

Clinical Services Plan 2017-2037



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LIST OF ABBREVIATIONS

ABI	Acquired Brain Injury	ED	Emergency Department	OPG	Orthopantomogram
ABS	Australian Bureau of Statistics	ENT	Ear, Nose & Throat	PAC	Post-Acute Care
ACE	Acute Care for the Elderly	ERCP	Endoscopic Retrograde Cholangiopancreatography	PBS	Pharmaceutical Benefits Schedule (Scheme)
ACFA	Aged Care Financing Authority	GEM	Geriatric Evaluation Management	PCT	Primary Care Type
ACHR	Australian Centre for Health Research	GICS	Grampians Integrated Cancer Service	PHN	Primary Healthcare Networks
ACSC	Ambulatory Care Sensitive Conditions	GI(T)	Gastro-Intestinal (Tract)	QEC	Queen Elizabeth Centre
AFRM	Australian Faculty of Rehabilitation Medicine	GP	General Practitioner	RACS	Residential Aged Care Services
AHC	Allied Health Clinic	HACC	Home and Community Care Program	RAD	Refundable Accommodation Deposit
ALOS	Average Length of Stay	HAN	Health Assistant Nurse	RAMU	Rapid Assessment Medical Unit
AOD	Alcohol and Other Drugs	HARP	Hospital Admission Risk Program	RIR	Residential-in-Reach
ASR	Age-Standardised Rates	HDU	High Dependency Unit	RLOS	Relative Length of Stay
BADAC	Ballarat and District Aboriginal Cooperative	HHS	Hepburn Health Service	SA	Statistical Areas
BASHS	Beaufort & Skipton Health Service	HIP	Health Improvement Programs	SACS	Sub-Acute Care Services
BCHC	Ballarat Community Health Centre	HITH	Hospital-in-the-Home	SCN	Special Care Nursery
BHS	Ballarat Health Service	HMO	Hospital Medical Officer	SEIFA	Socio-Economic Index for Areas
CAMHS	Child & Adolescent Mental Health Service	ICT	Information Communication Technology	SJG-B	St John of God - Ballarat
CCC	Comprehensive Cancer Centre	ICU	Intensive Care Unit	SOU	Short-Stay Observation Unit
CCL	Cardiac Catheter Laboratory	IPM	Inpatient Projection Model	SPECT	Single Proton Emission Computer Tomography
CCU	Coronary Care Unit	LDR	Labour & Delivery Room	TCP	Transition Care Package
CDAMS	Cognitive Dementia & Memory Service	LGA	Local Government Area	TT&R	Teaching, Training & Research
CDM	Chronic Disease Management	LLLB	Living Longer Living Better	VACS	Victorian Ambulatory Care Service
CHF	Coronary Heart Failure	LOS	Length of Stay	VIF	Victoria in Future
CHSP	Commonwealth Home Support Program	MBS	Medicare Benefits Schedule (Scheme)	VMO	Visiting Medical Officer
CLA	Criteria-Led Admission	MCRG	Major Clinical Related Group	VPHS	Victorian Public Health Survey
CLD	Criteria-Led Discharge	MDHS	Maryborough District Health Service	VPRS	Victorian Paediatric Rehabilitation Service
COAG	Council of Australian Governments	MET	Medical Emergency Team	VSTS	Victorian State Trauma System
COPD	Chronic Obstructive Pulmonary Disease	MHCSS	Mental Health Community Support Services	WIES	Weighted Inlier Equivalent Separation
CRC	Community Rehabilitation Centre	MI	Medical Imaging		
CSP	Clinical Services Plan	NDIA	National Disability Insurance Agency		
CT	Computer Tomography	NDIS	National Disability Insurance Scheme		
DHHS	Department of Health and Human Services	NEAT	National Emergency Access Target		
DNA	Did Not Attend	NHT	Nursing Home Type		
DAP	Periodic Accommodation Payment	NHRA	National Health Reform Agreement		
DEXA	Dual-Energy X-ray Absorptiometry	NP	Nurse Practitioner		
DNA	Did Not Attend	NRCP	National Respite for Carers Program		
DRG	Diagnosis Related Group	MR	Magnetic Resonance Imaging		
DTC	Day Therapy Centre	OAHKS	Osteo-Arthritis Hip & Knee Service		
ECG	Electro-Cardiograph	OPD	Out-Patient Department		

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EXECUTIVE SUMMARY

The purpose of this project is twofold:

1. To describe and analyse the drivers of demand for the broader Grampians region catchment. This includes policy, demographic, socio-economic and health status factors that will impact on the future development and delivery of services¹. It also includes demand projections for the regional population, and for all health services in the Grampians region; and
2. To refresh of the Ballarat Health Service (BHS) clinical services plan (CSP) to guide the future provision of health care services by BHS in the context of its primary and extended (regional) catchment areas. The analysis also incorporates broad-based stakeholder consultations, service utilisation analysis and demand projections to 2036-37.

The scope of the plan includes consideration of BHS' clinical capability and service models that deliver a comprehensive service profile to support its regional role² for:

- Acute inpatient and ambulatory services, across all clinical streams;
- Subacute inpatient and ambulatory services;
- Emergency Department;
- Residential aged care; and
- Primary and community-based services.

This clinical services plan provides a catalyst to more effective service development and service re-design in the region, including more effective service integration, collaboration, and formal partnerships to better deliver patient-focused care.

The CSP is part of a body of analysis that is setting the future directions of BHS, including:

- The Ballarat Health Services Strategic Plan – 2017 to 2022 (completed December 2016);
- The Ballarat Health Clinical Service Plan – 2017 to 2027 (this document); and
- The Ballarat Health Services Capital Master Plan (to follow the CSP).

Drivers

The CSP has several important drivers, including:

► **Policy settings.** Although there are many policy considerations, two main policy drivers have been the 'Rural and Regional Health Services System Design, Service and Infrastructure Plan' with key policy considerations relating to service system design and governance, partnerships, networks and referral paths, service delineation, service integration and collaboration, sustainable and safe service models, and better harnessing of capacity, infrastructure and workforce. A second key policy driver has been clinical governance and service quality, in the context of the 'Targeting Zero – putting patient safety first' report. Some important facets of this policy include the pre-eminence of quality and patient safety, system-wide and effective clinical governance, causal relationships between volume and patient outcomes, and the increasing reliance on the development of clinical frameworks to forge role delineation and system planning outcomes.

► **Population and demography.** As at June 2016 the total catchment population was almost 250,000, with the City of Ballarat being most populous with 41% of the population. The population is projected to increase by a modest 1.4% per annum to 305,419 in 2031, or a 23% overall increase. There are pockets of strong growth, namely the City of Ballarat, and the Shires of Moorabool and Golden Plains. The City of Ballarat will be further boosted by growth flowing from the recent announcement of 600 Victorian government jobs associated with the Ballarat GovHub³. The tertiary catchment of the Wimmera is expected to decrease by -3%.

In addition, except for Moorabool and Golden Plains, the population is also ageing across the catchment.

► **Health and socio-economic status.** Given the strong correlation between social determinants and health outcomes, the analysis indicates that the socio-economic status as measured by SEIFA, is relatively poor, including education, income, crime and related social measures. This aligns with the relatively lower health status across general indicators of premature death from all causes, higher rates of chronic diseases and relatively poor lifestyle indicators. These factors drive the relative utilisation of public health services.

► **Projected demand.** Projected demand for acute and subacute inpatient services over the period 2015-16 to 2036-37 is expected to increase from 38,854 separations to 67,056 separations, a per annum growth rate of 2.6%; subacute services demand is projected to almost double from 944 separations to 1,809, a per annum growth rate of 3.3%, reflecting the impact of population ageing.

Self-sufficiency for acute and subacute medical services is expected to increase from 84% to 87% between 2015-16 and 2036-37. For surgical services, the increase is from 69% to 75%. Maternity is expected to remain very high on 95%.

Emergency demand is expected to increase by 2.7% per annum from 53,307 presentations in 2015-16 to 62,196 by 2021-22, and a growth rate of 2.8% per annum, or 72,173 from 2022 to 2027.

Current and projected demand for Health Improvement Programs (i.e. ambulatory subacute services) are projected to increase by 15,425 contacts from 40,070 in 2015-16 to 55,495 in 2031-32, a per annum increase of 2.2%. Outpatient services, including MBS, are projected to increase by 39,377 contacts from 86,106 in 2015-16 to 125,483 in 2031-32, a per annum increase of 2.5%.

Projected demand for most services, including acute inpatient services is occurring at rates much higher than the population increase. The utilisation rates are increasing.

► **Organisational culture and an appetite for change.** One driver for this plan that is not to be under-estimated is the need for a change to organisational culture, and the preparedness of BHS – at all levels of the organisation – to pursue new service models, service re-design, collaborations, and practice changes at a level that is unusual in health services.

Strategic themes

BHS ROLE AND REGIONAL LEADERSHIP

There is an expectation that BHS will provide leadership to the Grampians region.

Leadership is expected to take many forms; clinical leadership, the principal provider of both specialist and comprehensive general health care, the 'go to' referral

health service, initiating and/or developing collaborative arrangements, clinical governance and patient safety initiatives, and providing/coordinating clinical and non-clinical support to other health services in the region. It will be important for the development of effective leadership to ensure clarity of BHS' role in the context of the imprimatur by the department, and health services in the region, in developing integrated and safe services across the catchment.

BHS is well placed to take a more proactive leadership role based on the expectations of other health services in the region and the policy direction by the department.

It is proposed that BHS provide leadership in the development *region-wide system design and stewardship structures*, including clinical councils, regional taskforces that address service integration, enhanced service capability, clinical governance, and role delineation issues in Grampians.

LOOKING EAST

The communities traditionally served by BHS have come from the west of Ballarat and are now characterised by an ageing and declining population. By contrast the catchment population to the east of Ballarat is characterised by a younger, faster growing population with Moorabool projected to increase by 44% and Golden Plains by 37% by 2036-37.

BHS already captures much of the Moorabool 'market' from Ballan, but not east of Ballan, except in some particular specialties, such as urology.

At the same time, Western Health has acknowledged that without further development it will not be able to meet the growth in demand for the Melton-Bacchus Marsh corridor. *It is proposed that BHS should strategically position itself to look east for four key reasons:*

- Operate as a regional referral health service with Moorabool as part of the region;
- To ease pressure off metropolitan health services, and in particular Western Health;
- Importantly, to ensure that there is a viable critical mass of sub-specialty services in the future at Ballarat to deliver the expected volume and complexity of care; and
- Clinically support Bacchus Marsh as appropriate, and any future hospital at Melton, with medical specialists.

1. Aspex Consulting, 'Strategic Services Plan Environmental Analysis Final report', March 2017.

2. Mental health services were not specifically in scope for this project. A separate process has been undertaken concurrent with this plan for the Mental Health Grampians Plan for the Grampians Area Mental Health Service.

3. Department of Treasury and Finance, Victorian Budget 17/18 Overview, May 2017 – p30

This theme is not premised on ‘all Bacchus Marsh and Melton residents coming to Ballarat’. It is premised on the development of critical mass in sub-specialties based at Ballarat and delivering some of this service in Bacchus Marsh and Melton.

BHS has an opportunity to fulfil its role as the regional health service for the Grampians region, and demonstrate the strategic value of a regional hospital supporting peri-urban growth.

INTEGRATION AND COLLABORATION

As part of BHS’ regional leadership role, as well as delivering efficient and seamless care locally, service integration and collaboration is a key theme. The BHS Strategic Plan embraces collaborative partnerships, supporting service delineation based on clinical capability, and service integration to ensure a more connected service system.

Health services within the region have expressed a need for greater engagement with BHS with respect to collaborative developments. This is consistent with the rural and regional **service integration and collaboration** in the ‘*Rural and Regional Health Services System Design, Service and Infrastructure Plan*’. Clear departmental imprimatur for regional leadership would need to form part of system integration and collaboration in the Grampians region.

BHS will take a lead role in developing formal structures and processes that better integrate services across the region.

A 7-DAY SERVICE

BHS has committed to progressively develop consistent clinical capability on a 24 hour, 7-day basis.

Over the last decade there has been increasing evidence that contemporary hospitals cannot afford to operate mainly on a “business hours only” basis. Nights and weekends are the times account for a substantial proportion of hospital admissions yet these are also the times when health services are minimally staffed. There is limited access to diagnostic and procedural services, a lack of multidisciplinary care for an increasing cohort of aging patients with multiple comorbidities who benefit from a team approach, and most crucially, a paucity of medical consultant input. This is especially important as there is now a large body of evidence associating timely consultant input to patient care with improved outcomes.

As the regional health service for Grampians, BHS needs to embrace the 24/7 care concept and progressively develop a more consistent clinical capability.

SERVICE RE-DESIGN AND PATIENT-FOCUSED MODELS OF CARE

A key theme to emerge in this project is the broad recognition of the need to re-design some core services at BHS. Improvements identified were defined by inadequacies in patient access, operational efficiencies, enhancing patient experience, and/or improved patient outcomes.

Service redesign is a transformation that needs to be generated from within BHS, and carried through by BHS. To give effect to necessary change, there will need to be enhanced service redesign capability available to BHS. It offers the potential to significantly improve patient outcomes as well as enhance operational efficiency.

Service redesign must create ‘patient value’ that prioritises the patient’s needs over the historic practice.

SELF-SUFFICIENCY

An important strategic theme for the clinical service plan is to ensure a high level of self-sufficiency for the primary catchment as well as the broader region. The level of self-sufficiency is principally generated by the level of the clinical capability across a broad range of clinical streams at BHS. This enables a high proportion of patients to be treated within the region and prevents patients from travelling to Melbourne for acute services that can be delivered safely in the region.

There are priority areas for increased market share at BHS, in order to ensure that the regional self-sufficiency is adequate. There are many specialties where the self-sufficiency is high or acceptable. However, some specialties – principally surgical specialties – could be developed further at BHS to enhance self-sufficiency. The most in need of development are non-specialty surgery, plastic and reconstructive surgery, orthopaedics, and medical and surgical paediatrics.

It is important to enhance the level of self-sufficiency in particular specialties, most notably in key surgical specialties, and to consolidate self-sufficiencies in clinical streams that are currently at acceptable levels.

AGED CARE

Aged care is a core business of BHS, whether in the Emergency Department (ED), acute, subacute, community-based care, and of course residential aged care (RACS). This theme has several components; better designed care for elderly patients, a state leadership position in RACS, and more specialised community-based capability for elderly patients.

In many respects, this theme overlaps with the need for BHS to reconsider its models of care and **redesign models of care that are patient centric**. Although a hackneyed phrase, there are opportunities to design care around the needs of elderly patients, and not the needs of the institution.

Firstly, to provide for an **Acute Care of the elderly (ACE) program that has as its centrepiece the development of a Rapid Assessment Medical Unit (RAMU)**.

Secondly, there are significant opportunities, as the largest provider of public RACS, for BHS to position itself as a **leader in residential aged care in the state**, and indeed nationally. Strategically, BHS can:

- Forge new service models that work where BHS could work in partnership with third party private operators of retirement and supported care, and public residential aged care that can better support the operations of the public RACS system, and offer a more comprehensive set of patient-centred services;
- Exploration of niche services high need client cohorts whose needs are not well met at present. This is likely to require developing non-traditional revenue streams;
- Develop and package expertise in specialised care for the elderly that can be disseminated more broadly to enhance research, training, reputation and attract a committed workforce.
- Thirdly, **to enhance the consistency of clinical capabilities for subacute inpatients, and develop more specialised skills in geriatrics and age-related conditions that delivered in community settings and in patients’ homes.**

CHRONIC ILLNESS

The burden of disease in the population demonstrates that there is a need to address/redress the level of population morbidity, especially in areas that are amenable to lifestyle changes. It is proposed that a key theme would include the (further) development of chronic disease programs (in collaboration with other service providers) that can demonstrate an impact on chronic disease rates; that is, a reduction in incidence/prevalence, and lower chronicity/complexity of disease, and slower disease processes. This is a major challenge. It requires a set of clear objectives, a service framework that is acceptable within BHS and with collaborating partners.

It is proposed that as a first step, BHS develop a framework for the delivery of chronic diseases. The framework should provide the common basis on which chronic disease

services can be jointly planned and implemented, a basis for delineating roles, preventing duplication, identifying service gaps, and when/how referrals are made between health providers, depending on the stages of the disease. A common framework can be a powerful tool to systemic management of chronic disease for greater Ballarat, and by extension to the rest of the region.

Service development priorities

In addition to these strategic themes, there are a range of specific service development strategies identified that are important to pursue over the short and longer term. These include:

Ambulatory services

► **Outpatients** is a key strategic weakness. There is a range of shortcomings that extend to clinical capability, service gaps, lack of direction, and poor systems and processes. Outpatients requires complete redesign.

► **Role delineation** with community health. There is a need to establish structured processes for delineating roles between BHS and all other providers across the full range of existing community-based services, determining the respective levels of services provided by respective organisations, and identifying service gaps.

