62	69	66	6	10.0%
Knee Replacement	48	42	45	68	20	41.7%
Hip Replacement	32	29	37	49	17	53.1%
Other Shoulder Procedures	32	30	12	41	9	28.1%
Major Small and Large Bowel Procedures	15	25	25	31	16	106.7%
Tonsillectomy and/or Adenoidectomy	52	29	13	0	-52	-100.0%
Other Skin Grafts and Debridement Procedures	17	22	20	14	-3	-17.6%
Other Uterus and Adnexa Procedures for Non-Malignancy	19	14	21	16	-3	-15.8%
Hysterectomy for Non-Malignancy	30	14	14	12	-18	-60.0%
Anal and Stomal Procedures	13	22	15	19	6	46.2%
Transurethral Prostatectomy for Reproductive System Disorder W/O Cat/Sev CC	26	8	13	12	-14	-53.8%
Vein Ligation and Stripping	16	18	11	6	-10	-62.5%

DRG	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Endoscopic and Laparoscopic Procedures, Female Reproductive System	13	9	11	13	0	0.0%
Testes Procedures	8	9	9	6	-2	-25.0%
Thyroid Procedures	13	<5	7	6	-7	-53.8%
Other DRG	199	184	193	209	10	5.0%
Total	**717**	**652**	**673**	**730**	**13**	**1.8%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) - less than 5 separations per year were designated a different care type.*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Over a third of multiday/overnight surgical separations were from people living in VIFSA Echuca Town in 2017/2018, followed by New South Wales (19.9 per cent), VIFSA Rochester District (9.0 per cent) and VIFSA Gannawarra Shire (6.3 per cent) (Table 53).

Table 53 Where people receiving multiday/overnight surgical services* at ERH are coming from 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	275	253	244	268	-7	-2.5%
New South Wales	201	188	172	145	-56	-27.9%
VIFSA Rochester District	66	72	68	66	0	0.0%
VIFSA Gannawarra Shire	30	33	48	46	16	53.3%
VIFSA Kyabram District	22	30	41	47	25	113.6%
VIFSA Cobram-Numurkah District	21	17	17	23	2	9.5%
VIFSA Rushworth District	10	7	10	13	3	30.0%
VIFSA Greater Bendigo Rural	10	<5	12	15	5	50.0%
VIFSA Shepparton Town	5	5	6	21	16	320.0%
Other VIFSA or State	77	44	55	86	9	11.7%
Total	**717**	**652**	**673**	**730**	**13**	**1.8%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) - less than 5 separations per year were designated a different care type.*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Multiday and overnight medical/other inpatient activity at Echuca Regional Health has increased by 37.9 per cent over the last four years. The top four Major Diagnostic Categories included "Diseases & Disorders of the Digestive System" (16.3 per cent), "Diseases & Disorders of the Respiratory System" (16.2 per cent), "Diseases & Disorders of the Circulatory System" (12.6 per cent), and "Diseases & Disorders of the Musculoskeletal System & Connective Tissue" (8.4 per cent) (Table 54).

Table 54 Multiday and overnight medical/other inpatient activity* at ERH by Major Diagnostic Category (MDC) 2014/2015 to 2017/2018

MDC	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Diseases & Disorders of the Respiratory System	379	537	511	512	133	35.1%
Diseases & Disorders of the Digestive System	382	399	457	513	131	34.3%
Diseases & Disorders of the Musculoskeletal System & Connective Tissue	181	188	195	266	85	47.0%
Diseases & Disorders of the Nervous System	170	150	201	239	69	40.6%
Diseases & Disorders of the Skin, Subcutaneous Tissue & Breast	131	143	144	189	58	44.3%
Diseases & Disorders of the Kidney & Urinary Tract	146	107	153	151	5	3.4%
Infectious & Parasitic Diseases, Systematic or Unspecified Sites	75	98	125	135	60	80.0%
Injuries, Poisonings & Toxic Effects of Drugs	75	108	110	118	43	57.3%
Diseases & Disorders of the Ear, Nose, Mouth & Throat	66	78	81	128	62	93.9%
Factors Influencing Health Status & Other Contacts with Health Services	92	77	82	85	-7	-7.6%
Diseases & Disorders of Blood, Blood Forming Organs, Immunological Disorders	66	91	69	84	18	27.3%
Pregnancy, Childbirth & the Puerperium	65	70	57	76	11	16.9%
Diseases & Disorders of the Hepatobiliary System & Pancreas	53	62	82	71	18	34.0%
Endocrine, Nutritional & Metabolic Diseases & Disorders	44	53	74	70	26	59.1%
Other MDC	71	87	86	116	45	63.4%
Total	2285	2560	2780	3151	866	37.9%

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn). Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

Nearly half of the multiday and overnight medical/other inpatient activity at Echuca Regional Health over the past four years was from people living in VIFSA Echuca Town, followed by New South Wales (22.4 per cent), VIFSA Rochester District (10.3 per cent) and VIFSA Kyabram District (6.3 per cent) (Table 55).

Table 55 Where people receiving multiday or overnight medical/other services* at ERH are coming from 2014/2015 to 2017/2018

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	1220	1341	1428	1512	292	23.9%
New South Wales	519	583	586	706	187	36.0%
VIFSA Rochester District	178	225	281	325	147	82.6%
VIFSA Kyabram District	131	163	167	198	67	51.1%
VIFSA Cobram-Numurkah District	63	47	64	81	18	28.6%
VIFSA Gannawarra Shire	27	37	43	65	38	140.7%
VIFSA Rushworth District	14	14	36	34	20	142.9%
VIFSA Ardmona-Murchison	14	13	18	18	4	28.6%
VIFSA Loddon Shire	7	14	13	22	15	214.3%
VIFSA Greater Bendigo Rural	6	10	13	19	13	216%
Other VIFSA or State	106	113	131	171	65	61.3%
Total	**2285**	**2560**	**2780**	**3151**	**866**	**37.9%**

**Excludes births and unqualified neonates. Care type 4 only (other care (acute) including Qualified Newborn) - less than 5 separations per year were designated a different care type.*

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

The average length of stay for multiday/overnight medical/other acute inpatient activity at Echuca Regional Health has decreased by 0.8 days over the last four years, while separations and bed days have continued to increase (Table 56).

Table 56 Average length of stay of multiday/overnight medical and other inpatient activity* at ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	2285	2560	2780	3151	866	37.9%
Bed days	9355	10179	10319	10525	1170	12.%
Average length of stay (days)	4.1	4.0	3.7	3.3	-0.8	-18.4%

**Excludes births and unqualified neonates. Care type 4 only (other acute). Source: Victorian Admitted Episodes Dataset, VAHI, DHHS*

Hospital in the Home (HITH) separations

From 2014/2015 to 2017/2018, Hospital in the Home (HITH) separations provided by Echuca Regional Health increased by 89.6 per cent, with activity doubling in 2015/2016 from the year prior and remaining relatively steady since. The number of bed days has also increased significantly from 1028 bed days in 2014/2015 to 2084 bed days in 2017/2018 (Table 57).