► **Service gaps** and priority service developments, which includes access to specialist medical clinics, geriatric/gerontic clinics, specialised paediatric clinics, pain management and other services.

► **‘Clearing House’** service for the appropriate discharge of complex patients.

► **Health Independence Program (HIP)** need to be progressively expanded to increase the volume of CRC, PAC and specialist clinics. HIP services would also benefit from an expansion in the range of specialist clinics, including chronic pain.

► The further development of integrated and collaborative community **palliative care models** that enhance access, quality and patient choice.

► Expand **outreach** services across the region both in situ and virtual in a range of specialist medical services, which could provide outreach clinics to smaller health services.

Acute internal medicine

► **The ‘reinvigoration’ of HITH.** Broaden and deepen the range of HITH clinical conditions, and change the service model to provide a scale of operation that provides the critical mass of medical and nursing staff in a HITH unit under the remit of a physician, and provision of a service with active medical management. BHS has an opportunity to develop HITH beyond the traditional range of services, and develop acute home-based services in potentially new areas such as chemotherapy and cardiology, amongst others. ‘Pushing the envelope’ can potentially provide a very sound clinical platform for diversion and substitution services.

► **Acute Care for the Elderly (ACE)** is the new core business for acute medical services which is proposed with the development of a RAMU as the cornerstone. A RAMU would provide for the early identification of elderly and clinically compromised patients suitable for rapid assessment and planning and would work closely with the ED and short stay observation unit. There are potentially two different approaches for a RAMU at BHS; the formation of a small dedicated unit with a clear and discrete set of clinical protocols and pathways that would operate as part of an acute medical ward, or, to develop a model of care for all ‘eligible’ patients irrespective of where they are accommodated in the hospital. Both approaches are legitimate and both have their strengths and challenges. Both approaches require designated clinical leadership to ensure timely, consistent and comprehensive assessment and care pathways.

► **Cancer services** at BHS will:

- Focus on better integration of services including between surgery and medical and radiation oncology, together with consolidation of clear care pathways and regional treatment models for cancer care;
- Formally incorporate Central Goldfields (Maryborough) in the Grampians Integrated Cancer Service network.

► **Gastroenterology** is significantly under-developed within BHS and is a priority for development.

► **Renal medicine** is currently primed for a potential shift in service model to see an increase in home dialysis, nocturnal dialysis more consistent with best evidence, together with the provision of community satellite services to improve access for patients across the catchment.

► Cardiology.

- Interventional Cardiology is currently over-capacity in Ballarat; and
- Based on the analysis there is no case for separating CCU from ICU.

► **General Medicine** at BHS is best served by maintaining the current generalist medical model as its core provision of medical specialist cover. However, there is an acknowledgement that increasing sub-specialisation will continue incrementally on an informal as well as formal basis in the future.

► There is a significant projected expansion of **acute medical beds** with projected demand growth at 3.8% per annum, primarily due to an ageing population.

Surgical services

► **Plastic surgery** is a significantly under-developed service area at BHS with a low market share directly attributable to not having a plastic surgeon appointed. Most stakeholders identified plastic surgery as a significant service gap, and a priority initiative.

► **Orthopaedic surgery** has a lower than expected market share, especially given that BHS is the main site for emergency orthopaedic surgery. Orthopaedics is a specialty that is expected to expand relative to other clinical services (supported by the availability of a dedicated emergency operating theatre).

► **Anaesthetics services** is a potential rate limiter. The capacity is reported to be problematic based on coverage of at least 60 operating sessions per week plus out-of-hours and weekend emergency sessions/coverage, in addition to supporting CCU, acute pain management, pre-admission clinics, oncology, and medical imaging activities, the workload for anaesthetists is seen to be challenging.

► Development of a BHS sponsored ‘**package of sub-specialty service provision**’ that supports a collaborative basis for service provision to Bacchus Marsh.

► Development of planned and collaborative outreach surgical sessions to a number of other hospitals based on local need and clinical capability.

► **Ophthalmology** is an area that should be considered for regional role delineation as it is well suited to visiting

sessional appointments at smaller hospitals. The continuing use of Ararat to deliver a significant percentage of ophthalmology procedures remains an appropriate strategy into the foreseeable future and could potentially be extended to other smaller hospitals.

► **Peri-operative services** have opportunities to improve efficiencies relating to clinical practices, infrastructure that is not fit-for-purpose, and other general work practices. There is also scope to improve operating theatre performance with the establishment of an additional theatre dedicated for emergencies.

Emergency department

► **Demand** for ED services projected to increase significantly, even on conservative projections.

► **Patient streaming.** The current streaming of patients does not operate as effectively or as efficiently as it could due to the limitations of the physical capacity, the layout of ED, and clinical leadership.

► **Diversion and substitution.** Develop diversion and substitution services.

► **Improvement in design** to separate paediatrics and create potentially create a paediatrics ambulatory unit may also create efficiencies and enhance patient experience for a significant cohort of ED patients.

► Reorientation to an even more regional focus. Telehealth & ‘Virtual Patient Management’

Subacute care

► Significantly change the service model to include specialist subacute beds on the acute campus, clinical integration of subacute with RAMU, ED and diversion and substitution services, more consistent senior medical and nursing cover in subacute to provide a ‘pull system’ from ED and acute.

► Consolidate subacute beds with acute beds;

► Reinvigorate GEM-in-the-Home and Rehabilitation-in-the-Home as viable service models.

► Develop a more highly skilled workforce able to operate independently in the community and home-based settings delivering higher acuity/complexity services.

Women’s & Children’s health

► Maternity services that continue to provide women with choices in care delivery options which are supported by a more holistic wellness approach to ante and post-natal care of women through a multidisciplinary team approach, potentially at an off-site setting.

► Expand neonatal cots.

► For paediatrics:

- Examine the feasibility of a new service model that combines same day recovery and ED SOU for children into a new ‘day paediatric unit’; and
- Further develop specialised outpatient clinics in collaboration with Ballarat Community Health.

In addition to the above priority service initiatives, there are a range of other important services developments that have been identified throughout Section 4 (Service developments and models of care) and section 5 (Critical enablers) as well as a summary in Section 6 of this plan.

1 Purpose and approach

The purpose of this project is to review, update and refresh the clinical service plan for acute and subacute services, primary and community-based services and residential aged care services. The CSP is intended to guide BHS on the future provision of health care services, within the primary catchment, and extended catchment areas to meet its role as the regional health service.

The scope of the plan includes consideration of BHS' role, and as a consequence, the clinical capability and service models that deliver a comprehensive service profile for:

- ▶ Acute inpatient and ambulatory services, across all clinical streams;
- ▶ Subacute inpatient and ambulatory services;
- ▶ Emergency Department;
- ▶ Residential aged care; and
- ▶ Primary and community-based services.

Mental health services were not specifically in scope for this project. A separate process has been undertaken concurrent with this plan for the *Mental Health Service Plan for the Grampians Area Mental Health Service*.

The Plan also considers a broad range of key enablers such as:

- ▶ Inter-relationships and inter-dependencies between each of the health services in the catchment. This relates principally to clinical partnerships and collaborative arrangements;
- ▶ Service sustainability in the context of ensuring critical mass and skilled workforce, particularly in the context of specialist services that are currently or are proposed to be provided by BHS relative to services located in metropolitan Melbourne;
- ▶ Infrastructure. Capacity assessment commensurate with role, range of services, and expected future volumes;
- ▶ Organisational culture;
- ▶ Workforce development and skill mix;
- ▶ Clinical governance and patient safety, consistent with role and state-wide clinical guidelines; and

- ▶ Teaching and training.

The Plan has involved a comprehensive approach to service planning that has included an analysis of:

- ▶ *Environmental factors* that are likely to impact on BHS such as the:
 - Policy context at state and federal level;
 - Demography of the catchment population for its primary, secondary and tertiary catchments;
 - Socio-economic profile of the catchment population; and
 - Health status of the catchment population;
- ▶ *The catchment activity, and self-sufficiency;*
- ▶ *BHS' service profile*, including market share;
- ▶ *Projected increases in demand* for acute, subacute, emergency and other ambulatory services; and
- ▶ *A consultation program* across a broad range of stakeholder discussions.

Appendix 1 provides more detail of the project methodology.

The CSP is part of a broader body of analysis. The CSP is consistent with the Strategic Plan completed in January 2017. It precedes later capital master planning, and will assist with the development of annual business plans for the various clinical units and departments of BHS.

2 Key drivers

This section outlines the main Services Plan drivers. It includes a synopsis of:

- ▶ The main findings from extensive analysis reported in the *Environmental and Service Profile Analysis (November 2016)* for:

- Key policy considerations;
- Demographic drivers;
- Socio-economic and health status of the catchment population;
- ▶ The service profile of the catchment⁴;
- ▶ The service profile of BHS across all its services;
- ▶ Projected demand for the catchment, and for BHS; and
- ▶ The main points and perspectives from an extensive series of consultations with stakeholders.

2.1 Policy drivers

A broad range of policies that impact on BHS have been identified, detailed below are the state and national policies most likely to impact on BHS.

- ▶ A strong focus on rural and regional **service integration and collaboration**, particularly in the context of the *'Rural and Regional Health Services System Design, Service and Infrastructure Plan'*. The main themes from this policy include:
 - System design and governance;
 - Partnerships, networks and referral paths;
 - Service delineation;
 - Service integration and collaboration;
 - Development of sustainable and safe service models; and
 - Better harnessing of capacity, infrastructure and workforce.
- ▶ An emphasis on **clinical governance and service quality** in the context of the *'Targeting Zero – putting patient safety first'*, report. Some important facets of this policy include:

- The pre-eminence of quality and patient safety;
- Strong and effective clinical governance, including independent clinical advice and review;
- The causal relationships between volume and patient outcomes; and
- The increasing reliance on the development of clinical frameworks and similar mechanism to forge role delineation and system planning outcomes.

There are also specific impact policies relating to:

- ▶ *Closing the Gap*. The national strategy that aims to reduce disadvantage among Aboriginal and Torres Strait Islander people with respect to life expectancy, child mortality, access to early childhood education, educational achievement, and employment outcomes;
 - ▶ *Service capability frameworks* relating to maternity and neonatal services, statewide trauma services, and a range of other clinical specific frameworks expected to be 'rolled out' over the coming few years. These frameworks set the expected clinical capability for delivering services by health services;
 - ▶ Developing a workforce that fits within flexible and sustainable service models; and
 - ▶ Developing information and communication technology that supports innovative practices and flexible provision of care.
- At a **national level**, since the 2007 National Health Reform there have been pivotal shifts in health policy. These are captured in the stated objectives of the 2011 National Health Reform Agreement (NHRA) as:
- ▶ Reforming the basics of the health and hospital system, including funding and governance, to improve the sustainability of the system;
 - ▶ Changing the way health services are delivered, including better access and more coordinated care designed around the needs of consumers. This includes a greater focus on prevention, early intervention and the provision of care outside of hospitals; and
 - ▶ Increased investments to improved infrastructure and workforce resources.

4. Primary catchment includes the City of Ballarat, and the Hepburn and Pyrenees Shires. The secondary catchment includes the Shires of Golden Plains, Moorabool, and Central Goldfields as well as the Rural City of Ararat. The tertiary catchment includes all local government areas in the Wimmera sub-region.

Since the 2013 election some of the fundamentals of the reform package have changed. The most recent developments have seen the Council of Australian Government (April 2016) commit to *explore fundamental changes that seek to reassure commitment to the universal health system*. This included a Heads of Agreement for public hospitals from 1 July 2017 to 30 June 2020 that sees the Commonwealth providing an estimated additional \$2.9 billion capped at 6.5 per cent per annum. More significantly, the Agreement preserves parts of the existing system, including activity based funding and the national efficient price.

Residential aged care services (RACS) have also undergone significant changes in the context of its regulatory framework. The intent of the reforms emanating from the Living Longer Living Better (LLLLB) strategy put into effect by the Commonwealth Government includes:

- ▶ Increased flexibility of service models, with greater emphasis on community-based service options and use of home care packages;
- ▶ Delivering a funding model that introduces ‘ingoing’ payments by all residents, reorienting payments toward higher need residents, and
- ▶ A greater focus on quality indicators and transparency of information to better ensure consumer empowerment.

As part of this larger reform process there will be the transfer of responsibility for core community based services such as Home Support programs and primary mental health services to the Commonwealth to be administered through **Primary Health Networks (PHNs)**. The PHN role is expected to continue to evolve and be pivotal for the commissioning of both *what* primary care and community based services are delivered, and *how* they are delivered. In the short-term there may be significant dislocation of many existing rural HACC services.

There was a clear theme running through the consultations relating to the need to change and *how* services need to be delivered in order to:

- ▶ Better meet consumer expectations in the context of increased competition and changing (increased complexity) of aged care client base for BHS;
- ▶ Ensure integrated and seamless care across the care continuum; and
- ▶ Innovative service models that can minimise the shortcomings of the current infrastructure that may not be fit-for-purpose.

In this context, service reconfiguration and changing service models (or models of care) are necessary focal points for the service plan.

The **National Disability Insurance Scheme**, the *Road Map to Reform* strategy for child and family services, and the *Royal Commission on Family Violence* also introduce areas of major reform that are likely to have significant implications for both client/patient access to services, and for BHS as the major health service provider and fulcrum in the various areas of health and human service delivery within the region.

2.2 Catchment demographics and health status

Population characteristics

Population data as at June 2016 indicates a total catchment population of 248,988, with the most populous LGA within the catchment, by a wide margin, being the City of Ballarat with 41%. The population is projected to increase by 1.4% per annum from 248,988 in 2016 to 305,419 in 2031; a 23% overall increase. However, despite growth in the primary and secondary catchments, the tertiary catchment is expected to decrease -3%.

The majority of the population (55%), is 44 years and younger, which reflects a more urban pattern. However, the pattern of ageing in the tertiary catchment to the west and north of Ballarat is more consistent the pattern for rural and regional areas, which includes a dip in the population between the ages of 25-44 years.

It is noted that these projections do not include the potential impact of the recent Victorian State Budget 2017-18 announcement of 600 additional government jobs associated with the Ballarat GovHub, noting that there is a potential 2.1-2.5 additional persons associated with this employment initiative that will have an impact on service utilisation at BHS.⁵

Based on the data for 2012, as the latest available by LGA, the fertility rate in many LGAs within the catchment was higher than both the rural Victorian rate of 2.1 and the overall Victorian rate of 1.8 for the same period. Life expectancy varies across the catchment, but in general, males in the catchment have a lower life expectancy than male Victorians overall, with the exceptions being in the Golden Plains, Hepburn and Moorabool LGAs.

Compared to the average rural Victorian rate of 1.7%, the tertiary catchment has two LGAs, Hindmarsh and Horsham, with higher proportions of Aboriginal and Torres Strait Islander people, at 1.9% and 1.8% respectively.

Health and socio-economic status context

As evidenced from Table 2-1 there are many LGAs within the broader catchment that have risk factors that predict poorer health comes compared to Victorian rates. This is illustrated by:

- ▶ A significantly greater incidence of cancer in a number of the LGAs within the catchment including Golden Plains with an age-standardised rate (ASR) of 929.2/100,000, West Wimmera (923.6/100,000 ASR), Hindmarsh (897/100,000 ASR) and Yarriambiack (871.8/100,000 ASR) which are all much higher than the State rate of 522/100,000 ASR;

▶ Most LGAs within the catchment have higher rates of avoidable mortality when compared to the State rate of 148.2/100,000 ASR and higher than Victorian and rural Victorian rates of suicide and self-inflicted injuries; and

▶ A higher prevalence of risk factors in relation to smoking, nutrition, alcohol consumption and physical inactivity and higher rates of some chronic diseases including high cholesterol, and high blood pressure.

Table 2-1: Summary of health status and risk factor indicators compared to Victorian rates

CONDITION/ RISK FACTOR	BALLARAT C	HEPBURN (S)	PYRENEES (S)	AFARAT (RC)	CENTRAL GOLDFIELDS (S)	GOLDEN PLAINS (S)	MOORABOOL (S)	HINDMARSH (S)	HORSHAM (RC)	NORTHERN GRAMPYANS (S)	WEST WIM-MERA (S)	YARRIAMBIACK (S)
TYPE 2 DIABETES	↓	↑	↑	↓	↑	↓	↓	↑	↓	↑	↓	↑
HIGH BLOOD PRESSURE	↑	↓	↓	↑	↑	—	—	↑	↑	—	↑	↑
HEART DISEASE	↑	↑	↓	↓	↑	↑	↑	↑	↓	↑	↑	↑
OBESITY	↓	↓	↓	—	↑	↑	↑	↑	↑	↑	↓	↑
OVERWEIGHT	↓	↓	↑	—	↑	↓	—	↑	↑	↓	↑	↑
CANCER	↑	↑	↑	↑	↑	↓	↑	↑	—	↑	↑	↑
PREMATURE DEATH - ALL CAUSES	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
PREMATURE DEATHS - SUICIDE/ SELF-INF INJURY	↑	↓	—	↑	↑	↑	↓	—	↓	↑	—	↑
SMOKING	↓	↓	↑	↓	↓	↓	↓	↑	↓	↓	↓	↑
POOR NUTRITION	↑	↑	↑	↑	↑	↑	↑	↑	↓	↑	↑	↑
ALCOHOL CONSUMPTION AT LIKELY TO HARM LEVELS	↓	↑	↑	↑	↑	↑	↑	↑	—	↑	↑	↑
NOT MEETING PA GUIDELINES	↓	↑	↓	↓	↓	↓	↑	↓	↓	↑	↓	↓

↓ Indicates a lower rate compared to Victorian rates

↑ Indicates a higher rate compared to Victorian rates

5. Department of Treasury and Finance, Victorian Budget 17/18 Overview, May 2017 – p30

Given the strong correlation between social determinants and health outcomes, there are several notable socio-economic and health disparities across the catchment to which BHS will need to respond. There are several LGAs within the catchment that have a relatively low SEIFA (Socio-Economic Index for Areas) score, which gauges relative socio-economic advantage or disadvantage in terms of people's access to material and social resources, and their ability to participate in society. In 2016, a number of the LGAs within the catchment were well below the rural Victorian index of 978 with the lowest index in Central Goldfields at 905.

This is supported by other indicators that contribute to measures including high rates of unemployment at 10%, compared with the Victorian rate of 5.8% and the rural Victorian rate of 5.4%, and relatively low incomes for those who are employed, with higher levels of people earning less than \$400 per week in 2013 compared with the Victorian rate (Table 2-2).

Table 2-2: Summary socio-economic indicators

CONDITION/ RISK FACTOR	BALLARAT C	HEPBURN (S)	PYRENEES (S)	ARARAT (RC)	CENTRAL GOLDFIELDS (S)	GOLDEN PLAINS (S)	MOORABOOL (S)	HINDMARSH (S)	HORSHAM (RC)	NORTHERN GRAMPPIANS (S)	WEST WIM-MERA (S)	YARRIAMBIACK (S)
SEIFA INDEX AGAINST RURAL VICTORIAN INDEX	On par	On par	Lower	Lower	Lower	Higher	Higher	Lower	Higher	Lower	Higher	Lower
UNEMPLOYMENT RATE	—	↓	↓	↓	↑	↓	↓	↓	↓	↓	↓	↓
INCOME <\$400 PER WEEK	↑	↑	↑	↑	↑	—	—	↑	—	↑	↑	↑
INDICENTS OF FAMILY VIOLENCE	↑	↓	↓	↑	↑	↓	↑	↑	↑	↑	↓	↓
DRUG USAGE & POSSESSION OFFENCES	↓	↓	↓	↑	↓	↓	↓	↓	↑	↓	↓	↓

↓ Indicates a lower rate compared to Victorian rates

↑ Indicates a higher rate compared to Victorian rates

From a broader human services perspective, including the policy imperatives from the Royal Commission into family violence, the catchment includes LGAs with high rates of family violence incidents. This includes Ararat at 20.3 per 1,000, which is close to double that of the Victorian rate of 10.8 per 1,000. This is followed by Horsham (17 per 1,000), and Central Goldfields (16 per 1,000).

The highest rates of drug use and possession is also in Ararat, at 18.6 per 1,000, and this is significantly higher than

either the Victorian rate of 3.8 per 1,000, or the rural Victorian rate of 3.8 per 1,000.

The review of mental health services undertaken by Birru Health indicates that the western part of the catchment shows high rates of both mental illness and drug and alcohol problems with the rate of mental illness in Ararat being particularly evident with 20 registered clients per 1,000 compared with the Victorian rate of 10.3 per 1,000 and the Grampians rate of 12.9 per 1,000.⁶

6. Birru Health, Ballarat Health Services, *Mental Health Plan for Grampians Area Health Service* (Draft Report March 2017)

2.3 Catchment profile

This section provides a cross-section of the catchment analysis for Grampians region. Specifically, it outlines both historical trends (2011-12 to 2015-16), and projected demand (2015-16 to 2036-37) for:

- ▶ Acute and subacute activity (separations) by:
 - Local Government Area;
 - Public health service provider; and
 - Service type;
- ▶ Publicly delivered primary and community based services activity (occasions of service or other measure) by
 - Local Government Area;
 - Public health service provider; and
 - Service type.

A more detailed analysis is provided in a companion report, 'Grampians Region Overview of Service Utilisation Trends: A Supplementary Planning Report'.

2.3.1 AREA BASED ANALYSIS FOR INPATIENT ACTIVITY

Grampians region - historical trend

An LGA-level analysis of public and private activity trends in the Grampians Region indicates:

- ▶ Total separations from Grampians increased by 16,281 (3.9%) per annum from 2011-12 to 2015-16, representing growth from 97,421 to 113,702 (Table 2-5); and
- ▶ As expected the highest volume of separations are from the City of Ballarat (41.4% followed by Shire of Moorabool (11.9%) and Rural City of Horsham at 9.8%.

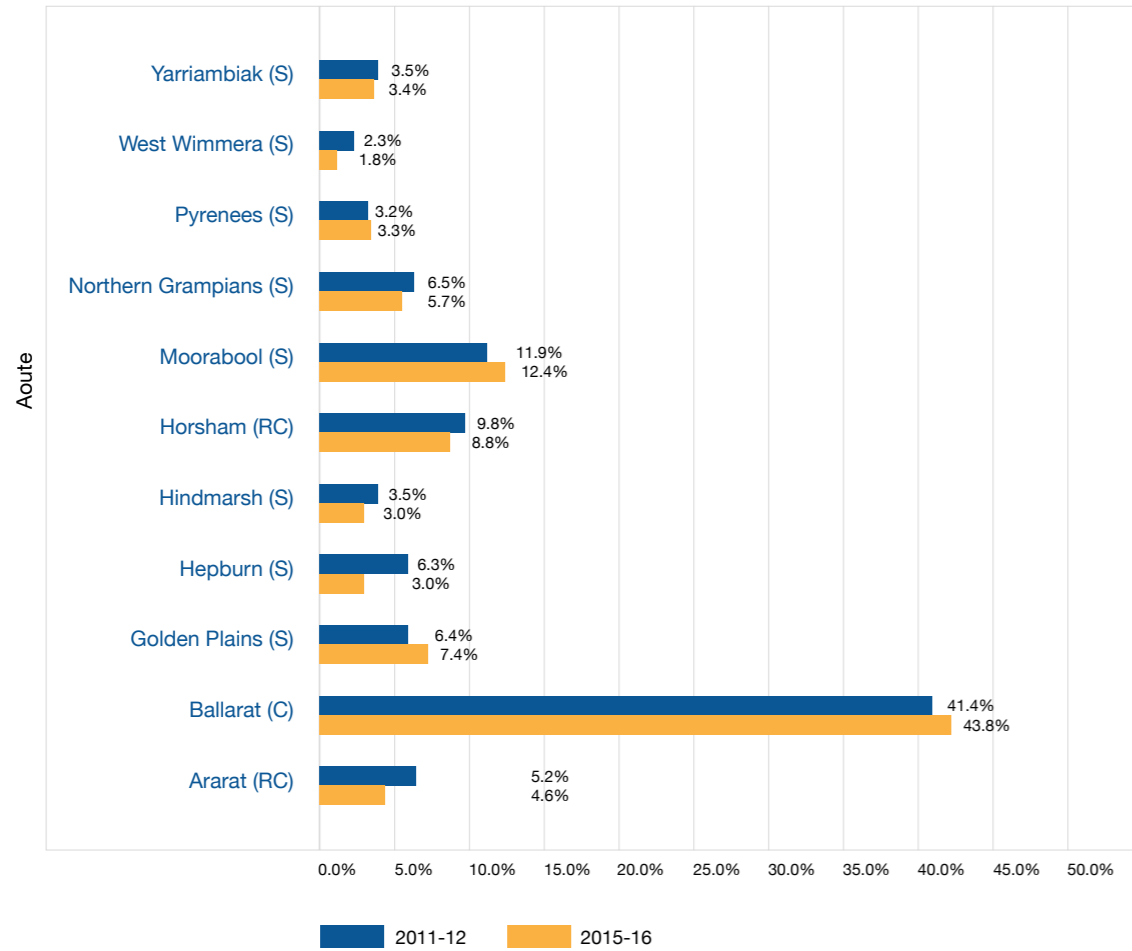
It is important to note that Wimmera LGAs are indicating very small or negative growth rates.

Table 2-3: Trends in Admitted Patient Separations by LGA, Grampians Region, 2011-12 to 2015-16

Self-Sufficiency	2011-12	2012-13	2013-14	2014-15	2015-16	% Change 2011-12 to 2015-16
Ararat Rural City	4994	4708	5071	5020	5162	0.8%
Ballarat City	40693	42308	44497	46666	49980	5.3%
Golden Plains Shire	6269	6998	7653	7488	8333	7.4%
Hepburn Shire	6131	6381	6378	6615	6679	2.2%
Hindmarsh Shire	3328	3645	3523	3498	3395	0.5%
Horsham Rural City	9429	8761	9190	9869	9997	1.5%
Moorabool Shire	11618	11768	12137	12766	141148	5.0%
Northern Grampians Shire	6255	5631	5875	5967	6471	0.9%
Pyrenees Shire	3151	3075	3482	3570	3740	4.4%
West Wimmera Shire	2168	2303	2226	2049	1982	(2.2%)
Yarriambiack Shire	3385	3162	3267	3495	3815	3.0%
Total	97421	98740	103299	107003	113702	3.9%

This is also presented in Figure 2-1 along with the proportion of separations to total regional separations.

Figure 2-1: Admitted Acute Patients by LGA, 2011-12 to 2015-16



Self-sufficiency

Table 2-4 indicates that Grampians region has self-sufficiency for public hospital separations consistently around 82% since 2012-13. With the projections to 2036-37, it is expected that self-sufficiency will increase to 83% mainly due to the increased activity at BHS.

Table 2-4: Regional Public Hospital Self-sufficiency, 2011-12 to 2036-37

Self-Sufficiency	2011-12	2012-13	2013-14	2014-15	2015-16	2036-37
Grampians Public Hospitals	53,853	52,864	55,279	57,876	61,795	100,003
Total Excluding Private Hospitals	64,665	64,441	67,825	70,155	75,522	120,533
Self-Sufficiency	83.3%	82.0%	81.5%	82.5%	81.8%	83%

Clinical Type

The region's inpatient separations are outlined by service type in Table 2-5. Aggregating the LGA activity indicates that acute admissions were 97% of all inpatients, with 2.1% for subacute.

Table 2-5: Trends in admitted patient separations by clinical type, Grampians region, 2011-12 to 2015-16

Clinical stream	2011-12	2012-13	2013-14	2014-15	2015-16	Change from 2011-12 to 2015-16	% change from 2011-12
Acute	94,173	95,561	100,125	103,665	110,299	16,126	4.0%
Mental Health	885	832	962	969	985	100	2.7%
NHT	111	73	60	57	59	-52	-14.6%
Subacute	2,252	2,274	2,152	2,312	2,359	107	1.2%
Total	97,421	98,740	103,299	107,003	113,702	16,281	3.9%

Grampians Region – Projections

LGA-level projections for public and private acute activity in the Grampians Region indicates:

- ▶ Separations will increase from 113,702 in 2015-16 to 190,200 by 2036-37, an average increase of 2.5%;

- ▶ Changes in acute activity are expected to vary by LGA. The fastest growing LGAs both in terms of activity and rates are Ballarat City, and Moorabool and Golden Plains Shires. The LGAs that are losing or benign are Hindmarsh, West Wimmera and Yarriambiack Shires.

- ▶ The catchment generally, and the Wimmera specifically, is forecast to increase at lower rates than has been the case historically, even with the ageing of the population.

Table 2-6: Admitted Patient Projection by LGA, Grampians Region, 2015-16 to 2036-37

Projections	2015-16	2036-37	Change	% Change
Ararat Rural City	5162	6888	1726	1.4%
Ballarat City	49980	92377	42397	3.0%
Golden Plains Shire	8333	14505	6172	2.7%
Hepburn Shire	6679	10891	4212	2.4%
Hindmarsh Shire	3395	3659	264	0.4%
Horsham Rural City	9997	15017	5020	2.0%
Moorabool Shire	14148	26193	12045	3.0%
Northern Grampians Shire	6471	8402	1931	1.3%
Pyrenees Shire	3740	5530	1790	1.9%
West Wimmera Shire	1982	2329	347	0.8%
Yarriambiack Shire	3815	4408	593	0.7%
Total	113702	190200	76498	2.5%

2.3.2 HOSPITAL-BASED ANALYSIS FOR INPATIENT ACTIVITY

Grampians region - historical trend

A hospital-level analysis of public activity in the Grampians Region indicates:

► Total separations from Grampian's health services increased by 10,000 (3.4%) per annum from 2011-12 to 2015-16, representing growth from 69,973 to 79,973 (Table 2-5, Table 2-7);

► As expected the highest separations are from Ballarat Health Service. More surprising were the high volumes and rates for Stawell; due entirely to chemotherapy; and

► Five health services have seen reductions in inpatient activity since 2011-12.

Table 2-7: Trends in Admitted Patient Separations by LGA, Grampians Region, 2011-12 to 2015-16

Health Service	2011-12	2012-13	2013-14	2014-15	2015-16	% Change 2011-12 to 2015-16
Beaufort & Skipton Health Service	207	211	176	164	188	-2.4%
Ballarat Health Services	32212	32981	35110	37044	40362	5.8%
Djerriwarrh Health Service	11804	12627	13094	13282	13364	3.2%
East Grampians Health Service	4504	4028	4231	4448	4666	0.9%
East Wimmera Health Service	1594	1290	1215	1379	1638	0.7%
Edenhope District Hospital	593	582	544	339	277	-17.3%
Hepburn Health Service	1602	1480	1448	1229	1286	-5.3%
Rural Northwest Health	730	665	667	625	622	-3.9%
Stawell Regional Health	3085	3049	3539	3783	4020	6.8%
Wimmera Health Care Group	11775	10510	10569	11253	11467	-0.7%
West Wimmera Health Service	1867	2212	2229	2300	2083	2.8%
Total	69673	69635	72822	75846	79973	3.4%

Market share by hospital

Overall public hospital market share; that is, the share of the total volume of separations by Grampians region patients who were treated in Grampians region public hospitals, has declined slightly from 57% to 56% over the period. This slight decline has gone to private hospitals.

The market share for BHS has increased from 29% to 32% over the period; and referrals to metropolitan hospitals have averaged 7% (Table 2-8).

Table 2-8: Acute admitted episodes, market share for public and private health services, Grampians region, 2011-12 to 2015-16

HOSPITAL	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
B&SHS	167	165	145	124	135	0%	0%	0%	0%	0%
BHS	27,360	28,164	30,369	32,213	35,525	29%	29%	30%	31%	32%
Djerriwarrh	2,734	2,750	2,512	2,517	2,779	3%	3%	3%	2%	3%
Edenhope	572	552	495	322	253	1%	1%	0%	0%	0%
EGHS	4,243	3,750	3,990	4,222	4,399	5%	4%	4%	4%	4%
EWHS	860	676	577	618	570	1%	1%	1%	1%	1%
Hepburn	1,477	1,380	1,216	1,145	1,203	2%	1%	1%	1%	1%
RNH	693	624	632	601	599	1%	1%	1%	1%	1%
Stawell	2,903	2,844	3,354	3,491	3,702	3%	3%	3%	3%	3%
WHCG	11,102	9,850	9,863	10,523	10,726	12%	10%	10%	10%	10%
WWHS	1,743	2,109	2,126	2,100	1,904	2%	2%	2%	2%	2%
Sub-total	53,854	52,864	55,279	57,876	61,795	57%	55%	55%	56%	56%
Private Hospital	29,508	31,120	32,300	33,510	34,777	31%	33%	32%	32%	32%
Barwon Health	2,393	2,655	2,967	2,797	3,000	3%	3%	3%	3%	3%
Bendigo Health	344	350	363	311	313	0%	0%	0%	0%	0%
Other Rural	1,273	1,467	1,611	1,700	2,179	1%	2%	2%	2%	2%
Metropolitan	6,801	7,105	7,605	7,471	8,235	7%	7%	8%	7%	7%
Total	94,173	95,561	100,125	103,665	110,299	100%	100%	100%	100%	100%

Grampians region - projected demand

Across all health services there is projected to be a modest growth of 2.5% per annum in the number of projected admitted episodes between 2015-16 and 2036-37, this yields an overall increase of 76,498 separations from 113,702 to 190,200 separations. Somewhat higher (3.2%) growth is projected for subacute separations, from 2,359 to 2,174 separations (Table 2-9).