Table 57 Hospital in the Home (HITH) separations provided by ERH 2014/2015 to 2017/2018

	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Separations	67	125	136	127	60	89.6%
Bed days	1028	2781	2391	2084	1056	102.7%

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Appendix 4 Emergency and urgent care services

Echuca Regional Health: Emergency presentations

This section looks at emergency department presentations at Echuca Regional Health over the last four years.

From 2014/2015 to 2017/2018, emergency department presentations at Echuca Regional Health increased by 16.7 per cent, or 3,019 additional presentations. In 2017/2018, triage category 4 (semi- urgent) presentations represented 45.8 per cent of total presentations, followed by triage category 3 (emergency) (27.3 per cent) and triage category 5 (non-urgent) (18.1 per cent) (Table 18).

Table 58 Emergency presentations at ERH by triage category 2014/2015 to 2017/2018

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	32	30	26	33	1	3.1%
Triage category 2: emergency	1210	1112	1374	1827	617	51.0%
Triage category 3: urgent	4128	4675	5147	5773	1645	39.8%
Triage category 4: semi-urgent	8210	8923	9365	9666	1456	17.7%
Triage category 5: non-urgent	4509	4305	4774	3825	-684	-15.2%
Triage category 6: dead on arrival	17	<5	<5	<5	-16	-94.1%
Total	**18106**	**19048**	**20688**	**21125**	**3019**	**16.7%**

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Table 59 shows the average time to treatment in minutes in the Echuca Regional Health emergency department by triage category. For reference, the target treatment times include[9]:

- Triage category 1: need for resuscitation - patients treated immediately
- Triage category 2: emergency - patients treated within 10 minutes
- Triage category 3: urgent - patients treated within 30 minutes
- Triage category 4: semi-urgent - patients treated within 60 minutes
- Triage category 5: non-urgent - patients treated within 120 minutes.

Over the last four years, the average time to treatment in the emergency department has been within the recommended treatment times across all triage categories.

[9] https://performance.health.vic.gov.au/Home/Resources/FAQ.aspx?key=1

Table 59 Average time to treatment (minutes) at the ERH emergency department by triage category

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	0	0	0	0	0	-3.0%
Triage category 2: emergency	6	7	8	10	4	69.4%
Triage category 3: urgent	16	18	21	24	8	52.2%
Triage category 4: semi-urgent	34	39	43	48	15	2%
Triage category 5: non-urgent	33	38	42	42	9	26.7%
Triage category 6: dead on arrival	N/A	N/A	N/A	N/A	N/A	N/A

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Table 60 shows the average total time spent in the Echuca Regional Health emergency department in minutes. All triage categories have shown a small increase in minutes over the last four years, except triage category 2 (emergency) which has slightly decreased.

Table 60 Average time spent in emergency department (minutes) at ERH by triage category 2014/2015 to 2017/2018

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	193	307	305	199	6	2.9%
Triage category 2: emergency	238	256	247	226	-12	-5.0%
Triage category 3: urgent	191	205	210	204	13	6.7%
Triage category 4: semi-urgent	120	131	133	141	21	17.9%
Triage category 5: non-urgent	75	83	88	89	14	18.3%
Triage category 6: dead on arrival	N/A	N/A	N/A	N/A	N/A	N/A

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

On departure from the Echuca Regional Health emergency department, 70.9 per cent of patients returned home in 2017/2018, 13.7 per cent were transferred to a ward, and 6.3 per cent were transferred to the Short Stay Unit (Table 61).

Table 61 Departure status of people receiving emergency services at ERH 2014/2015 to 2017/2018

Departure Status	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Home	14488	14775	15720	14984	496	3.4%
To Ward – not elsewhere described	2451	2778	2860	2891	440	18.0%
Left at own risk without treatment	553	713	847	798	245	44.3%
To Ward – short stay unit	0	0	422	1321	1321	#DIV/0!
Transfer to another hospital – excl MH/ICU/CCU	388	425	339	452	64	16.5%
Left after advice re Rx options	18	158	256	426	408	2266.7%
Left at own risk after treatment started	110	109	138	153	43	39.1%
Residential care facility	52	46	42	32	-20	-38.5%
Transfer to another hospital – CCU	14	14	35	15	1	7.1%
Transfer to another hospital – mental health	<5	8	10	33	30	1000.0%
Other departure	29	22	19	20	-9	-31.0%
Total	**18106**	**19048**	**20688**	**21125**	**3019**	**16.7%**

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

People receiving services at the Echuca Regional Health emergency department came from a wide range of areas over the last four years, with the greatest number of people from VIFSA Echuca Town and cross-border New South Wales. A significant number of people also came from VIFSA Rochester District and VIFSA Kyabram District (Table 62).

From 2014/2015 to 2017/2018, the greatest increase in emergency department presentations was from New South Wales residents, with an additional 661 presentations (19.7 per cent) compared with 598 additional presentations from VIFSA Echuca Town residents. During 2017/2018, 19.0 per cent of emergency department presentations were from New South Wales residents.

Table 62 Where people receiving emergency department services at ERH are coming from, by Victoria in Future Small Area or State 2014/2015 to 2017/2018