Table 2-9: Projected volume of admitted patient separations by clinical type, Grampians region, 2015-16 to 2036-37

Clinical stream	2015-16	2036-37	Change from 2011-12 to 2015-16	% change from 2011-12
Acute	110,299	184,204	73,905	2.5%
Mental Health	985	1,388	403	1.6%
NHT	59	76	17	1.2%
Subacute	2,359	4,533	2,174	3.2%
Total	113,702	190,200	76,498	2.5%

Market share

Grampians region public hospitals' market share of the Grampians region is projected to reduce from 56.0% to 54.3% between 2015-16 and 2036-37. For BHS, market share of the region is projected to increase from 32.2% to

33.1% and for Djerriwarrh there is also a projected increase (2.5% to 3.1%). A drop in regional market share is projected for other public hospitals including WHCG (9.7% to 8.4%), EGHS (4.0% to 3.5%), Stawell (3.4% to 2.9%) and WWHS (1.7% to 1.1%) – refer Table 2-10.

Table 2-10: Acute admitted episodes, market share for public and private health services, Grampians region, 2015-16 to 2036-37

HOSPITAL	2015-16	2036-37	2015-16	2036-37
Beaufort & Skipton Health Service	135	256	0.1%	0.1%
Ballarat Health Services	35,525	60,996	32.2%	33.1%
Djerriwarrh Health Service	2,779	5,722	2.5%	3.1%
Edenhope & District Health Service	253	356	0.2%	0.2%
East Grampians Health Service	4,399	6,514	4.0%	3.5%
East Wimmera Health Service	570	856	0.5%	0.5%
Hepburn Health Service	1,203	2,208	1.1%	1.2%
Rural Northwest Health	599	673	0.5%	0.4%
Stawell Regional Health	3,702	5,306	3.4%	2.9%
Wimmera Health Care Group	10,726	15,000	9.7%	8.1%
West Wimmera Health Service	1,904	2,117	1.7%	1.1%
Sub-total	61,795	100,003	56.0%	54.3%
Private Hospital	34,777	63,671	31.5%	34.6%
Barwon Health	3,000	5,073	2.7%	2.8%
Bendigo Health	313	342	0.3%	0.2%
Other Rural	2,179	2,758	2.0%	1.5%
Metropolitan	8,235	12,356	7.5%	6.7%
Total	110,299	184,204	100.0%	100.0%

2.3.3 SERVICE TYPE

Analysis of activity levels for each of the public hospitals in the Grampians region from 2011-12 to 2015-16 by hospital indicates that an increase in admitted patient demand across the region's public hospitals is largely driven by acute separations, which increased by a strong growth rate of 3.6% over the period 2011-12 to 2015-16 from 67,869 to

78,051 separations, an increase of 10,182 separations. By contrast, and somewhat surprisingly, subacute separations declined by 2.2% per annum from 1,460 to 1,333 separations (Table 2-11). This may be due to artefacts of reporting subacute separations.

Table 2-11: Activity by care type by campus, public hospitals in the Grampians region, 2011-12 to 2015-16

AREA	CARE TYPE	2011-12	2012-13	2013-14	2014-15	2015-16	Change from 2011-12	Change p.a (%) from 2011-12
Grampians	Acute	67,869	67,514	70,832	73,860	78,051	10,182	3.6%
	Mental Health	558	568	609	583	564	6	0.3%
	NHT	86	52	44	43	25	-61	-26.6%
	Subacute	1,460	1,501	1,337	1,360	1,333	-127	-2.2%
	Total	69,973	69,635	72,822	75,846	79,973	10,000	3.4%

The top 10 clinical specialties accounted for 69% of acute admitted separations in 2015-16. The per annum rate of growth for these specialties was 2.7% increasing from 48,681 to 54,156 separations. Of these, there were four clinical specialties that contributed disproportionately to growth:

- ▶ Diagnostic GI Endoscopy, 7.1% per annum growth from 3,741 to 4,920 separations;
- ▶ Neurology, 7.0% per annum growth from 2,095 to 2,743 separations;
- ▶ Chemotherapy and radiotherapy, 6.4% pa growth from 5,372 to 6,890 separations; and
- ▶ Orthopaedics, 2.5% per annum growth from 4,436 to 4,904 separations.

The growth rate for 'other specialties' outside the top 10 was very high at 5.6% per annum. There were ten 'other' specialties that contributed disproportionately to this growth:

- ▶ Endocrinology, 14.1% per annum growth from 689 to 1,166 separations;
- ▶ Haematology, 13.4% per annum growth from 1,476 to 2,441 separations;
- ▶ Immunology & infections, 12.7% per annum growth from 1,068 to 1,723 separations;

- ▶ Gastroenterology, 11.7% per annum growth from 883 to 1,374 separations;
- ▶ Ophthalmology, 10.0% per annum growth from 1,465 to 2,146 separations;
- ▶ Interventional cardiology, 8.3% per annum growth from 656 to 903 separations;
- ▶ Renal medicine, 8.3% per annum growth from 323 to 445 separations.
- ▶ Urology, 7.2% per annum growth from 1,316 to 1,738 separations;
- ▶ Qualified neonates, 6.1% per annum growth from 503 to 637 separations; and
- ▶ Oncology, 5.1% per annum growth from 840 to 1,026 separations;

Table 2-12: Acute admitted episodes by top 10 MCRGs, public hospitals in the Grampians region, 2011-12 to 2015-16

MCRG	2011-12	2012-13	2013-14	2014-15	2015-16	Change from 2011-12	Change p.a (%) from 2011-12
Dialysis	16,153	15,588	15,817	16,506	17,582	1,429	2.1%
Chemotherapy & Radiotherapy	5,372	5,253	6,270	6,094	6,890	1,518	6.4%
Diagnostic GI Endoscopy	3,741	4,367	4,570	4,618	4,920	1,179	7.1%
Orthopaedics	4,436	4,351	4,674	4,894	4,904	468	2.5%
Non-subspecialty Medicine	4,401	3,873	3,492	3,851	4,255	-146	-0.8%
Obstetrics	4,034	4,092	3,905	4,065	3,920	-114	-0.7%
Non-subspecialty Surgery	3,209	3,198	3,378	3,422	3,516	307	2.3%
Respiratory Medicine	2,651	2,560	2,646	2,720	2,820	169	1.6%
Neurology	2,095	2,159	2,415	2,519	2,743	648	7.0%
Clinical Cardiology	2,589	2,558	2,628	2,711	2,606	17	0.2%
Top 10	48,681	47,999	49,619	51,576	54,156	5,475	2.7%
Other	19,188	19,515	21,213	22,284	23,895	4,707	5.6%
Total	67,869	67,514	70,832	73,860	78,051	10,182	3.6%

Service type - projected demand

Hospital level analysis for the region indicates that there is moderate to high growth of 2.7% per annum projected in acute separations for Grampians region public hospitals between 2015-16 to 2036-37 with an increase of 57,863 acute separations, from 78,051 to 135,914. Somewhat higher growth of 3.0% per annum is projected for subacute separations, yielding an increase of 1,143 separations from 1,333 to 2,476 separations over the period.

For the top 10 clinical specialties, growth is projected to increase by 2.9% per annum, compared to 2.2% per annum for other clinical specialties (Table 2-13). Accordingly, the top 10 specialties are expected to drive most of the growth, that is, the top 10 is projected to contribute 75% of the increase in separations (43,568 of total growth of 57,863) over the period.

Within the top 10, there are four specialties with particularly high growth over the period 2015-16 to 2036-37:

- ▶ Haematology, 3.7% per annum growth from 2,440 to 5,263 separations;
- ▶ Dialysis, 3.4% per annum growth from 17,582 to 35,363 separations;
- ▶ Neurology, 3.3% per annum growth from 2,716 to 5,347 separations; and
- ▶ Chemotherapy & radiotherapy, 2.9% per annum growth from 6,890 to 12,433 separations.

Table 2-13: Acute admitted episodes by top 10 MCRGs, public hospitals in the Grampians region, 2011-12 to 2015-16

MCRG	2015-16	2036-17	Change from 2011-12	Change p.a (%) from 2011-12
Dialysis	17,582	35,363	17,781	3.4%
Chemotherapy & Radiotherapy	6,890	12,433	5,543	2.9%
Diagnostic GI Endoscopy	4,919	8,611	3,692	2.7%
Orthopaedics	4,801	7,465	2,664	2.1%
Non-subspecialty Medicine	4,233	6,891	2,658	2.3%
Obstetrics	3,920	5,765	1,845	1.9%
Non-subspecialty Surgery	3,498	5,603	2,105	2.3%
Neurology	2,716	5,347	2,631	3.3%
Haematology	2,440	5,263	2,823	3.7%
Respiratory Medicine	2,787	4,612	1,825	2.4%
Top 10	53,786	97,354	43,568	2.9%
Other	24,265	38,560	14,295	2.2%
Total	78,051	135,914	57,863	2.7%

2.3.4 GRAMPIANS COMMUNITY-BASED SERVICES

This section provides an overview of primary, community and ambulatory services delivered in the Grampians region. As there is no data based on LGA, the analysis is necessarily based on health service activity.

Specialist ambulatory services

Table 2-14 summarises the distribution of specialist ambulatory services which comprises *outpatient services and HIP services*. It can be seen that BHS is the predominant

provider of specialist ambulatory services and accounted for over three quarters (76%) of total contacts by public hospital providers in 2015-16. It comprised just over one half (55%) of total HIP contacts and as expected had a full coverage across each of the HIP service types, namely: HARP, HIP clinics, Post-Acute Care or Post-Acute care, Rehabilitation and Residential In-reach (RIR).

Four other public hospitals operated HIP programs: Djerriwarrh Health Service; East Grampians Health Service; Stawell Regional Health; and Wimmera Health Care Group.

Table 2-14: Specialist ambulatory services by health services, contacts, 2015-16

Health Service	Out Patients	Health Independence Program						Total
		HARP	HIP clinics	PAC	Rehab	RIR	Subtotal	
Ballarat Health Services	131,934	7,260	7,121	8,606	15,051	1,236	39,274	210,482
Beaufort and Skipton	0	0	0	0	0	0	0	0
Djerriwarrh	0	0	0	0	8,134	0	8,134	16,268
Edenhope	0	0	0	0	0	0	0	0
East Grampians	0	1,129	0	0	0	0	1,129	2,258
East Wimmera	0	0	0	0	0	0	0	0
Hepburn	0	0	0	0	0	0	0	0
Rural Northwest Health	0	0	0	0	0	0	0	0
West Wimmera Health Service	0	0	0	0	0	0	0	0
Stawell Regional Health	0	704	0	4,704	2,586	0	7,994	15,988
Wimmera Health Care Group	0	2,351	1,403	3,803	7,058	628	15,243	30,486
Total	131,934	11,444	8,524	17,113	32,829	1,864	71,774	275,482

Table 2-15: Specialist ambulatory services by health services, relative share of contacts, 2015-16

Health Service	Out Patients	Health Independence Program						Total
		HARP	HIP clinics	PAC	Rehab	RIR	Subtotal	
Ballarat Health Services	100%	63%	84%	50%	46%	66%	55%	76%
Beaufort and Skipton	0%	0%	0%	0%	0%	0%	0%	0%
Djerriwarrh	0%	0%	0%	0%	25%	0%	11%	6%
Edenhope	0%	0%	0%	0%	0%	0%	0%	0%
East Grampians HS	0%	10%	0%	0%	0%	0%	2%	1%
East Wimmera HS	0%	0%	0%	0%	0%	0%	0%	0%
Hepburn HS	0%	0%	0%	0%	0%	0%	0%	0%
Rural Northwest Health	0%	0%	0%	0%	0%	0%	0%	0%
West Wimmera Health Service	0%	6%	0%	27%	8%	0%	11%	6%
Stawell Regional Health	0%	0%	0%	0%	0%	0%	0%	0%
Wimmera Health Care Group	0%	21%	16%	22%	21%	34%	21%	11%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Primary and community-based services

The distribution of primary and community-based services is summarised in Table 2-16. In total, there were 121,447 hours for community health and primary health programs and more than twice this volume, 270, 597 hours for HACC services. The four largest providers of primary and community-based services in the region, which comprised 62% of total hours, were:

- ▶ Djerriwarrh Health Service, 19% of hours;
- ▶ West Wimmera Health Service, 18% of hours;
- ▶ Wimmera Health Care Group, 13% of hours; and
- ▶ Hepburn Health Service, 11% of hours.

Table 2-16: Primary & community-based services by health service, hours, 2015-16

Health Service	Community/ Primary Health	HACC	Total	Community/ Primary Health	HACC	Total
Ballarat Health Services	0	0	0	0%	0%	0%
Beaufort and Skipton	480	5,293	5,773	0%	2%	1%
Djerriwarrh	21,726	52,011	73,737	18%	19%	19%
Edenhope	7,580	17,399	24,979	6%	6%	6%
East Grampians	5,979	30,731	36,710	5%	11%	9%
East Wimmera	3,138	32,590	35,728	3%	12%	9%
Hepburn	33,541	11,201	44,742	28%	4%	11%
Rural Northwest Health	18,995	0	18,995	16%	0%	5%
Stawell Regional Health	8,784	18,760	27,544	7%	7%	7%
West Wimmera Health Service	12,526	58,769	71,295	10%	22%	18%
Wimmera Health Care Group	8,698	43,843	52,541	7%	16%	13%
Total	121,447	270,597	392,044	100%	100%	100%

2.4 BHS' current service profile

Acute services

Over the five years to 2015-16:

- ▶ Total acute separations at BHS have increased from 22,564 to 28,479 separations, an annual increase of 6.0% (excluding chemotherapy and dialysis);
- ▶ Dialysis and chemotherapy separations have increased by 6.0% and 8.4% per annum respectively;
- ▶ Same day separations (excluding chemotherapy and dialysis) increased from 9,243 to 13,073, an annual increase of 9.1%, whereas multi-day separations have increased to a

lesser degree, from 13,321 to 15,406 with 3.7% per annum growth;

- ▶ Surgical separations (with a modest 2.4% per annum growth) had the highest growth in same day (3.7%) and lower growth in multi-day (1.7%) separations;
- ▶ There has been a reduction in ALOS for medical separations by 2.7% p.a. from 4.23 to 3.79 days compared to a smaller reduction for surgical (1.8% per annum) from 4.59 to 4.27 days. ALOS for maternity multi-day episodes decreased by 3.0% from 3.19 to 2.83 days;

- ▶ BHS's level of clinical complexity increased over the five-year analysis period with the proportion of primary-level DRG activity decreasing from 39.2% in 2011-12 to 37.3% in 2015-16, whilst the proportion of secondary-level DRG activity increasing from 48.0% to 50.0%. Correspondingly, the proportion of tertiary-level DRG activity remained relatively stable, reducing slightly from 12.8% to 12.6% over this period;

- ▶ The volume of ambulatory care sensitive condition (ACSC) separations as a percentage of total separations remained steady at 8.7% of total separations and ACSC bed-days comprised a reducing share of bed-days, falling from 12.6% to 11.2%. This is an acceptable rate but there is scope to further consolidate its diversion/substitution strategies given the catchment growth in demand due to population growth and ageing, to further reduce the rate of ACSC admissions from the catchment;

- ▶ Relative Length of Stay (RLOS) of 0.88 in 2015-16 for inlier separations, which means that *BHS is performing better than the average across Victoria for the same casemix*. When all BHS Ballarat separations are included, the RLOS is 0.97, indicating the presence of long stay outliers but under the state expected ALOS. The RLOS for high outliers is 5.17 and these episodes contributed 8,716 excess bed days when compared to the average inlier LOS with most of the excess days for these outliers being a cohort of patients aged 65 and over; and

- ▶ BHS' market share for acute separations from the primary catchment (excluding dialysis and chemotherapy) was 79.1% in 2015-16. By 2036-37, the primary catchment market share is projected to increase to 81.4%.

Overall, BHS is expected to increase its regional self-sufficiency.

Emergency services

Emergency separations comprised the largest patient category at 13,626 separations (48%) in 2015-16 and increasing by 8.9% per annum over the period; the next largest volume category was planned separations with 12,300 (43%) separations, increasing by 4.0% per annum. Maternity contributed 2,229 separations in 2015-16, with 2.0% per annum growth.

Mental health

Birru Health comments on findings where performance at BHS in 2015-2016 has not met targets, or does not compare favourably with the average for all rural Area Mental Health Services. Specifically noting that:

- ▶ Bed occupancy rate is low compared with other rural regions but the average length of stay (35 days or under) is higher at 11.7 days for 2015/2016 against 8.2 days for all other regional area mental health services;

- ▶ The adult mental health post discharge client follow-up rate fell during 2015-2016 from 92% in the first quarter to 83 per cent in the fourth quarter and then to 73% in the first quarter of 2016/2017;

- ▶ Adult mental health seclusion events fluctuated throughout 2015-2016 with higher levels through the middle of that year;⁷ and

- ▶ Compared with other regional Area Mental Health Services, from July 2015 to June 2016 Grampians had a lower than average new case rate and average treatment days for adult community mental health services, and a higher than average length of case.

2.5 Consultation themes

The key themes that emerged from the extensive consultations for preparation of the CSP have been consolidated under the following themes.

- ▶ *Role and leadership* – In general, there was broad acknowledgement that BHS was integral to the future development of services in the region, and it was understood that the department was looking for BHS to take on a leadership role. Views on how BHS exercises its leadership role, however, were more varied.

- ▶ *System integration and service delineation* – There were a number of messages relating to broader system integration and service delineation including synergies with the private hospital, clarity and role delineation across the range of community health services and the potential for sharing resources with smaller rural health services.

- ▶ *Internal BHS services integration* – There was general consensus that there were many opportunities for internal service integration. Amongst the key messages were those that related to improved patient flow, innovative service models, and the potential to redesign services to be more patient-focused.

- ▶ *Service development opportunities* – The current climate within BHS is open to change and innovation, as are the expectations of other service providers in the region. Many strategies were identified to develop current and new services across all service streams. The most cited opportunities included acute outpatient clinics, subacute inpatients, ED, a rejuvenated and refocused aged care, operating theatres, and hospital-in-the-home (HITH).

- ▶ *Partnerships and alliances* – All external stakeholders without exception noted that BHS is a critically important partner in the delivery and integration of services in the Grampians region. Despite most external stakeholders acknowledging that BHS has not had a good track record in collaborative or respectful partnerships or alliances they were anticipating better collaboration in the future.

- ▶ *Quality and clinical governance* – The consultations indicate that BHS has a developed quality and clinical governance system, but with room for improvement. Specifically, there was commentary to indicate that there needed to be a more responsive clinical governance system that generates timely decisions relating to improved quality.

- ▶ *Service culture* – The service culture at BHS was reported as problematic, a significant legacy issue for the organisation. However, it was also recognised that change was occurring that reflected a more positive, respectful and inclusive culture.

- ▶ *Workforce* – Observations about workforce varied from systemic to the very specific. General observations included commentary on recruitment difficulties, the ageing workforce, leadership and succession planning amongst others.

- ▶ *Infrastructure and information technology* – There were many areas of BHS that have new and appropriate infrastructure. However, there was also observation that other areas were inappropriate and not fit-for-purpose. ICT was seen as a critical enabler that needed further investment.

- ▶ *Education, Training and Research* – There were commonly held views relating to education, training and research, including the need to consolidate and centralise education, training and research efforts, create a learning organisation and a role in supporting smaller health services.

7. Birru Health, Ballarat Health Services, *Mental Health Plan for Grampians Area Health Service* (Draft Report March 2017)

3 Role and strategic positioning

This section draws from the completed Strategic Plan 2017-2022 and outlines the expected future role of BHS, changes to the values and vision for BHS, the main strategic directions or themes, and key service developments, for this service plan.

3.1 Role

BHS is a designated Regional Public Health Service under the Health Services Act. This role entails being the *main referral health service* to a catchment population of around 250,000 people across the Grampians region.

Consistent with previous definitions of a 'regional hospital', BHS provides the *"point of referral for complex care"*, offering a comprehensive mix of clinical services, with acute medical and surgical services at all but the highest level of complexity.

Regional hospitals are also intended to be the principal providers of both specialist and comprehensive general health care including acute, subacute, aged and primary health services which provide amongst other things:

- ▶ 24-hour emergency departments on-site and full complement of clinical staff;
- ▶ Procedural services are provided at Level 5, which is the highest level of complexity for rural health services;
- ▶ Birthing services at Level 5, and support for intrapartum care to neighbouring local hospitals with Level 2 and 3 birthing services;
- ▶ Critical care for adults with an intensive care unit;
- ▶ Neonatal care is at Level 4 high dependency special care nursery;
- ▶ Regional referral (Level 5) subacute rehabilitation and Geriatric Evaluation and Management service; and
- ▶ Palliative care is provided at Level 3, with links to the regional palliative care consortia.⁸

To complement the extensive range of clinical services, the department's policy position in relation to the role of a regional health service is articulated in the *Victorian Health Priorities Framework 2012-2022: Rural and Regional Health Plan*, which states;

"...regional hospitals and health services are expected to take a leadership role within their respective regions. This includes providing clinical advice and specialist support when required to those services located at the sub-regional and local levels. They provide significant leadership in

*rural workforce development and staff education, training and research from undergraduate through to specialist postgraduate levels in all disciplines. They have important links with universities, particularly with departments of rural health. Developing collaborative relationships with a range of health service providers in a regional centre and across the wider regional area is important. These relationships support coordinated and integrated services for people accessing services across a regional area."*⁹

In addition to the functions described above, BHS also provides:

- ▶ Aged care. BHS is the largest public provider of residential aged care in Victoria with accommodation settings in Ballarat, Ballarat East, Ballarat North, Sebastopol and Wendouree and includes a specialist psychogeriatric service. It is noted that RACS extends mainly to the primary catchment;
- ▶ A local role in primary care and community-based services, but not the predominant role. BHS community programs seek to support people live within the community with dignity and independence and include community nursing, case management, allied health services, carer respite and support and a range of programs such as cognitive, dementia and memory services, continence service, community palliative care, planned activity groups amongst others;
- ▶ A supporting role with connectivity and innovative practices in health care provision; and
- ▶ BHS operates the state-wide equipment program.

As the largest employer in a city of over 100,000 population, BHS is also a prominent corporate citizen, and has a role in broader community leadership in areas of community and social service development, whether in family violence and community safety, social cohesion, community education, community inclusion, and as an employer of choice.

3.2 Strategic themes

3.2.1 REGIONAL LEADERSHIP

In its 2017-2022 Strategic Plan, BHS embraced its role as a **regional leader** in health, which includes several aspects of leadership:

- ▶ **Collaborative partnering** with other (public, private and non-government organisations) health and community service providers;

- ▶ Supporting **service delineation** based on clinical capability of the many health care providers in the region;

- ▶ **Service integration** to ensure a more connected service system;

- ▶ Providing leadership in **clinical governance and support to smaller health services**;

- ▶ Auspicing **structures** that act as mechanisms for integrative care or developing clinical governance, including for example, clinical councils; and

- ▶ Provide the critical mass of **specialist medical services** in a wide range of medical and surgical specialties that can be made available to the region on an outplacement, outreach or virtual basis.

Collaborative partnering with other providers within the BHS catchment is a key to success. As observed by one stakeholder, *'We need to work collaboratively to survive'*.

The nature and the value of formal and informal partnerships have been important to service access and service quality. There are many current examples where leadership within the region is being undertaken, including teaching and training, secondary consultations, outreach surgical services, and outreach subacute clinics amongst others.

However, it is also clear that partnerships over the next decade will be even more extensive, and more formal/structured.

The department is currently developing a clearer, more definitive, position on role delineation in response to commentary in the Targeting Zero report, which has highlighted the inappropriateness of some service delivery, and perverse incentives of the current system. The likely outcome of the departmental review is a stronger leadership role for BHS, including for clinical governance.

Health services within the region have expressed a need for greater engagement with BHS with respect to clinical advice and support. Equally, there are concerns that there is often a *'fine line to be negotiated between leadership and taking over'*.

It is expected that BHS will be demonstrating regional leadership across all the aspects of leadership identified above over the next several years. However, this leadership role in the context of current policy imperatives from government must be supported by an appropriate authorising environment. In effect, the Department must ensure that regional health services understand and accept their respective roles and responsibilities, have an 'authorising environment' for their leadership role, and are supported to deliver their roles in relation to collaboration, role delineation and sharing information amongst other matters.

3.2.2 LOOKING EAST

The communities traditionally served by BHS have come from the west and are now characterised by an ageing population. Many of these communities have static or declining populations. Local government areas (LGAs) that are projected to have significant decreases in population from 2016 through to 2031 include West Wimmera (-22%), Yarriambiack (-15%) and Hindmarsh (-14%).

By contrast the catchment population to the East is characterised by a younger, faster growing population with Moorabool projected to increase by 44% and Golden Plains by 37% in the same period. As part of the environmental analysis, consideration has been given to BHS' activity/role in servicing the population east of Ballarat to the metropolitan fringe; essentially the Shire of Moorabool. The analysis indicates:

- ▶ BHS has around 38% market share for the Moorabool Shire and the northern half of the Golden Plains Shire, and is the largest single service provider to the Moorabool Shire;
- ▶ BHS provides:
 - 16% market share to the Bacchus Marsh district of the Moorabool Shire, with Djerriwarrh providing 32% and metropolitan health services providing 24%;
 - 45% of the Ballan district, with Djerriwarrh providing 22%;
 - 77% of Gordon-Mount Egerton district, with Djerriwarrh providing 2% as the next highest provider; and
 - 79% of the Linton-Smythesdale district, with East Grampians Health Service providing 2% as the next highest service provider.

This suggests that BHS is currently the major provider in the catchment, with the exception of the Bacchus Marsh district and the related metropolitan growth fringe.

At the same time, Western Health is currently the *designated* health service for the growth corridor between the western sector of Melbourne, which encompasses the Shire of Moorabool and City of Melton. Western Health's Strategic Plan 2015-2020 specifically notes that *"without intervention, Western Health will continue to be able to provide about 40% of the health service demand in our community"*. *"Other services within our community such as Werribee Mercy Health and Djerriwarrh Health Services provide some further services; however, our region is heavily reliant on other tertiary and quaternary services..."*¹⁰

It is further expected that any future planning for a standalone hospital at Melton is likely to operate as a 'community hospital' with relatively low complexity patients, and unlikely to be able to meet expected tertiary demand.

8. Department of Human Services, *Rural directions for a better state of health – Further defining the roles of public hospitals in Victoria (2007)*

9. Victorian Department of Health – Victorian Health Priorities Framework 2012-2022, Rural and Regional Health Plan (2011) – pp 13-14

10. Western Health – *Strategic Plan 2015-2020* - p9

There are two key considerations for BHS (and the department) in planning for the future needs of this growth corridor, and the implications of reduced referrals over time to BHS from the Wimmera.

1. BHS can play a significant role to support the delivery of sub-specialty services to the Bacchus Marsh district and potentially reduce pressure on new capital developments, and workforce pressures at Western Health; and
2. Preserve and strengthen the necessary critical mass of sub-specialty services at BHS, that will over time, see reduced referrals from the Wimmera. To safeguard the *Design, service and infrastructure plan for Victoria's rural and regional health system, it will be important that BHS is able to sustain sub-specialty services across most clinical streams.*

These considerations can be addressed by:

- ▶ Referrals being provided to BHS and that the *services are delivered from BHS*. The analysis indicates that the secondary and tertiary services that could reasonably be undertaken at BHS rather than Western Health would be around 1,300 additional separations per annum (or 50% of the 2,641 expected separations forecast to be undertaken in metropolitan hospitals from the Bacchus Marsh district in 2036-37). This would assist with, but not address, future sub-specialty critical mass at BHS; combined with,
- ▶ Formal clinical relationships between BHS sub-specialists and Djerrivarrh Health Service, as the *major provider of general and sub-specialty services* at Djerrivarrh, and a significant clinical workforce contributor to any future Melton Community Hospital.

In addition, there is expected to be a total of 270,000 to 300,000 outpatient attendances per annum from the Moorabool catchment, of which BHS could be in a position to support between 60% and 70% of these with the right service model in place; in Ballarat and at Bacchus Marsh/ Melton.

This provides a viable strategy for all parties.

Such a strategy is also consistent with the findings of the recent *Design, service and infrastructure plan for Victoria's rural and regional health system*, report which identifies the need for regional health services as central coordinating agencies for areas such as clinical education, workforce development and supply, and as links to metropolitan hospitals for smaller rural health services; and for supporting smaller health services within their region in maintaining sustainable practices.¹¹

3.2.3 A 7-DAY SERVICE

BHS has also committed to progressively develop consistent clinical capability on a 24 hour, 7-day basis.

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

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

*"The weekend as protected time has been accepted in anglophile western countries since the 1940s. In the UK challenges from the large retailers resulted in a change to the law in 1994. Since then social behaviour has changed profoundly and public expectation that services should be designed for customer convenience has grown."*¹²

This is particularly relevant to health care in Australia where the clinical practices and service availability differs considerably depending on the day of the week and the time of the day. Ironically, this is in a sector where, as the ACHR notes, *"the distress of uncontrolled pain and symptoms cannot wait for 'opening hours'."*¹³

As the regional health service for Grampians, BHS needs to embrace the 24/7 care concept and progressively develop a more consistent clinical capability.

3.2.4 SERVICE RE-DESIGN AND NEW MODELS OF CARE

A key theme that came to the fore in developing the CSP is the need to (re)design several services. For some services re-design was essential; not discretionary. The underlying reasons for redesign differed depending on the service. Improvement was often defined by patient access, operational efficiency, enhanced patient experience, and/ or improved patient outcomes. Some of the important areas identified during consultations for redesign included:

- ▶ Acute outpatients;
- ▶ HITH;
- ▶ Emergency department;
- ▶ Elective surgery;
- ▶ Subacute inpatient services;
- ▶ Patient discharge;
- ▶ Community-based services - duplication and gaps; and
- ▶ Research, amongst others.

Therefore, this central theme of the CSP touches on the potential for service re-design that can make a discernible improvement and 'create patient value'.¹⁴ *What does this mean in practice?*

All of the areas identified have a number of factors in common, which together can act as a powerful basis for reform that demonstrably improve patient value.

The elements are:

1. To organise (or reorganise) services around the patient, not the health service. This means developing integrated practice (and by definition avoiding siloed practice and behaviours). More bluntly it requires changing clinical practice, and how the model of care is delivered through *integrated practice units that wrap around a defined and clinically accepted patient pathway.*
2. To organise the right skill set/team that can deliver healthcare.
3. Introduce 'internal bundled payments' for the patient pathway. This reinforces the structure and workforce changes, and embeds integrative behaviours.
4. Measure patient outcomes/impacts (and patient costs).
5. Build an enabling technology that addresses the above four elements.

Unlike typical change processes that might touch on one of these elements, or possibly two, it is proposed that service redesign incorporates *all of these elements*. Each element is inter-dependent and mutually reinforcing, which is likely to multiply the benefits of re-design than would be possible if only tackling one, or a few, of these elements. There are exemplar international case studies that are instructive in improving patient outcomes at the same time as improving efficiency¹⁵.

Whilst design and implementation do not have to be 100% developed to add value, there needs to be sufficient commitment to change in each of these elements to make a real difference. Change can be piecemeal but the results are not as evident and therefore more difficult to use as the basis for demonstration of benefits to the stakeholders involved.

11. Deloitte, *Design, service and infrastructure plan for Victoria's rural and regional health system* Consultation Report, 2016

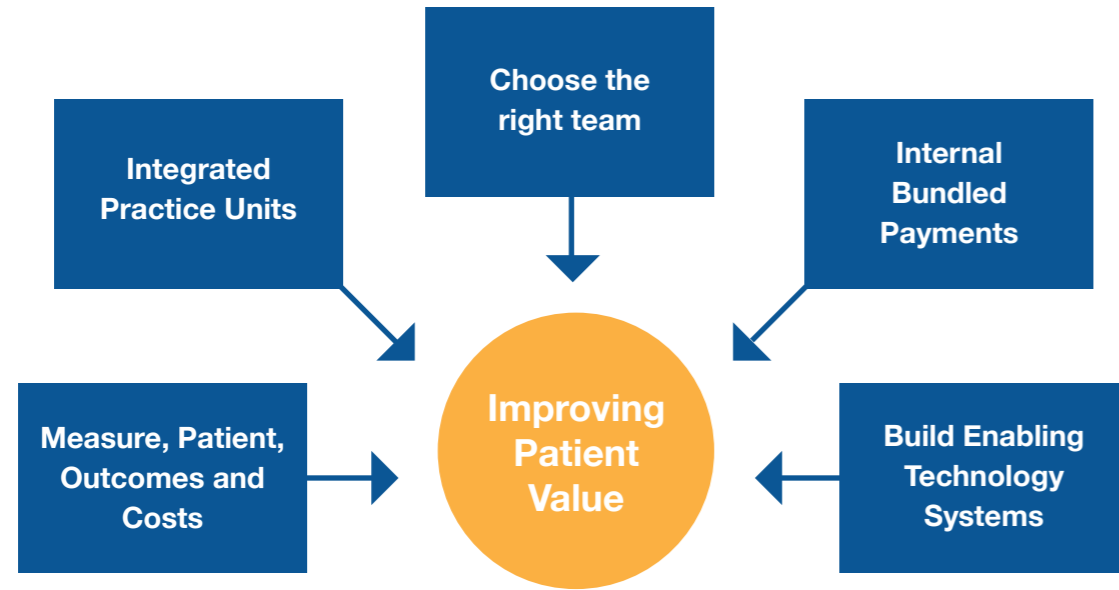
12. Department of Health (UK), *Implementing 7 Day working in Imaging Departments: Good Practice Guidance*, A Report from the National Imaging Clinical Advisory Group (2011)

13. Australian Centre for Health Research, *Conversations – Creating Choice in End of Life Care*, 2016, p11

14. Based on Porter, M. & Lee, T. Harvard Business School, *The Strategy That Will Fix Health Care*, October 2013

15. Porter, M. & Lee, T. Harvard Business School, *The Strategy That Will Fix Health Care*, October 2013

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



Service re-design may be undertaken at the level of the clinical unit, department or patient cohort. It needs to be manageable, measurable and locally owned.