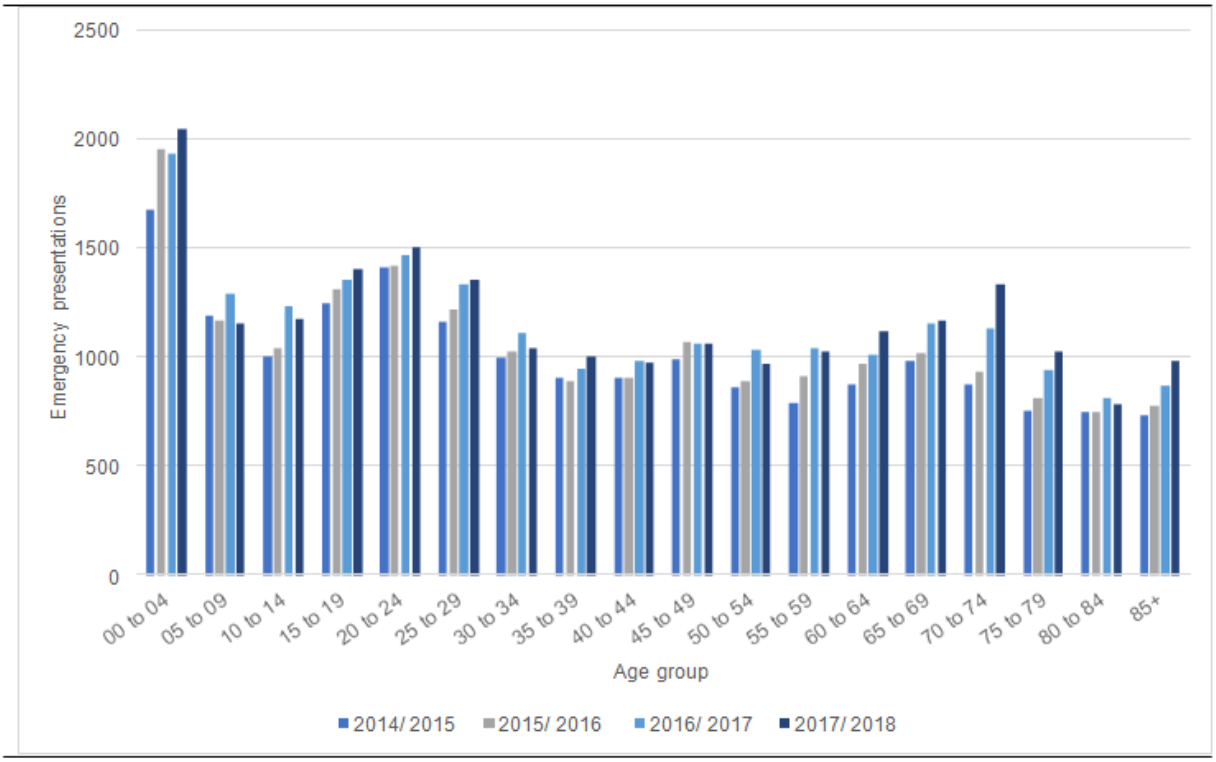
VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Echuca Town	9289	9427	10032	9887	598	6.4%
New South Wales	3363	3681	3807	4024	661	19.7%
VIFSA Rochester District	1532	1684	1960	2091	559	36.5%
VIFSA Kyabram District	1052	1276	1397	1473	421	40.0%
VIFSA Cobram-Numurkah District	289	290	383	407	118	40.8%
VIFSA Gannawarra Shire	196	172	231	288	92	46.9%

VIFSA or State	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
VIFSA Rushworth District	115	138	228	294	179	155.7%
VIFSA Loddon Shire	77	107	103	124	47	61.0%
VIFSA Ardmona-Murchison	60	82	119	144	84	140.0%
VIFSA Greater Bendigo Rural	56	76	91	105	49	87.5%
VIFSA Shepparton Town	70	69	82	98	28	40.0%
VIFSA Bendigo-Kangaroo Flat District	61	79	63	68	7	11.5%
VIFSA Epping-Whittlesea District	51	62	60	57	6	11.8%
VIFSA Sunbury District	45	46	71	40	-5	-11.1%
VIFSA Ballarat Central and East District	44	42	59	41	-3	-6.8%
VIFSA Kilmore-Wallan District	41	46	55	35	-6	-14.6%
VIFSA Ascot-Eaglehawk District	27	49	39	55	28	103.7%
Other VIFSA or State	1738	1722	1908	1894	156	9.0%
Total	**18106**	**19048**	**20688**	**21125**	**3019**	**16.7%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

While emergency presentations at Echuca Regional Health were relatively distributed across five year age groups over the last four years, presentations from babies and children aged 0 to 4 years represented 9.7 per cent of presentations in 2017/2018, followed by young adults aged 20 to 24 years (7.1 per cent) and youth aged 15 to 19 years (6.6 per cent) (Figure 7).

Figure 7 Emergency presentations at ERH by age group 2014/2015 to 2017/2018



Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

While the majority of people receiving emergency services at Echuca Regional Health arrived by "other" means of transport (e.g. self/family/friend), Road Ambulance Service arrivals increased by 15.4 per cent over the last four years (Table 63).

Table 63 Emergency presentations at ERH by arrival transport 2014/2015 to 2017/2018

Transport type	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Other	14728	16096	17789	17955	3227	21.9%
Road Ambulance Service	2589	2614	2656	2989	400	15.4%
Community/Public/Council Transport	660	235	127	45	-615	-93.2%
Police Vehicle	102	100	105	114	12	11.8%
Other (includes ambulance private car, undertaker)	27	<5	11	22	-5	-18.5%
Total	**18106**	**19048**	**20688**	**21125**	**3019**	**16.7%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Where Campaspe Shire residents present for emergency services

This section looks at emergency presentations by Campaspe Shire residents outside of Echuca Regional Health at other Victorian emergency departments. Most Campaspe Shire residence attending the emergency department outside of Echuca Regional Health in 2017/2018 received services at either Goulburn Valley Health [Shepparton] (47.5 per cent) or The Bendigo Hospital (32.1 per cent) (Table 64).

During the past four year period, there was an 11.9 per cent decline in emergency presentations at Goulburn Valley Health [Shepparton] by Campaspe Shire residents.

Table 64 Where Campaspe Shire residents are going for emergency department services outside of ERH 2014/2015 to 2017/2018

Campus	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Goulburn Valley Health (Shepparton)	1983	1813	1721	1748	-235	-11.9%
Bendigo Hospital, The	1073	1032	1054	1182	109	10.2%
Other Campus	698	731	775	748	50	7.2%
Total	**3754**	**3576**	**3550**	**3678**	**-76**	**-2.0%**

Source: Victorian Admitted Episodes Dataset, VAHI, DHHS

Total emergency department presentations by Campaspe Shire residents outside of Echuca Regional Health remained relatively constant over the last four years, with a slight decrease overall (Table 65).

Table 65 Emergency department presentations by Campaspe Shire residents outside of ERH by triage category 2014/2015 to 2017/2018

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	33	40	32	41	8	24.2%
Triage category 2: emergency	505	550	606	650	145	28.7%
Triage category 3: urgent	1518	1503	1492	1569	51	3.4%
Triage category 4: semi-urgent	1485	1313	1226	1223	-262	-17.6%
Triage category 5: non-urgent	211	170	194	195	-16	-7.6%
Triage category 6: dead on arrival	<5	-	-	-	N/A	N/A
Total	**3754**	**3576**	**3550**	**3678**	**-76**	**-2.0%**

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Campaspe Shire residents receiving emergency department services outside of Echuca Regional Health on average waited longer for treatment at other hospitals (see Table 59 for reference), though still close to recommended waiting times (Table 66).

Table 66 Average time to treatment (minutes) by Campaspe Shire residents receiving emergency department services outside of ERH by triage category 2014/2015 to 2017/2018

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	0	0	0	0	0	N/A
Triage category 2: emergency	8	12	10	11	3	32.0%
Triage category 3: urgent	37	47	42	46	9	24.2%
Triage category 4: semi-urgent	59	65	62	54	-4	-7.2%
Triage category 5: non-urgent	41	53	55	39	-2	-4.0%
Triage category 6: dead on arrival	N/A	N/A	N/A	N/A	N/A	N/A

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Table 67 shows the average total time spent in the emergency department in minutes by Campaspe Shire residents receiving services outside of Echuca Regional Health. In 2017/2018, Campaspe Shire residents spent longer in the emergency department across all triage categories than if they were at Echuca Regional Health (see Table 60 for reference) (Table 67).

Table 67 Average time spent in emergency department (minutes) by Campaspe Shire residents receiving emergency department services outside of ERH by triage category 2014/2015 to 2017/2018

Triage Category	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	Change to 2014/ 2015 to 2017/ 2018	Per cent change
Triage category 1: need for resuscitation	267	290	315	270	3	1.2%
Triage category 2: emergency	342	339	327	321	-22	-6.4%
Triage category 3: urgent	317	311	332	318	1	0.5%
Triage category 4: semi-urgent	218	224	250	231	13	6.2%
Triage category 5: non-urgent	114	131	148	135	21	18.4%
Triage category 6: dead on arrival	N/A	N/A	N/A	N/A	N/A	N/A

Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Appendix 5 Potentially preventable hospitalisations

The Australian Institute of Health and Welfare (AIHW) defines potentially preventable hospitalisations as 'those conditions where hospitalisation could have potentially been prevented through the provision of appropriate individualised preventative health interventions and early disease management. These services are usually delivered in primary care and community-based care settings (including by general practitioners, medical specialists, dentists, nurses and allied health professionals).' [10] The Victorian Government has now adopted the definition of "potentially preventable hospitalisation", consistent with the Australian standard.

The proportion of total separations that were for potentially preventable hospitalisations is an NHA benchmark and not unexpectedly therefore, the rate of Potentially Preventable Hospitalisations is defined as a National Healthcare Agreement performance indicator.

Separation rates for potentially preventable hospitalisations thus can be seen as indicators of the quality or effectiveness of non-hospital care. A high rate of potentially preventable hospitalisations may indicate an increased prevalence of the conditions in the community, poorer functioning of the non-hospital care system, or an appropriate use of the hospital system to respond to greater need.

There are three categories of potentially preventable hospitalisations described by the AIHW:

- '*Vaccine-preventable*. These diseases can be prevented by proper vaccination and include influenza, bacterial pneumonia, hepatitis, tetanus, diphtheria, pertussis (whooping cough), chicken pox, measles, mumps, rubella, polio and haemophilus meningitis. The conditions are considered to be preventable, rather than the hospitalisation
- *Acute*. These conditions may not be preventable, but theoretically would not result in hospitalisation if adequate and timely care (usually non-hospital) was received. These include eclampsia; pneumonia (not vaccine-preventable); pyelonephritis; perforated ulcer; cellulitis; urinary tract infections; pelvic inflammatory disease; ear, nose and throat infections; and dental conditions
- *Chronic*. These conditions may be preventable through behaviour modification and lifestyle change, but they can also be managed effectively through timely care (usually non-hospital) to prevent deterioration and hospitalisation. These conditions include diabetes complications, asthma, angina, hypertension, congestive heart failure, nutritional deficiencies and chronic obstructive pulmonary disease.'[11]

In 2014–15, nationally potentially preventable hospitalisations accounted for 8.2 per cent of public hospital separations. *Diabetes complications* accounted for about 15 per cent of separations that were classified as *Chronic condition* potentially preventable hospitalisations.

[10] Australian Institute of Health and Welfare 2016. Admitted patient care 2014–15: Australian hospital statistics. Health services series no. 68. Cat. no. HSE 172. Canberra: AIHW p94-99

[11] ibid

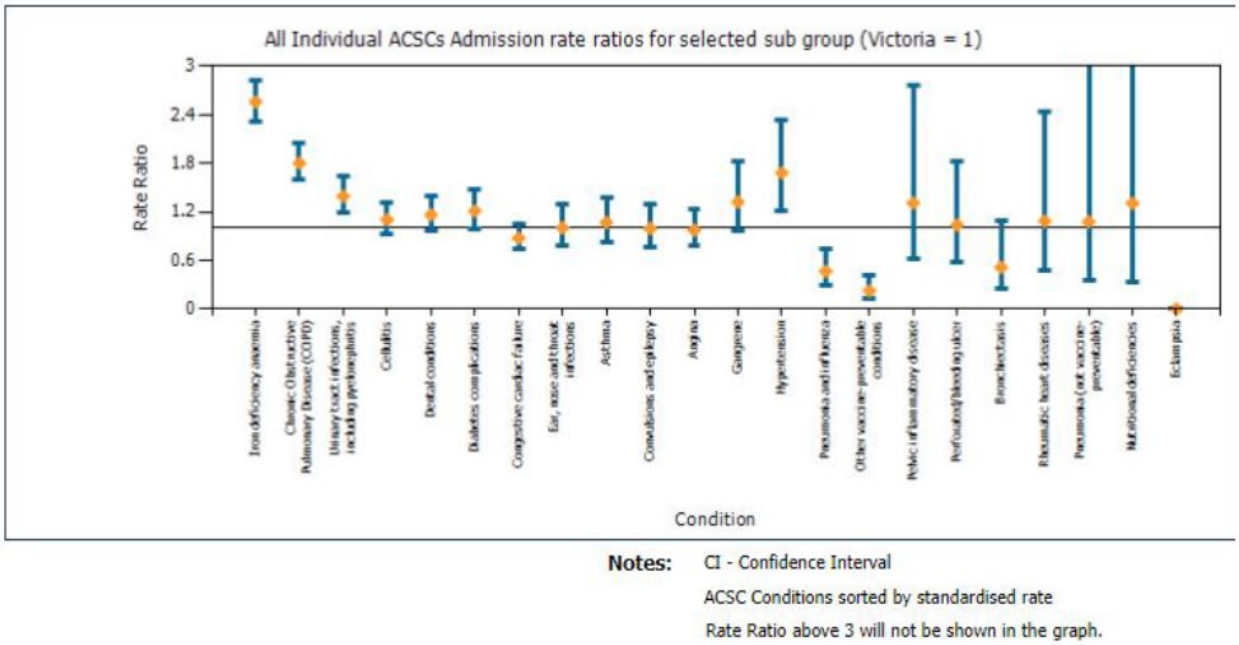
For Victoria the total potentially preventable hospitalisation separations per 1000 population was 23.9, or 5.9 per cent of all separations.