Service re-design is a transformation that needs to be generated from within BHS, and carried through by BHS.

3.2.5 SELF-SUFFICIENCY

An important strategic theme for the CSP is to ensure a high level of self-sufficiency for the primary catchment as well as the broader region. The level of self-sufficiency is principally generated by the level of the clinical capability across a broad range of clinical streams at BHS. This enables a high proportion of patients to be treated within the region and prevents patients from travelling to Melbourne for acute services that can be delivered safely in the region.

As a general statement, self-sufficiency for the BHS primary catchment, and the region in aggregate, is *marginally lower than what might be expected*. There are a number of priority areas for increased market share at BHS, in order to ensure that the regional self-sufficiency is adequate in the future.

In 2015-16 internal medical specialties had a primary catchment of 84%, which has room for further development. However, considering the impact of Hepburn Health Service and Beaufort-Skipton Health Service on internal medicine, the current levels seem reasonable. Importantly, internal medicine separations are projected to increase to 87% market share for the primary catchment by 2036-37. The whole region is projected to have a self-sufficiency of 84% by 2036-37, both of these are acceptable.

Maternity self-sufficiency, especially for the primary catchment are very high at around 95%, which is higher than might be expected.

Surgical specialties are not as high as internal medicine. General surgery seems particularly low at 72%, but is expected to increase to 80% by 2036-37. The catchment, self-sufficiency is expected to be around 77% by 2036-37.

There are some specialties – principally surgical specialties – that could be developed further at BHS, or in the region, to enhance self-sufficiency. The most in need of development are non-specialty surgery, plastic and reconstructive surgery, orthopaedics, and medical and surgical paediatrics.

It is important to enhance the level of self-sufficiency in particular specialties, most notably in key surgical specialties, and to consolidate self-sufficiencies in clinical streams that are currently at acceptable levels.

3.2.6 AGED CARE

Aged care is a core business of BHS, whether in the Emergency Department (ED), acute, subacute, community-based care, and of course residential aged care (RACS). This theme has several components; better designed care for elderly patients, a state leadership position in RACS, and more specialised community-based capability for elderly patients.

In many respects, this theme overlaps with the need for BHS to reconsider its models of care and *redesign models of care that are patient centric*. Although a hackneyed phrase, there are opportunities to design care around the needs of elderly patients, and not the needs of the institution.

There are three core elements to redesigning aged care at BHS.

Firstly, to provide for an *Acute Care of the elderly (ACE) program that has as its centrepiece the development of a Rapid Assessment Medical Unit (RAMU)*.

Secondly, there are significant opportunities, as the largest provider of public RACS, for BHS to position itself as a *leader in residential aged care in the state*, and indeed nationally. Strategically, BHS can:

- ▶ Forge new service models that work where BHS could work in partnership with third party private operators of retirement and supported care, and public residential aged care that can better support the operations of the public RACS system, and offer a more comprehensive set of patient-centred services;
- ▶ Exploration of niche services high need client cohorts whose needs are not well met at present. This is likely to require developing non-traditional revenue streams;
- ▶ Develop and package expertise in specialised care for the elderly that can be disseminated more broadly to enhance research, training, reputation and attract a committed workforce.

Thirdly, to *enhance the consistency of clinical capabilities for subacute inpatients, and develop more specialised skills in geriatrics and age-related conditions that delivered in community settings and in patients' homes*.

3.2.7 CHRONIC ILLNESS

The burden of disease in the population demonstrates that there is a need to address/redress the level of population morbidity, especially in areas that are amenable to lifestyle changes. It is proposed that a key theme would include the (further) development of chronic disease programs (in collaboration with other service providers) that can demonstrate an impact on chronic disease rates; that is, a reduction in incidence/prevalence, and lower chronicity/complexity of disease, and slower disease processes. This is a major challenge. It requires a set of clear objectives, a service framework that is acceptable within BHS and with collaborating partners.

It is proposed that as a first step, BHS develop a framework for the delivery of chronic diseases. The framework should provide the common basis on which chronic disease services can be jointly planned and implemented, a basis for delineating roles, preventing duplication, identifying service gaps, and when/how referrals are made between health providers, depending on the stages of the disease. A common framework can be a powerful tool to systemic management of chronic disease for greater Ballarat, and by extension to the rest of the region.

4 Service development and models of care

This section describes important areas where services will be enhanced over the next five to 10 years, and provides the basis for more strategic service development over the next 20 years. In particular, the CSP includes a discussion of each of the main service streams:

- ▶ Acute services including internal medicine, surgery, women's & children's, and clinical support functions;
- ▶ Subacute services including rehabilitation, GEM, palliative care and Subacute Ambulatory Care Services (SACS);
- ▶ Emergency Department;
- ▶ Specialist ambulatory services; and
- ▶ Residential aged care.

In general, each section contains a summary discussion of the main issues and challenges, and the proposed strategies for the development and service models.

Market share analysis in the following tables is provided for the base year and projected years 2036-37 noting that market share describes BHS activity relative to total public hospital separations in the region (i.e. excludes private hospital activity).

4.1 Acute services - internal medicine

For the purposes of this CSP, internal medicine includes the clinical disciplines listed in Table 4-1. In total, BHS provided 22,018 acute internal medicine separations in 2015-16. This accounted for a market share of 84.3% in the primary catchment, and 46.6% for the total catchment. A more detailed analysis of each of the main internal medicine clinical streams is provided in following sections.

Table 4-1: Internal Medicine Clinical Stream Activity, Market Share and Self-Sufficiency, 2015-16 to 2036-37

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchm't Projection	Catchm't Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Chemotherapy	3,159	5,693	87.6%	89.6%	3,011	5,439	39.8%	40.9%	11,378	85.5%
Clinical Cardiology	1,641	2,931	85.8%	90.4%	1,551	2,804	52.0%	59.7%	4,029	85.8%
Dialysis	7,044	12,252	90.6%	91.4%	6,951	12,177	55.2%	58.5%	18,032	86.7%
Endocrinology	500	1,112	86.6%	89.3%	485	1,087	45.5%	52.2%	1,575	75.6%
Gastroenterology	918	1,678	83.3%	84.3%	863	1,593	51.6%	55.2%	2,231	77.3%
Haematology	851	1,848	72.5%	79.9%	828	1,799	32.4%	37.8%	3,581	75.3%
Immunology & Infections	713	1,418	79.0%	84.4%	674	1,335	35.0%	40.8%	2,609	79.8%
Neurology	1,850	3,767	87.1%	88.2%	1,779	3,656	56.6%	62.1%	4,801	81.6%
Non-Subspecialty Medicine	2,125	3,742	73.5%	82.9%	1,994	3,576	40.1%	46.9%	6,565	86.0%
Oncology	721	1,016	78.1%	79.4%	652	914	53.8%	56.7%	1,308	81.1%
Renal Medicine	323	542	60.3%	68.4%	291	490	46.9%	52.7%	656	70.5%
Respiratory Medicine	1,574	2,897	79.2%	80.8%	1,503	2,756	42.7%	47.9%	4,629	80.4%
Other	599	865	77.1%	77.1%	559	823	36.4%	41.0%	1,534	84.2%
Total	22,018	39,761	84.3%	87.2%	21,141	38,450	46.6%	50.8%	63,086	83.4%

All Other Medicine clinical disciplines include dermatology, drug & alcohol, extensive burns, acute rehabilitation, rheumatology, and unallocated.

The 2015-16 data indicates that there are several clinical areas that:

- ▶ Are at, or exceed, the expected levels of market share for the primary catchment (such as neurology, renal medicine, clinical cardiology and endocrinology);
- ▶ Are marginally below expected market share (such as oncology, chemotherapy, dialysis and immunology and infections); and
- ▶ A few that are well below expected rates (such as respiratory, non-specialist medicine, and haematology). However, the lower rates for respiratory and non-specialty medicine in particular, appear to be due to the relatively higher levels for these conditions at other primary catchment hospitals, namely Hepburn Health Service (HHS) and Beaufort & Skipton Health Service (BASHS).

Acute general medicine is an expected core service for regional and sub-region health services. It is further expected that regional hospitals can deliver sub-specialty medical services in most clinical streams. For a regional service this is expected to translate into self-sufficiency of 85% to 90% for BHS' primary catchment for internal medicine clinical streams. The above analysis indicates that BHS is marginally lower than the expected market share for the primary catchment at 84%.

Importantly, internal medicine separations are projected to increase to 87% market share for the primary catchment by 2036-37. The whole region is projected to have a self-sufficiency of 84% by 2036-37.

The expected casemix profile for BHS would typically include:

- ▶ All Non-Specialty Medicine Diagnosis-Related Groups (DRGs);
- ▶ All Clinical Cardiology DRGs;
- ▶ All Drug & Alcohol (V & X-series) DRGs;
- ▶ All Gastroenterology DRGs, including the most complex (K-series) conditions;
- ▶ All Haematology DRGs (including the Q and non-surgical R series);
- ▶ All Immunology & Infections DRGs (S & T-series);
- ▶ All medical and other Nephrology (L4 & L6-series) DRGs;
- ▶ All Neurology DRGs; and
- ▶ All non-surgical Respiratory DRGs, including ventilation.

Demand for general acute medicine is expected to increase with the growth and ageing of the population. BHS is expected to meet most of this increased demand. Demand for internal medicine is projected to increase from 22,108 to 39,761, an average growth rate of 3.84% per annum.

From a total catchment perspective, self-sufficiency is expected to be 83.4% by 2036-37, meaning that health services in the catchment will be meeting catchment demand at an expected level. In aggregate, there would be no unnecessary patient outflow.

[This clinical service plan would deliver self-sufficiency for internal medicine consistent with expectations of BHS, and other health services in the catchment.](#)

4.1.1 IMPROVING ACUTE CARE FOR OLDER PATIENTS

A high proportion of acute care at BHS, as with other acute hospitals, is for older patients. In 2015-16, 30.4% of all separations and 37.0% of all bed-days were for patients aged 70 and over. Demand projections show that by 2036-37 the relative share of separations for older patients will progressively increase to as high as 40.6% of separations and 45.4% of bed-days.

The consultation process has further reinforced the need for a greater focus on care for older people because they are more likely to have a range of co-morbidities (and have more limited cognition, societal factors such as limited home support and inadequate alternatives to acute hospital care), which makes care more complex and lengthens hospital stay. Longer length of time in hospital not only requires more resources, it can also have an adverse impact on frail elderly patients as they are at risk of de-conditioning in an acute setting and occupy beds that are in high demand.

There has been an awareness of this phenomenon at BHS for many years, including a previous attempt at introducing a Rapid Assessment Medical Unit¹⁶ (RAMU) in the acute medical ward. BHS is currently planning to develop and implement a more durable RAMU model.

There is broad acknowledgement that a major focus over the next decade is to have a patient-centric (holistic) approach to the care of older people as part of the broader strategic policy of *'Improving Care for Older Persons'* across all care settings. This patient-centred approach is intended to be the platform for **service redesign** that:

- ▶ Breaks down the physical and clinical barriers between ED and acute and subacute services, and community-based services; and
- ▶ Ensures that there is an active clinical pathway that enables early and comprehensive assessment of the patient's needs when admitted.

[Acute care of the elderly \(ACE\) is the new core business for acute medical services, and the development of a RAMU is a cornerstone of a new service model.](#) It is proposed that the RAMU be developed over 12 months.

There are potentially two different approaches for a RAMU at BHS. The first is the more established model which forms a small dedicated Unit with a clear and discrete set of clinical protocols and pathways that would apply to all patients in the unit. This model tends to operate in relative isolation from the other acute medical beds. Alternatively, there could be a model that would apply the principles of RAMU, and have the capability to deploy the model of care, irrespective of the location of the patient in the hospital. Both approaches are legitimate, and both have their strengths and challenges. Equally, both approaches share the following characteristics:

- ▶ Early identification of patients suitable for rapid assessment and planning (within 4 hours for ED presentations and within 24 hours of ward presentation if the patient were an elective admission). A close relationship with ED and Short-Stay Observation Unit (SOU) is essential for this service to operate effectively;
- ▶ Designated clinical leadership for these patients to ensure more timely, consistent and comprehensive assessment and care pathways. The clinical leadership would include senior specialists (and could potentially incorporate Nurse Practitioners over time);
- ▶ Multi-disciplinary assessment and joint planning of the patient's needs, including comprehensive geriatric assessment and a model of care (and assessment tools) that consider all facets of the patient's needs. This model is most effective when operating 7-days a week and out-of-hours;

- ▶ Examination of the development of Nurse Practitioner(s) (NP) in geriatrics or similar field to support RAMU, subacute beds and community Well Ageing programs;
- ▶ The incorporation of information technology that provides clear assessment, clinical plan, and clinical pathway information for each patient, with connectivity to the main referral services in subacute, community and GPs;
- ▶ An electronic real-time bed management system (as part of a broad bed management system);
- ▶ A RAMU performance management system;
- ▶ The support of an electronic medical record (EMR);
- ▶ Using consultation-liaison with other specialists as required;
- ▶ Using senior nurse specialists to provide clinical support for transitioning between inpatient and community settings;
- ▶ Developing 'shared care' pathways with GPs and/or specialist physicians; and

▶ A close working relationship with HITH program and subacute service stream that operate a 'pull system', that provides a comprehensive clinical and non-clinical planning and 'hand-over'.

[An active ACE program – including a RAMU – is a key element to a Well Ageing strategy for BHS.](#)

4.1.2 CANCER SERVICES

In 2015-16, BHS provided 721 medical oncology separations, which translated to a primary catchment market share of 78%, and 54% for the total catchment. This is just under the expected rate of 80%.

For chemotherapy, BHS provided 3,159 chemotherapy separations, which translated to a primary catchment market share of 88% and a total catchment rate of 52%. This is relatively low for chemotherapy, particularly as the other hospitals in the primary catchment do not provide chemotherapy.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations ¹⁷		Primary Catchment Market Share ¹⁸		Total Catchment Separations		Total Catchment Market Share ¹⁹		Catchment Projection ²⁰	Catchment Self-Sufficiency ²¹
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Medical Oncology	721	1,016	78%	79%	652	914	54%	57%	1,308	81%
Chemotherapy	3,159	5,693	88%	90%	3,011	5,439	52%	41%	11,378	86%

The demand estimates assume no change to the market share of the current private chemotherapy practice in the region.

The projections for medical oncology to 2036-37 indicate a significant increase in activity to 1,016 separations, which maintains the market share at 79%, but increases the total catchment market share to 57%. By 2036-37, the projections indicate an overall total catchment self-sufficiency for medical oncology of 81%, which is the expected rate.

The projection for chemotherapy increases activity to 5,693 separations, which is a market share in the primary catchment of 90%, marginally more than the current market

share. Interestingly, the projected market share for the total catchment decreases significantly from 52% to 41%. This means that other health services in the catchment will be providing chemotherapy locally, reducing travel for a significant proportion of patients.

By 2036-37, the projections indicate a regional self-sufficiency for chemotherapy of 86%, which is an acceptable rate that could reasonably be higher given the comprehensive cancer centre, and regional hub for oncology.

16. These Units can also be known as MAPU, or Medical Assessment & Planning Units

17. 'BHS separations' describes the total volume of BHS separations by patients wherever they live i.e. it includes patients who live both within and outside the catchment.
 18. BHS primary catchment market share for a given specialty is the sum of BHS separations by patients who live in the primary catchment divided by the sum of all public hospital separations by patients who live in the primary catchment for that clinical specialty
 19. BHS' total catchment market share for a given clinical specialty is the sum of primary, secondary and tertiary catchment separations from BHS divided by total catchment separations from all public hospital separations for that specialty.
 20. Total catchment projections describe the total number of separations by patients who live in the primary, secondary and tertiary catchment to public hospitals located in the primary, secondary and tertiary catchment.
 21. Total catchment self-sufficiency for a given clinical specialty is the sum of primary, secondary and tertiary catchment separations from public hospitals located in the catchment divided by total catchment separations from all public hospital separations (i.e. including public hospitals located outside the catchment) for that specialty.

Ballarat provides outreach chemotherapy services to two locations in the region – Horsham and Stawell, and until recently to Hamilton. Under this model, oncologists undertake sessions at sub-regional and local hospitals across the region.