The AIHW data also notes that remoteness is a significant factor to be considered when evaluating potentially preventable hospitalisations. For 2014–15, the overall rate of potentially preventable hospitalisations was highest for residents of Remote and Very remote areas (40 and 59 per 1,000 population, respectively) and lowest for residents of Major cities (24 per 1,000). Residents of Remote and Very remote areas had the highest rates of potentially preventable hospitalisations across the three categories. The corresponding Outer regional rate was 29 per 1000 population.

Campaspe Shire Comparator

The Department publishes a comparison between admission rates associated with Ambulatory Care Sensitive Conditions, compared with a Victorian benchmark of 1.0. In Campaspe Shire, comparable rates of admission are high for conditions including iron deficiency anaemia, Chronic Obstructive Pulmonary Disease (COPD), hypertension, urinary tract infections, gangrene, pelvic inflammatory disease, nutritional deficiencies, and diabetes complications.

Figure 8 All individual ACSCs admission rate ratios for Campaspe Shire (Victoria = 1): 2016/2017 time interval based on 2011 standard population



Source: DHHS, Victorian Health Information Surveillance System

Table 68 shows the number of admissions and bed days for inpatient separations due to Ambulatory Care Sensitive Conditions (Potentially Preventable Hospitalisations) by Campaspe Shire residents in 2016/2017, using the 2011 standard population. Iron deficiency anaemia and Chronic Obstructive Pulmonary Disease (COPD) accounted for the highest number of admissions that year, while

admissions for pneumonia and influenza, gangrene, and perforated/bleeding ulcer had the longest average length of stay. Chronic Obstructive Pulmonary Disease (COPD) and congestive cardiac failure accounted for the highest number of total bed days.

Table 68 Ambulatory Care Sensitive Conditions in Campaspe Shire 2016/2017 using the 2011 standard population

Ambulatory Care Sensitive Condition	Number of Admissions	Standardised Rate per 1,000 Persons	Lower limit of 95% CI	Upper limit of 95% CI	Average Bed Days	Total Bed Days
Iron deficiency anaemia	404	8.92	8.00	9.84	1.13	458
Chronic Obstructive Pulmonary Disease (COPD)	257	4.78	4.20	5.37	5.29	1360
Urinary tract infections, including pyelonephritis	157	3.56	2.97	4.15	4.24	666
Cellulitis	138	3.22	2.65	3.78	4.59	633
Dental conditions	119	3.18	2.60	3.76	1.13	134
Diabetes complications	98	2.39	1.89	2.89	6.05	593
Congestive cardiac failure	125	2.26	1.86	2.66	6.44	805
Ear, nose and throat infections	60	1.68	1.25	2.11	1.77	106
Asthma	61	1.58	1.17	1.98	3.52	215
Convulsions and epilepsy	55	1.45	1.05	1.85	2.27	125
Angina	73	1.37	1.05	1.69	1.99	145
Gangrene	37	0.84	0.55	1.13	9.89	366
Hypertension	37	0.74	0.49	0.99	3.65	135
Pneumonia and influenza	18	0.40	0.21	0.60	14.72	265
Other vaccine-preventable conditions	10	0.25	0.09	0.40	5.70	57
Pelvic inflammatory disease	7	0.24	0.06	0.42	1.86	13
Perforated/bleeding ulcer	12	0.22	0.09	0.35	9.25	111
Bronchiectasis	7	0.13	0.03	0.23	5.00	35
Rheumatic heart diseases	6	0.11	0.02	0.21	6.17	37

**Note: Outputs are suppressed when less than 5 cases are reported*
Source: Victorian Emergency Minimum Dataset, VAHI, DHHS

Of the total admissions for Ambulatory Care Sensitive Conditions in 2016/2017 by Campaspe Shire residents, chronic conditions accounted for 63.6 per cent of admissions and acute conditions accounted for 34.9 per cent of admissions. There were 28 vaccine-preventable admissions that year (Table 69).

Table 69 Ambulatory Care Sensitive Condition group results in Campaspe Shire 2016/2017 using the 2011 standard population

ACSC Group	Number of Admissions	Standardised Rate per 1,000 Persons	Lower limit of 95% CI	Upper limit of 95% CI	Average Bed Days	Total Bed Days
Chronic ACSCs	1070	22.32	20.94	23.69	3.54	3787
Vaccine-preventable ACSCs	28	0.65	0.40	0.90	11.50	322
Acute ACSCs	587	14.43	13.22	15.64	3.69	2166
Total ACSCs	**1683**	**37.36**	**35.53**	**39.18**	**3.72**	**6257**

Source: DHHS, Victorian Health Information Surveillance System

An estimation of the number of hospital beds utilised by Campaspe Shire residents with an Ambulatory Case Sensitive Condition in 2016/2017 is provided in Table 70. Hospital bed demand is calculated assuming the bed is utilised for 365 days per year with an 85 per cent occupancy rate. Using these assumptions, the total bed demand for ASCS admissions by Campaspe Shire residents in 2016/2017 is

20.2 beds, of which 12.2 beds are from Chronic ACSCs, 7.0 beds are from Acute ACSCs and 1.0 bed is from Vaccine-preventable ACSCs.

Note that as the total bed days are for Campaspe Shire residents-only, these calculations do not include patients from southern Murray River Council who may be receiving cross-border services, so the bed demand met by Echuca Regional Health may be higher

Table 70 Bed demand for Campaspe Shire resident hospital admissions with an ACSC indicator in 2016/2017

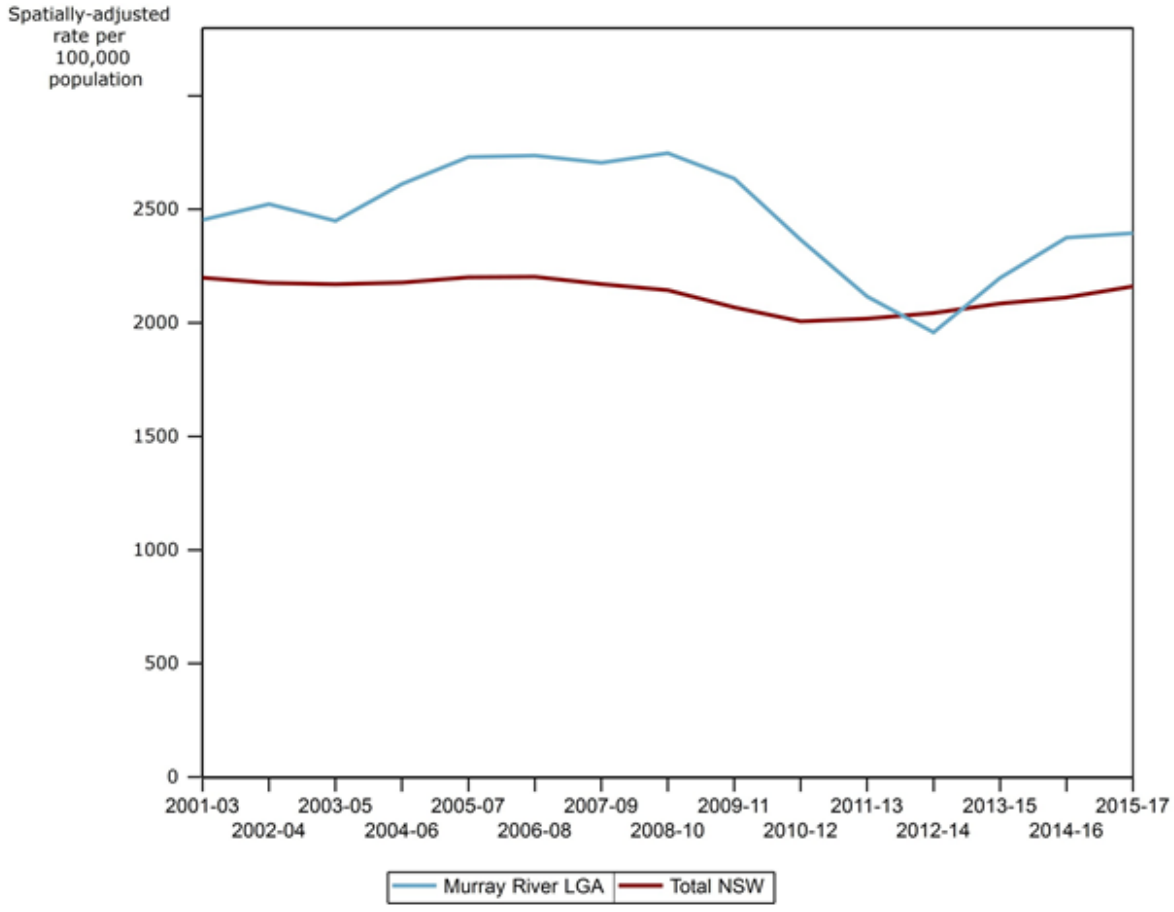
ACSC Group	Days per annum	Bed occupancy rate	Total bed days	Beds
Chronic ACSCs	365	85%	3787	12.2
Vaccine-preventable ACSCs	365	85%	322	1.0
Acute ACSCs	365	85%	2166	7.0
Total ACSCs	**365**	**85%**	**6257**	**20.2**

Murray River Council

During 2015 to 2017, the standardised rate per 100,000 population for potentially preventable hospitalisations was 2395.3 in Murray River Council, compared with 2161.0 in New South Wales. Figure 8 shows how the rate for potentially preventable hospitalisations in Murray River Council has been consistently higher than the New South Wales rate, except for during the 2012 to 2014 period.

A high rate for potentially preventable hospitalisations in the council indicates it is possible that there are many people receiving services in hospital, whose admissions could have been prevented if effective primary care and community-based care (non-hospital-based services) was available. Given that 53 per cent of the Murray River Council population lives in Moama, it is likely that a high percentage of these hospitalisations are from people living in Moama and receiving services at Echuca Regional Health.

Figure 9 Potentially avoidable hospitalisations, Murray River LGA, NSW 2001-03 to 2015-17



Source: HealthStats NSW < http://www.healthstats.nsw.gov.au/>

Appendix 6 Maternal and neonatal capability frameworks

Key	Definition
×	Not currently provided at Echuca Regional Health
√	Currently provided at Echuca Regional Health

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
Complexity of care			
Maternal	Normal risk pregnancies including management of labour, birth and puerperium at 37 weeks gestation or more including elective and emergency caesarean section.	× Management of low and moderate risk pregnancies including management of labour, birth and puerperium at 34 weeks gestation or more.	Lack of 24/7 paediatrician support or nurses/midwives with neonatal capability
Neonatal	Postnatal in-patient and domiciliary management of newborns greater than 37 weeks gestation without complications. Minor conditions not requiring additional nursing or specialist medical care e.g. short term transient mild respiratory distress, minor feeding difficulties. Depending on local facilities and personnel, option for phototherapy for jaundice without significant pathological cause, with advice from specialist paediatrician.	√ As per Neonatal Services Guidelines Level 2 Low dependency: Uncomplicated infants of 34 weeks gestation or more, birthweight at least 2,000 grams (including growing preterm and convalescing infants). × Infants requiring incubator care for short term transition problems or mild complications, including: oxygen requirement less than 40 per cent, apnoea monitoring, blood glucose monitoring, short term intravenous therapy, phototherapy, gavage feeding.	Can manage selected neonates for 'fattening' and conditioning Lack of 24/7 paediatrician support or nurses/midwives with neonatal capability

Infrastructure			
Birth rooms	Designated room/space for birthing (refer to Design guidelines for hospitals and day procedure centres). Equipment to support labour, birth and puerperium. Twenty-four hour access to foetal monitoring and interpretation. Equipment to support adult and neonatal resuscitation.	√ Designated room/space for birthing – see Design Guidelines for Hospitals and Day Procedure Centres. √ Equipment to support labour, birth and puerperium. √ Twenty-four hour access to foetal monitoring and interpretation. √ Equipment to support adult and neonatal resuscitation.	

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
Nursery	As per Neonatal services guidelines for Level 1 nursery. Equipment and space as per Neonatal services guidelines Level 1. Facilities for stabilisation prior to retrieval of newborn infants.	√ Conforms to Design Guidelines for Hospitals and Day Procedure Centres. √ Space and equipment as per Neonatal Services Guidelines6 Level 2 low dependency nursery. √ Facilities for stabilisation prior to retrieval of newborn infants.	Space limited – 2-4 cots
Operating rooms	Equipment and space in operating rooms 24 hours a day with on call service for performance of caesarean section and neonatal resuscitation.	√ Equipment and space in operating rooms 24 hours a day with on call service for performance of caesarean section and neonatal resuscitation.	
Adult intensive care unit / High dependency unit	Not required on site.	√ High dependency unit available onsite.	

Workforce (medical)			
Obstetric	Must have established consultation and referral pathways to specialist obstetrician.	✗ Specialist obstetrician on staff to advise on obstetric service. ✗ Specialist obstetrician available on call 24 hours and/or GP obstetrician credentialed for advanced obstetric care (including caesarean section).	Consultant Obstetrician not available 24/7 – on site periodically
General practice	One of specialist obstetrician, GP credentialed to perform caesarean section or general surgeon credentialed for caesarean section must be available for elective or emergency caesarean section 24 hours a day.	✓ GP obstetrician credentialed for advanced obstetric care (including caesarean section) on call 24 hours a day (alternative to specialist obstetrician). ✗ Accredited Shared Care Program available for pregnancy care for low risk women from local area.	No formal program for shared care
Anaesthetic	GP anaesthetist or specialist anaesthetist on call 24 hours a day. GP anaesthetist or specialist anaesthetist must be able to perform spinal and general anaesthesia.	Specialist anaesthetists available 24 hours on call and/or: ✓ Credentialed GP anaesthetists available 24 hours a day on call. ✓ Specialist anaesthetist or GP anaesthetist must be able to perform spinal and general anaesthesia.	