The current and emerging issues for cancer services are:

► **Catchment.** The Central Goldfields Shire has strong clinical referral linkages to Ballarat for most clinical services, although it is formally in the Loddon-Mallee region for its cancer services. It is proposed that this be changed for cancer services, and that Maryborough District Health Service (MDHS) transfer to Grampians region as part of the GICS service planning and referral pathways for cancer patients. The future provision of cancer services (clinics and chemotherapy) at Maryborough would take precedent over current services to Hamilton;

► **Growing demand.** The burden of disease analysis indicates that cancer has the highest prevalence of any disease in the Grampians region and is the second highest cause of death. There are pockets of very high cancer rates in pockets of the region, notably in the Wimmera and Central Goldfields. It is expected that the planning response should manage over 80% self-sufficiency, especially as clinical practice changes and pharma-technology better enables the safe delivery of chemotherapy in a wider range of settings. This translates into the expansion of services at BHS.

► **Private chemotherapy practice in Grampians.** There is a substantial private medical oncology (chemotherapy) practice that operates out of Ballarat and provides outreach services to the catchment including Ararat. If there is no succession arrangement for medical oncologists continuing this private practice, or continuing on a reduced basis, there is potential for public demand to increase significantly. It is estimated that the increase in demand on the public system could be as high as 10,000 chemotherapy separations per annum in Ballarat and the region, this is double the current chemotherapy events. In this remote circumstance, there will be an impact on the number of chairs required in the region, but more significantly, it will also require an increase the specialist medical and nursing workforce required to service this demand.

► **Grampians Integrated Cancer Services Strategy** for chemotherapy proposes improved coordination and standardised mechanisms to ensure consistent models of care. The regional strategy also highlights the need for wrap-around health and human service supports for cancer patients.

► **Comprehensive Cancer Centre (CCC).** It is expected that BHS will maintain its role as the CCC for the region. This means progressively increasing the breadth of services and the volume of services consistent with the target self-sufficiency. Importantly, this includes maintaining the partnership with a quaternary hospital in relation to radiotherapy services.

► **Service integration.** In the interests of effective integration of oncology services, it is expected that BHS will increase its outreach services, as well as develop the core oncology capability at Ballarat. With an expected chemotherapy self-sufficiency of over 80% across the catchment it is likely that BHS will expand chemotherapy services at Ballarat, as well as develop chemotherapy at other sites as appropriate, (possibly Maryborough), and expand existing sites throughout the region (particularly at Horsham with the development of the new cancer centre).

► A focus on service integration of cancer services would also see the consolidation of clear pathways, and regional treatment models for cancer care, including further development of integrated and collaborative **community palliative care models** that improves timely access, quality care and patient choice. This has been a tenet of the Grampians Integrated Cancer Care service plan. Opportunities for *enhanced collegiate approaches* between medical oncology, surgical oncology and radiotherapy. Notwithstanding good working relationships, developing increased collegiate approaches to managing surgical patients with cancers was seen as an opportunity.

► **Service model.** On the basis that BHS' core role in the delivery cancer services to the region service initiatives may include:

- Exploring innovative service models for *chemotherapy in the home* (and accompanied by real time patient monitoring systems);
- *Cancer liaison nurses* to ensure effective seamless cancer care between BHS and cancer patients from across the catchment. The positions could be pivotal to a patient-centred model of care that enables successful day-to-day integration of services, and coordination of care with local care providers;
- *The development of brachytherapy;*
- Strengthening the *timeliness of referrals* between oncology and palliative care;
- Integrated cancer services *information technology* and patient databases that support:
 - Referred patients from all sources for effective management of patient flow and tracking; and
 - Remote patient monitoring of chemotherapy, clinical audits, and research;
- An increased number of specialised medical *oncology nurses* to enhance capacity and capability of a more comprehensive chemotherapy service. This may include, over time, nurse practitioners at Ballarat and other 'satellite' services;
- *Cancer nurse training program* for BHS and other health services in the region;

- Increase of medical oncologists to clinically manage the higher demand and enhanced service capability; and
- Develop increased clinical pharmacy capacity commensurate with the breadth and complexity of chemotherapy available.

► **Capacity.** There is a capacity requirement to meet projected 2036-37 demand of around 11,400 public separations across the total catchment, with BHS expected to deliver 5,700 separations, half of the demand. Based on the projections for current public market share, 16 chemotherapy chairs at BHS would represent a relatively efficient service configuration. However, as previously noted, BHS may be required to meet the demand for about 10,000 additional patient episodes depending on the future direction of private chemotherapy in the region. It is noted that this additional caseload would not necessarily need to be undertaken in Ballarat and may be distributed across the region.

► **Performance management.** The development of common KPIs and benchmarks to measure access and patient outcomes is necessary for all public and private cancer services in the region.

In summary, BHS has developed critical mass for cancer services over the last decade, and should be aiming to consolidate its self-sufficiency and its role as a referral centre for the region, build the specialised medical and nursing oncology workforce at Ballarat, and evolve a model of care that would enable the provision of satellite chemotherapy services.

4.1.3 CLINICAL CARDIOLOGY AND CORONARY CARE

There were 1,641 separations related to cardiology and coronary care at BHS in 2015-16, which was 86% of the primary catchment demand and 52% of the total catchment demand. The market share is at expected levels and indicates that for clinical cardiology, BHS is providing a regional health service.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Clinical Cardiology	1,641	2,931	86%	90%	1,511	2,804	52%	60%	4,029	86%
Interventional Cardiology	885	1,297	80%	89%	832	1,240	67%	73%	1,268	74%

The projected volume of separations for clinical cardiology at BHS is 2,931, which is an increase in market share in the primary catchment to 90%, and for the total catchment of 60%. This indicates that BHS will play an increasing part in delivering cardiology services.

By 2036-37, the projections indicate a total catchment self-sufficiency for clinical cardiology of 86%, which is an acceptable rate. Similarly, total catchment self-sufficiency is 74% for interventional cardiology. For both service streams, BHS is drawing patients from outside the catchment.

BHS provides the only public interventional suite in the region, and is in the process of constructing a second cardiac catheter laboratory (CCL). St John of God - Ballarat (SJG-B) hospital also has a recently refurbished CCL.

The current and emerging issues for cardiology services are:

► **Demand for clinical, diagnostic and interventional cardiology** in the region is expected to increase by 3.3% per annum. *Cardiology services will therefore need to become a stronger sub-specialty over the next five years to better*

meet the health care needs of the population. The additional demand will place pressure on workforce capability as well as bed capacity;

► The prevalence of *cardio-vascular disorders* is projected to increase with the catchment population likely to experience a significant increase in clinical, diagnostic and interventional cardiology services over the next 10 to 20 years. BHS' role will be important with respect to prevention of cardio-vascular disorders, and the management of diagnosed conditions, in a community setting would reduce the number and frequency of admissions for patients with acute and chronic conditions, and complex interventions;

► Specifically, the projected demand is likely to have an impact on:

- Coronary care unit (CCU). BHS' CCU is part of a 13 bed Intensive Care Unit (ICU). A key issue raised by some stakeholders is for the functional and administrative separation of the CCU from the ICU. This was considered as a potential initiative for the service plan.

However, discussions with the relevant specialty areas indicates that clinical management of patients in ICU and CCU would not change as a result of functional separation of the areas. At this stage, there is insufficient critical mass to split the small unit solely to address bed access at the margins. Functionally splitting the unit will also result in higher costs for no discernible improvement to patient outcomes;

- Nevertheless, bed access could be improved by enhanced telemetry capability on the general medical ward(s), and remote monitoring of telemetry beds from CCU as well as on the ward; and
- Early (phase 1) cardiac rehabilitation in the acute setting;

► *Service capability.* Over time it is proposed that BHS maintain its capability to develop a Level 3 service as defined in the Design, service and infrastructure plan for Victoria's cardiac system. Under the draft capability framework²² this would mean that BHS would:

"Manage most acute and chronic cardiac patients and conditions, including high-complexity and higher risk patients. Acts as a referral centre for the regional area. Invasive and non-invasive cardiac services including 24/7 PCI service. Have Catheter Labs for interventional diagnostics but no cardiothoracic surgery."

This is expected to lead to a specialist regional service that will include:

- A responsive leadership role that incorporates a 'regional advisory' service for other hospitals and GPs;
- A referral network that maintains/improves self-sufficiency; and
- A centre for regional teaching in cardiology services;

► *Interventional cardiology.* By 2036-37 it is expected that there will be 1,297 separations. The anticipated demand reflects approximately 20% of the 6,528 capacity of three CCLs in Ballarat, and 60% of a single fully functioning CCL (@ the benchmark of 2,176 procedures per CCL). Even providing for non-cardiac procedures in the CCL, there will be a considerable excess capacity in Ballarat, and at BHS;

► To better meet the health care needs of the population there are several streams of activity for an enhanced cardiology service over the next five years:

- Continue to ensure a publicly accessible ambulatory cardiology diagnostic service in Ballarat and Horsham. This includes electrocardiograms (ECGs), ambulatory (Holter monitor) ECGs, stress tests, and trans-oesophageal echocardiograms. The service model for ambulatory cardiology would need to be developed to ensure that it was a timely, well-integrated component of a comprehensive cardiology service. The current service waiting lists for electro-physiology is anecdotally 12 months for some patients, which suggest that access is problematic;
- Agreed clinical pathways and protocols upon hospital discharge, and discharge protocols for referring outpatients back to primary health practitioners. It is understood that this is not well developed and variable as it is clinician dependent;
- Establish formal collaborative links with all referring hospitals and clinicians in relation to interventional cardiology, and a metropolitan specialist cardiology service for quaternary level clinical support to strengthen cardiology services at BHS;
- Substitution and diversion strategies for cardiology services, including heart failure clinics and chest pain clinics that provide timely access post presentation to ED, or referral from the complex care team etcetera;
- Ensure clinical pathways and effective referral networks to specialised SACS cardiology programs at BHS for patients from the catchment; and
- Education and research component in relation to cardiovascular disease in rural Victoria; and
- Reduce administrative burden and improve service integration by organisationally combining the clinical and interventional cardiology services.

In summary, BHS needs to strengthen its regional cardiology services to meet demand, including provision of regional advisory service, development of consistent clinical pathways and protocols for discharge, improved substitution and diversion strategies and merging the administration for clinical and interventional cardiology.

4.1.4 ENDOCRINOLOGY

Diabetes is the predominant DRG for endocrinology. There is a clear trend to prevent admissions associated with diabetes through enhanced diversion and substitution programs. This lends itself to a stronger ambulatory service accessible from across the sub-region.

BHS provided 500 endocrinology separations in 2015-16, which translated to 87% market share in the primary catchment and 46% in the total catchment. This is a relatively high market share.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Endocrinology	500	1,112	87%	89%	485	1,087	46%	52%	1,575	76%

The projected volume of separations for endocrinology at BHS is 1,112, which is an increase in market share in the primary catchment to a relatively high 89%, and for the total catchment of 52%.

Such an approach if effected appropriately is expected to reduce demand for tertiary diabetes services through acute separations at BHS.

By 2036-37, the projections indicate a total catchment self-sufficiency for endocrinology of 1,575 or 76%, which is a rate that is marginally low.

4.1.5 GASTROENTEROLOGY

For the purposes of this plan gastroenterology incorporates upper and lower gastrointestinal tract diagnostic endoscopy.

The endocrinology service at BHS could be enhanced with greater integration of diabetes services across the acute hospital and primary/community settings. This includes better integration of community based services provided by both BHS and BCH amongst others. As part of a stronger focus on chronic disease management, further workforce development may be required, such as diabetes nurse educators, allied health staff, podiatry and dieticians, to work in concert with the endocrinologist to provide a multidisciplinary approach to secondary prevention.

There were 918 general gastroenterology separations at BHS in 2015/16. BHS has a primary catchment self-sufficiency of 83%, and 52% for the broader catchment. *The market share for BHS remains marginally lower than expected* and should be closer to 90% for the primary catchment.

There were 2,125 diagnostic scopes for a market share of 71% for the primary catchment and 36% for the total catchment. The rate of scopes is particularly low.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Gastroenterology	918	1,678	83%	84%	863	1,593	52%	55%	2,231	77%
Diagnostic GI Endoscopy	2,125	3,810	71%	76%	2,050	3,704	36%	41%	8,183	90%

The projections for BHS gastroenterology suggest strong volume growth of more than 50% to 2036-37. The primary catchment market share continues to remain relatively low at 84%. The total catchment market share is 55%. Essentially, the market share for gastroenterology is projected to be stable. However, there is the prospect that this will change due to the availability of an increasing number of highly specialised Hepatitis C drugs that are available for community prescribing in consultation with appropriate specialists, including gastroenterologists, that are likely to

reduce future admissions (and lead to significant short to medium-term increases in specialist outpatient clinics).

The projections for diagnostic endoscopy would also see a significant increase in separations to 3,810, and a modest increase in market share for the primary catchment from 71% to 76%. This may be partly explained by the provision of scopes at HHS, however, it is more likely to be due to the paucity of clinical capacity at BHS. The projections remain considerably below an expected rate of closer to 90% for the primary catchment.

22. DHHS, 2016, Design, service and infrastructure plan for Victoria's cardiac system, Victorian Government

It is also noted that the projections result in only a modest increase (from 36% to 41%) in market share for BHS for endoscopy for the total catchment, indicating that other health services will continue to have a predominant share of the total catchment activity.

This analysis continues for regional self-sufficiency, which is expected to be an acceptable 90%.

The relatively low rates at BHS are due to low (and falling) clinical capability.

The current and emerging issues for gastroenterology are:

► **Demand.** The projected demand for gastroenterology services is expected to increase. Importantly, BHS is most unlikely to be able to meet expected primary catchment demand if there is no investment in gastroenterology. At present BHS has a single gastroenterologist. Consequently, this is a very vulnerable service. **Gastroenterology is a priority for development at BHS;**

► **Service model – nurse endoscopists** - Opportunities for considering nurse endoscopists to meet the growth in future demand;

► **Service model - outreach.** Diagnostic GI endoscopy is able to be performed at other smaller health services in the primary and secondary catchments. Transferring endoscopy to other smaller hospitals reduces pressure on theatre sessions for procedures that can be delivered safely and consistently in other settings; and

► **Service model – partnerships.** It is recognised that there have been some difficulties in attracting and retaining gastroenterologists. Depending on the relative success in a long-term remedy to attract and retain gastroenterologists, consideration be given to a partnership arrangement with Barwon Health to develop a critical mass of gastroenterologists that can meet the demands of both major population centres.

4.1.6 GENERAL MEDICINE

General medicine, including non-subspecialty medicine, is a (default) core medical service at BHS. In total, there were 2,125 reported non-subspecialty medicine separations at BHS in 2015-16, representing 74% market share for the primary catchment. The current market share is relatively low due to the inclusion of the Hepburn Health Service (HHS) and Beaufort and Skipton Health Service (BASHS) in the catchment as both these health services have a significant proportion of the general acute medical separation market in the primary catchment.

and are active on the general medicine roster. This will be a very important model to foster and further develop over the next five to ten years in the absence of a fully-fledged sub-specialisation to maintain an efficient on-call capability. It will also be essential in pursuing BHS' strategic objective of developing niche specialist training in general medicine;

The desirability of this inexorable evolution toward specialisation will become a major issue for BHS. Sub-specialisation has its benefits and challenges, especially in a hiatus phase of evolution toward a mainly sub-specialised workforce. It is imperative that the progress to sub-specialisation be undertaken in a planned, collaborative and sustainable manner;

► **Specialist advisory service.** The clinical leadership role of BHS and the current and future development of clinical frameworks for many medical services will require BHS to clinically support hospitals in the region. Processes to bring this to fruition have been described in Sections 5.1 to 5.3;

► **Specialist clinics.** Over time, the objective would be for a visiting or outreach physician specialist to provide clinics at other sites in the region, including specialist clinics at Maryborough and Ararat;

► **Improved patient flow management.** There are opportunities to improve patient flow for acute medical patients. *This requires agreed clinical pathways and protocols.* There are many inter-related strategies that will assist in continuous improvement including:

- The timely internal flow of clinical information from ED/ Short Stay Observation Unit to wards/treatment areas;
- The development of a RAMU service for complex elderly medical admissions. As discussed in Section 4.1.1, this service could be developed contiguous with the SOU or GEM beds on the acute campus;
- Specific admission policy and clinical protocols relating to ambulatory care sensitive conditions. This would include a higher level of engagement with HARP and HITH (Section 4.4);
- More comprehensive clinical handover;
- Consolidation of medical patients on medical wards by clinical types, respiratory, neurology, cardiology etc, to reduce unproductive ward round time. The same applies to medical patients located on non-medical wards;

- Improved clinical capability to manage more acute conditions at QEC. It is expected that the future development of subacute services will enable for consistent specialist capability to be available at the QEC to enable more timely and appropriate transfer of patients from acute beds;

- The potential development and introduction of Criteria-Led Admission, (CLA) and Criteria-Led Discharge (CLD) across all acute medical disciplines to improve patient experience, enhance patient safety, reduce LOS, and improve staff experience;

- Maintaining a focus on the current overall good performance for ALOS and RLOS at BHS for the patient mix for medicine disciplines; and

- As an innovative service model that establishes a single point of contact within BHS relating to all complex discharges that require patient referral or subsequent coordination, including liaison with community-based service staff, residential aged care facilities, community-based services, GPs, and to other health services;

► **A more efficient operational model.** The current organisation, and use of general medicine specialists has opportunities to improve. It is proposed that there is a specific project to examine the most appropriate operating model for medical specialists that recognises, inter alia:

- The need to ensure expected future expansion of separations;
- The specialty unit groupings;
- Safe work practices; and
- The teaching/training needs of a tertiary hospital.