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
Paediatric	Paediatric Paediatrician or GP with paediatric skills/neonatal ALS accreditation available/on call 24 hours a day; availability within a time consistent with the health service's risk management protocol. Established consultation and referral pathways to specialist paediatrician as per Neonatal services guidelines.	√ Paediatrician/s on staff (VMO) to advise on neonatal service and clinical care. × Paediatrician or GP with paediatric skills/neonatal ALS accreditation available/ on call 24 hours a day; availability within a time consistent with the health service's risk management protocol. × RMO available for special care nursery.	Full time Paediatrician - not available 24/7 No designated RMO – working towards
Workforce (other)			
Midwifery	All labouring and birthing women will be cared for by a midwife in accordance with ratios outlined in the industrial agreement.	√ All labouring and birthing women will be cared for by a midwife in accordance with ratios outlined in the industrial agreement. √ Designated midwifery educator either part-time or full-time.	
Nursing	A midwife will be responsible for postnatal care. In situations where services implement alternative models of care it is assumed that the processes for approval of these models are in accordance with the relevant industrial agreement.	× Nurse/midwife in charge of the nursery should have minimum of 3 years recent fulltime or equivalent midwifery or neonatal experience, including some Level 2 High dependency neonatal nursing experience or qualification. × At least one registered nurse/midwife allocated to the neonatal area on each shift should have recent Level 2 High dependency experience. Personnel with expertise in lactation should be available.	Nursery not routinely staffed -limited number of midwives with neonatal training/ experience

Allied health	Established referral pathways to physiotherapist, social worker, continence advisor and dietician. These may be local, visiting or readily accessible in the region. Access to telephone interpreter service.	√ On site access to physiotherapist, social worker, interpreters, continence advisor and dietician.	
Diagnostic services			
Pathology	Blood and specimen collection service available locally, processing may be at a different location.	√ Blood and specimen collection service 24 hours a day on site.	

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
	Access to local on call service for urgent requests or point of care pathology.	√ Twenty-four hour access to pathology or point of care pathology.	
Diagnostic imaging	Basic radiology on site with 24 hours a day on call availability. Ultrasound available on site, with staff able to operate and interpret. Established referral pathways to all diagnostic imaging modalities; may be local or readily accessible in the region.	√ Radiology available 24 hours a day on call. √ Obstetric ultrasound service available 24 hours a day on call.	U/S – portable
Support services			
Blood and blood products	Blood and volume expanders on site with the ability to administer immediately. Group and cross-match available for elective and emergency caesarean section. Established pathways to obtain complex blood products.	√ Cross-matched blood readily available. √ Blood storage facilities on site. √ Blood and volume expanders on site with the ability to administer. √ Established pathways to obtain complex blood products.	

Support services			
Pharmacy	Drugs available through imprest system. Established referral pathways to pharmacist for consultation – see Appendix 7.	√ On site pharmacy with 24 hour access. √ Drugs available through imprest system.	
Mental health	Established referral pathway to specialist mental health practitioners and facilities.	√ Established referral pathways to specialist mental health practitioners and facilities.	
Drug and alcohol services	Established referral pathways to specialist services – local or regional. QUIT Smoking Support Program.	√ Established referral pathways to specialist services – local or regional. QUIT Smoking Support Program.	
Family support services	Established referral pathways to Child FIRST and Child Protection Services. Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).	√ Established referral pathways to Child FIRST and Child Protection Services. √ Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).	

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
Clinical governance			
Guidelines	Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients. Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate. Guidelines are required for the management of unexpected high risk women and/or neonates and consultation, referral and/or transfer as appropriate. Service contingency guidelines are required to cover the unavailability of required resources with a documented process informing women and the appropriate alternate facility.	√ Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients. √ Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate. √ Guidelines are required for the management of unexpected higher risk women and/or neonates and consultation, referral and/or transfer as appropriate.	
Competency /credentialing	Each facility requires a comprehensive credentialing for medical staff and competency processes for all maternity care clinicians.	√ Each facility requires a comprehensive credentialing for medical staff and competency processes for all maternity care clinicians.	
Peer review	A formal annual assessment by peer review process is established and maintained.	√ Formal annual assessment by peer review process is established and maintained.	

Service links			
Transfer guidelines	Established links with surrounding Level 1 and 2 health services regarding consultation, referral and patient transfer. Established links with geographically appropriate health services with higher levels of care regarding consultation, referral and patient transfer. Formal transfer guidelines need to be established.	√ Established links with surrounding Level 1, 2 and 3 health services regarding consultation, referral and patient transfer; accepts appropriate transfers from Level 1, 2 and 3 services. √ Established links with geographically appropriate health services with higher levels of care, including NETS and PERS, regarding consultation, referral and patient transfer. √ Accepts appropriate convalescent transfers from Level 5 and 6 services.	Policies in place for transfer from level 2 facilities Predominantly from Level 5

Capability framework for Victorian maternity and newborn services			
Category	**Level 3**	**Level 4**	**Comment**
Communication guidelines and other services	Established communication links with surrounding Level 1 and 2 health services and practitioners. Established formal communication procedures with higher level units to facilitate the links described above.	√ Established communication links with surrounding Level 1, 2 and 3 health services and practitioners. √ Established formal communication procedures with Level 5 and 6 services.	In place In place for Level 5

Education and research			
	Continuing education programs for health providers in the health service, available also to providers in surrounding Level 1 and 2 health services. Health services regularly participate in Department of Health professional development and education programs including Neonatal resuscitation (NETS), Intrapartum foetal surveillance education, Pregnancy Care Program and, Maternity Emergency Education Program. Initiation and participation in research is not required, but Level 3 health services may voluntarily participate in research initiated as part of a regional program.	√ Continuing education programs for health providers in the health service, available also to providers in surrounding Level 1, 2 and 3 health services. Health services regularly participate in Department of Health professional development and education programs including Neonatal resuscitation (NETS), Intrapartum foetal surveillance education, Pregnancy Care Program and Maternity Emergency Education Program. × Level 4 health services may be involved in multicentre research.	Not currently involved in research

Defining levels of care for Victorian newborn services			
Category	**Level 2**	**Level 3**	**Actions required from ERH**
Service overview			
	Provides care for well, uncomplicated, term newborns (postnatal care only) - care of newborn ≥ 37 + 0 weeks gestation - usually correlating to newborn birthweight ≥ 2,500 grams[12] May accept care of newborns marginally below the gestational age/birthweight listed above, when clinically appropriate or following specialist consultation with emergency retrieval or tertiary service	× Provides care for mild- moderately unwell, uncomplicated newborns - care of newborn ≥ 34 + 0 weeks gestation - usually correlating to newborn birthweight ≥ 2,000 grams ✓ Includes growing preterm and convalescing newborns and infants × May accept care of newborns marginally under the gestational age/birthweight listed above, when clinically appropriate or following specialist consultation with emergency retrieval or tertiary service	Newborns need to be stable and ≥ 2,000 grams

Complexity of care			
Emergency care	Provides resuscitation and emergency stabilisation prior to transfer	√ Provides resuscitation and emergency stabilisation prior to transfer	
Respiratory	Provides short term oxygen therapy ≤ 30 per cent, ≤ 6 hours	× Provides oxygen therapy ≤ 30 per cent, 24–48 hours √ Provides non-invasive respiratory support for short- term transition problems pending transfer - nasal continuous positive airways pressure or high-flow oxygen via nasal cannulae - oxygen requirement (≤ 40 per cent, ≤ 4 hours) √ Provides short-term assisted ventilation care for respiratory support pending transfer only - anticipated short-term use (less than 4 hours), oxygen requirement (≤60 per cent)	First line respiratory support prior to transfer only
Surgical	n/a (see 'Retrieval and transfer' for advice on referral pathways)	n/a (see 'Retrieval and transfer' for advice on referral pathways)	

[12] Recommended gestational age and birth weight are indicative only, and largely relate to decisions regarding prenatal admission. A number of other factors may contribute to the overall presentation of the mother and newborn. Recommended birthweights have been deduced from national birthweight percentiles by gestational age (Dobbins et al. 2012).

Defining levels of care for Victorian newborn services			
Category	**Level 2**	**Level 3**	**Actions required from ERH**
Medical	Provides care for minor conditions not requiring additional nursing or specialist medical treatment, for example - short-term incubator care (≤ 6 hours) - short-term, simple phototherapy (physiological jaundice) - short-term gavage feeding - short-term continuous cardiorespiratory/pulse oxymetry monitoring - simple convalescence	Provides care for short-term transition problems or minor complications, for example: √ - as for level 2, plus √ - gavage feeding √ - simple apnoea monitoring, blood glucose monitoring √ - short-term intravenous therapy	Selected cases only
Critical care / special care	n/a (see 'Retrieval and transfer' for advice on referral pathways)	× Provides low-dependency special care	
Ophthalmology	Established referral pathways to ophthalmology services	× Established referral pathways to ophthalmology services	
Workforce			
Emergency response	Rapid response system (for example Code Blue or equivalent) team on site 24 hours a day to respond immediately to newborn emergencies (birth suite, nursery, emergency department)	√ Rapid response system (for example Code Blue or equivalent) team on site 24 hours a day to respond immediately to newborn emergencies (birth suite, nursery, emergency department)	

Workforce			
Medical	**Paediatrics:** n/a (see 'Retrieval and transfer' for advice on referral pathways) **General practice:** Access to general practitioner(s) with competence in resuscitation and emergency stabilisation of newborns	× **Paediatrics:** Consultant paediatrician (or general practitioner with competence in paediatrics/newborn advanced life support accreditation) - on site for ward round seven days per week - on call 24 hours a day (within 30 minutes) × Resident - on site 24 hours a day √ **General practice:** Access to general practitioner(s) with competence in resuscitation and emergency stabilisation of newborns	Full time Paediatrician not available 24/7 No designated RMO

Defining levels of care for Victorian newborn services			
Category	**Level 2**	**Level 3**	**Actions required from ERH**
Nursing / midwifery	Staffing in accordance with the Safe Patient Care (Nurse to Patient and Midwife to Patient Ratios) Bill 2015 or in the case of the private sector, the relevant enterprise agreement and statutory requirement Staff with appropriate competence and qualifications on site 24 hours a day Staff with competence in neonatal resuscitation and emergency stabilisation	× Staffing in accordance with the Safe Patient Care (Nurse to Patient and Midwife to Patient Ratios) Bill 2015 or in the case of the private sector, the relevant enterprise agreement and statutory requirement × Staff with appropriate competence and qualifications on site 24 hours a day √ Staff with competence in the administration of non-invasive ventilation (continuous positive airways pressure or high flow oxygen) √ Staff with competence in neonatal resuscitation and emergency stabilisation	Nursery not routinely staffed -limited number of midwives with neonatal training/ experience HDU staff have competence with NIV – neonates requiring NIV would be transferred out

Category	Level 2	Level 3	Actions required from ERH
Allied health	Established referral pathways to child protection services, pastoral care and allied health disciplines	√ Established referral pathways to child protection services √ Access to pastoral care √ On-site access to allied health services including dietetic, physiotherapy, social work, audiology and speech pathology services	
Clinical support services			
Pathology	Access to basic pathology services[13] 24 hours a day. For example, personnel capable of determining blood type and cross matching blood.	√ Access to pathology services 24 hours a day	
Diagnostic imaging	Access to imaging services locally	√Access to on-call basic radiology services 24 hours a day (within 30 minutes) √ Access to imaging services locally	
Pharmacy	Access to pharmacy services locally	√Access to pharmacy services locally	

[13] Basic pathology services may include blood cross matching, blood sugar level monitoring, basic haematology and biochemistry

Defining levels of care for Victorian newborn services			
Category	**Level 2**	**Level 3**	**Actions required from ERH**
Retrieval and transfer	Established pathways with Paediatric Infant Perinatal Emergency Retrieval (PIPER) for specialist consultation, referral and transfer – as required Established policies and infrastructure for retrieval and transfer (including stabilisation, transfer and receipt of back- transfer)	√ Established pathways with PIPER for specialist consultation, referral and transfer – as required √ Established policies and infrastructure (including stabilisation, transfer and back- transfer) √ Established protocols to accept appropriate convalescent referrals from level 5 and 6 services	
Lactation support	Referral pathway to lactation advice and referral services* *Not discipline specific and may not be on site	√ Referral pathway to lactation advice and referral services* *Not discipline specific and may not be on site	
Infrastructure			
Nursery	Facilities for stabilisation prior to retrieval, in accordance with: Australasian health facility guidelines: intensive care – neonatal / special care nursery 'Transfer: guide to nursery capability', Neonatal ehandbook (Department of Health 2014)	√ Access to facilities, space and equipment to support: - care for newborns without complications - newborn resuscitation - stabilisation prior to retrieval In accordance with: × Australasian health facility guidelines: intensive care – neonatal / special care nursery 'Transfer: guide to nursery capability', Neonatal ehandbook	
Special care nursery		× On-site access to special care nursery – low dependency	