The medical workforce model for acute medicine requires ongoing review to ensure that it remains contemporary; and

► The separation of medical and surgical units, although inherently beneficial, is only likely to be addressed with capital infrastructure consistent with the significant projected increase in multi-day medical beds. Section 5.4.1 indicates an increase in acute medicine capacity of 294 beds to 2036-37, an increase from the current 180 beds. This increase includes many specialised bed types including SOU and ICU.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
General Medicine	2,125	3,742	74%	83%	1,994	3,576	40%	47%	6,565	86%

The projections indicate that there is expected to be a substantial increase in activity, and a 9% increase in primary catchment market share to 83%, and a 7% increase in the total catchment to 47%. The modelling suggests that there will be a reduction in the clinical capability of other health services in the primary, and broader catchments.

By 2036-37, the projections indicate total catchment self-sufficiency for general medicine of 86%. General medicine would be expected to be around 90% self-sufficiency. On this basis, self-sufficiency is at the lower end of an expected range.

The current and emerging issues for general medicine are:

► **Demand growth.** It is expected that demand growth will continue at around 3.8% per annum, mainly due to population ageing. This is one of the highest growth areas for multi-day stay patients. This has had an impact on the bed

capacity needs of BHS, as has the higher self-sufficiency;

► **Specialist physician model.** The trend, as observed in all metropolitan hospitals is the progressive development toward sub-specialisation. As expected within a regional tertiary hospital, there is a level of both formal and informal 'sub-specialisation' within general medicine, which is predominantly driven by the particular interests of the general physician group.;

A level of sub-specialisation has evolved at BHS as acute medical demand has grown and the physician group has increased. This is observed in medical oncology, cardiology, nephrology, endocrinology, gastroenterology, respiratory and neurology;

Notwithstanding the sub-specialty interests, many Visiting Medical Officer (VMO) physicians continue to practice as general physicians (consistent with their private practices)

4.1.7 HAEMATOLOGY

Haematology separations at BHS in 2015-16 were 851, representing a primary catchment market share of 73%, and a total catchment market share of 32%.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Haematology	851	1,848	73%	80%	828	1,799	32%	38%	3,581	75%

The projections would see more than a 100% increase in haematology separations to 1,848, which increases primary catchment market share to 80%, and total catchment market share to 38%.

By 2036-37, the projections indicate total catchment self-sufficiency for haematology of 3,581, or 75%, which is relatively low. A more acceptable rate would be 80%. **BHS may consider reviewing factors that are effecting self-sufficiency.** The growth in activity is principally due to same day stay medical admissions for a range of conditions related to immunity, red blood cell, and coagulation disorders.

4.1.8 IMMUNOLOGY AND INFECTIONS

There were 713 immunology/infection separations in 2015-16 at BHS. This represented a market share of 79% for public hospital separations in the primary catchment, and 35% in the total catchment. This indicates that there are other hospitals in the broader catchment that are providing a significant immunology and infection service.

Prima facie, the role of BHS is lower than the expected 80% to 85% market share of the primary catchment.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Immunology & Infections	713	1,418	79%	84%	674	1,335	35%	41%	2,609	80%

BHS projections for Immunology & Infections separations are expected to increase from 713 to 1,418 by 2036-37 for a primary catchment market share of 84%. This is close to what might be expected of BHS. It is a 5% increase from 79%. The total catchment market share is 41%.

By 2036-37, the projections indicate total catchment self-sufficiency for immunology and infections of 80%, which is marginally low.

4.1.9 NEUROLOGY

There were 1,850 neurology separations in 2015-16 at BHS. This represented a high market share of 87% for public hospital separations in the primary catchment, and 57% in the total catchment.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Neurology	1,850	3,767	87%	88%	828	1,779	57%	62%	4,801	82%

Projections for BHS by 2036-37 indicate significant growth to 3,767 separations, which only maintains the high market share in the primary catchment of 88% and 62% in the total catchment. A breakdown of 2015-16 neurology MCRG indicates:

- ▶ 172 stroke and 55 Transient Ischaemic Attack separations (12.3%);
- ▶ 177 seizure separations (9.3%);
- ▶ 281 headache separations (15.2%);
- ▶ 666 degenerative nervous system disorders (principally Multiple Sclerosis) separations (36.1%); and
- ▶ 496 Other conditions (26.8%).

A significant proportion of separations are same day and principally for multiple sclerosis, and peripheral nerve disorders.

At 88% market share, neurology represents a significant specialty at BHS, and is functioning as a regional referral hub for stroke patients with a multidisciplinary team approach provided by the Stroke Team which includes a physiotherapist, an OT, a speech therapist a consultant and a registrar. The team is available immediately a case presents during business hours with the Victorian Stroke Telemedicine Service being utilised after hours.

By 2036-37, the projections indicate total catchment self-sufficiency for neurology of 82%, which is a significant increase due mainly due to BHS providing a regional service.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Dialysis	7,044	12,252	91%	92%	6,951	12,177	55%	59%	18,032	87%
Renal Medicine	323	542	79%	81%	291	490	43%	48%	656	71%

The projected separations for renal medicine are 542, and there is a slight increase in the market share for the primary catchment from 79% to 81%. The total catchment market share increases from 43% to 48%.

The projected separations for dialysis are 12,252, which is essentially the same as the current market share. This is within an acceptable range. By 2036-37, the projections indicate total catchment self-sufficiency for dialysis of 87%, which is low.

The projections for dialysis from the primary catchment would see an increase from 7,044 to 12,252 and a slight increase in the market share from 91% to 92%. This indicates the strong growth in end stage renal failure

The main areas for development for neurology are for BHS to:

- ▶ Develop an acute stroke unit, consistent with BHS' role, and the relatively high market share for neurology patients that provides a 24/7 service;
- ▶ Maintain close clinical relationships with a quaternary stroke service in Melbourne;
- ▶ Develop a specialist subacute stroke program;
- ▶ Contribute to research capability particularly in dementia and delirium research; and
- ▶ Enhance integration and patient flow between ED, acute, SACS for stroke patients, as well as pathways to primary care.

4.1.10 RENAL MEDICINE

There were 323 separations for renal medicine at BHS in 2015/16, for a primary catchment market share of 79%, and 43% for the broader catchment. Given the role of BHS as a satellite renal service to RMH, the market share seems reasonable.

There were 7,044 dialysis patients for a market share of 91% in the primary catchment. This is at the expected level of around 90% to 95% for the primary catchment.

expected in the population. BHS' market share for the total catchment is expected to increase from 43% to 48%.

By 2036-37, the projections indicate total catchment self-sufficiency for renal medicine of 71%, which is an acceptable rate.

The hub dialysis service for BHS is Melbourne Health (Kidney Care). It provides a planning service that identifies/ notifies of impending new dialysis clients. The hub also has a role in supporting its satellites with specialist physician consultations on a regular basis to sites that are smaller than BHS. It should be noted, however, that the overarching policy directions and renal service capability framework proposed in the 2013 *Renal Directions – Better services and improved kidney health for Victorians*, may see a change in these arrangements over the next five to ten years.

Over recent times, there has been a trend to increase home dialysis services, and an even more recent trend to nocturnal dialysis.

The current and emerging issues for renal services are:

- ▶ **Demand.** The projected growth in demand of 3.7% per annum for dialysis is significant. It means that BHS will need to grow capacity to treat 78 patients compared with the current 47 patients. The current 12-chair dialysis unit (that can accommodate up to 48 patients) will need to expand to 20 chairs to meet future demand. The service model and capacity for dialysis will need to change to meet future demand;

- ▶ **Model of care – service setting.** There will be three important shifts in the model of care for renal dialysis.

- The first is the shift to home dialysis noted above;
- The second is the provision of community satellite renal dialysis services to improve access to dialysis services. This could mean the provision of dialysis services at a site other than the main BHS campus, having some chairs;
- The third area is the introduction of evening/night dialysis, which is more patient-oriented, enabling opportunities for work and other commitments. This is becoming a common service model, that is often preferred by patients;

- Another factor is the funding model, which will encourage the use of home-based services relative to satellite centres, which could transform the current facility dialysis service and significantly alter the current forecasts. On these scenarios, fewer chairs would be required (or developed), and could obviate the need for a second dialysis site; and
- With increased alternative service types for dialysis, there will be more formal processes to stream patients to the service type that best suits their clinical need. Whilst it will be necessary to increase the number of traditional dialysis chairs at BHS, it will also be necessary to simultaneously develop a contemporary service model for dialysis. This may mean some uncertainty in relation to the mix of home based, satellite based, and nocturnal satellite services. Therefore, a conservative approach is proposed for increasing the number of chairs;
 - ▶ **Model of care – specialist access.** The clinical condition of renal dialysis patients can vary significantly. It is proposed to further develop the ‘hub’ relationship (Melbourne Health) to extend specialist consultations via telehealth for individual patients as required;
 - ▶ **Early intervention.** Whilst there continue to be efforts relating the prevention of diabetes and other early interventions relating to renal disease by BHS and Ballarat Community Health, this is an ongoing service gap; and
 - ▶ **Workforce.** To date the capacity to maintain specialised renal nurses has been satisfactory and is expected to continue. The medical workforce is likely to require an additional (third) renal physician, to meet local as well as regional outreach demand.

4.1.11 RESPIRATORY MEDICINE

There were 1,574 separations for respiratory conditions at BHS in 2015-16, for a primary catchment market share of 74%, and 39% for the broader catchment. This suggests that HHS and BASHS have a reasonable separation rate for respiratory diseases, which is impacting on the market share for BHS.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Respiratory	1,574	2,897	74%	77%	1,503	2,756	39%	48%	4,629	80%

The projections for respiratory conditions would see an increase from 1,574 to 2,897 separations. This increase would also boost market share in the primary catchment by 3% from 74% to 77%. BHS’ market share for the total catchment is expected to increase by 9% from 39% to 48%, suggesting that the admission pattern for respiratory will reduce the role of smaller hospitals to 2036-37.

By 2036-37, the projections indicate a total catchment self-sufficiency for respiratory of 80%, which is marginally lower than expected.

As such, the **principal proposals for respiratory services are:**

- ▶ Improved clinical pathways and protocols for discharged patient, and protocols for referring outpatients back to primary health practitioners. Like cardiology, accepted or preferred clinical pathways are not well understood and is clinician dependent;
- ▶ Implementation of substitution and diversion strategies for chronic respiratory conditions including lung function clinics would provide timely access post presentation to ED, or referral from the complex care team etc; and
- ▶ Ensuring clinical pathways and effective referral networks to specialised SACS programs at BHS for patients from the catchment.

4.1.12 OTHER MEDICINE

For the purposes of the service plan there are a range of other medical groups that have been aggregated, including:

- ▶ Alcohol & other drugs (AOD). AOD represents only formal admissions to BHS that result from urgent care presentations such as overdoses. There is no addiction medicine speciality at BHS. Most AOD patients who present at BHS need to have definitive care provided elsewhere. BHS demand does not represent the overall demand for AOD services. The development of a newly announced residential AOD service for the Grampians is expected to service a current service gap;
- ▶ Dermatology;
- ▶ Acute rehabilitation;
- ▶ Extensive burns;
- ▶ Rheumatology; and
- ▶ Unallocated separations.

These are summarised below. It is noted that subacute admissions, i.e. palliative care, GEM and rehabilitation are discussed in Section 4.6.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Alcohol & Drug	317	419	83%	86%	289	392	47%	53%	639	87%
Dermatology	116	165	76%	76%	113	161	37%	40%	313	78%
Extensive Burns	2	3	20%	23%	2	3	9%	11%	5	17%
Acute Rehabilitation	15	19	47%	41%	14	18	5%	6%	313	98%
Rheumatology	92	161	74%	77%	88	155	39%	45%	280	82%
Unallocated	57	98	74%	76%	53	94	47%	52%	143	79%

4.2 Acute services – surgery and procedural services

Table 4-2 provides an overview of the activity, market share and self-sufficiency for clinical streams that are predominantly surgical/procedural in nature. There will be some separations that are medical in nature.

Table 4-2: Surgical Stream Activity, Grampians Region, Public health services & Self-Sufficiency, 2015-16 to 2036-37

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchm't Projection	Catchm't Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Breast Surgery	178	235	86.0%	91.8%	169	228	62.4%	65.9%	298	86.1%
Colorectal surgery	286	422	82.9%	85.4%	272	406	52.6%	56.1%	579	80.0%
Dentistry	243	342	66.3%	72.5%	234	334	30.9%	37.1%	694	77.1%
ENT	965	1,481	77.5%	80.8%	921	1,420	46.6%	52.4%	2,268	83.7%
GI Endoscopy	2,125	3,810	70.8%	76.0%	2,050	3,704	36.3%	40.5%	8,183	89.5%
Gynaecology	1,261	1,997	66.8%	75.5%	1,171	1,877	44.0%	51.4%	3,187	87.2%
Head and Neck	145	270	80.5%	85.8%	139	262	63.8%	67.6%	304	78.4%
Neurosurgery	178	325	41.5%	44.0%	162	299	25.3%	28.2%	434	41.0%
Non-specialty Surgery	1,989	3,603	77.3%	85.9%	1,840	3,376	44.4%	52.5%	5,326	82.9%
Ophthalmology	359	683	27.6%	27.9%	344	649	14.6%	16.3%	3,319	83.5%
Orthopaedics	2,339	3,786	70.8%	80.8%	2,156	3,558	41.4%	47.6%	6,203	83.1%
Plastic/ Reconstructive	393	840	57.2%	72.7%	383	828	27.2%	36.0%	1,760	76.6%
Upper GIT Surgery	504	829	79.4%	84.7%	489	804	45.7%	52.6%	1,176	76.9%
Urology	1,213	2,180	88.2%	90.7%	1,008	1,813	55.8%	58.9%	2,544	82.6%
Vascular Surgery	274	404	68.4%	78.5%	264	383	43.6%	48.3%	574	72.4%
Total	12,452	21,207	69.1%	75.4%	11,602	19,941	39.6%	44.8%	36,850	82.8%

In 2015-16, there were 12,452 surgical separations, including 2,125 diagnostic endoscopies. This translates to 69% market share in the primary catchment, and 40% market share for the total catchment.

The 2015-16 data indicates that there are several clinical areas that:

- ▶ Are at or exceed the expected levels of market share for the primary catchment (such as urology, vascular surgery, neurosurgery, head & neck surgery, colorectal surgery and breast surgery);

- ▶ Are marginally below expected market share (such as Upper GIT, non-specialty surgery, gynaecology, and ENT); and

- ▶ A few are well below expected rates (such as plastic surgery and orthopaedic surgery). In addition, ophthalmology and diagnostic GI endoscopes are particularly low. However, this is the result of specific strategies to perform ophthalmic procedures at smaller health services in the secondary catchment, and for scopes to be undertaken at the two hospitals in the primary catchment).

It is further expected that regional hospitals can deliver sub-specialty surgery in most clinical streams. As expected, there is considerable variability in market share between the different surgical specialties, and BHS' share of the total surgical market.

For a regional service this is expected to translate into self-sufficiency of 75% to 80% for BHS' primary catchment. The above analysis indicates that BHS is lower than the expected market share for the primary catchment at 70%. With adjustments of the market share for ophthalmology and diagnostic endoscopies, this would increase to around 75%.

Importantly, surgery separations are projected to increase to 82% market share for the total catchment by 2036-37.

Key themes for surgical services in the health service plan are:

- ▶ Increasing low market share specialties;

- ▶ Surgical services should be provided where there is sufficient critical mass to deliver high quality service; and

- ▶ *There ought to be a collaborative approach to surgical service delineation*

4.2.1 GENERAL SURGERY

For the purposes of this plan general surgery at BHS would typically include:

- ▶ All *Non-Specialty Surgery* DRGs (including some major chest and multiple site surgery);

- ▶ All primary and secondary *Colorectal* DRGs;

- ▶ 'Scopes';

- ▶ All primary and secondary *Plastic Surgery* (J-series) DRGs.;

- ▶ All primary *Vascular Surgery* DRGs. Surgery has predominantly been vein ligation and digit amputations due to circulatory system disorders;

- ▶ Primary *Neurosurgery* DRGs. Most of the surgery has been carpal tunnels;

- ▶ All *Dental* (non-faciomaxillary) DRGs; and

- ▶ Primary and secondary *Upper GIT* (G & H series) DRGs. Most surgery has been for cholecystectomies..

Table 4-3: BHS General surgery activity, market share and self-sufficiency, 2015-16 to 2036-37

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchm't Projection	Catchm't Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Non-Subspecialty	1,989	3,603	77.3%	85.9%	1,840	3,376	44.4%	52.5%	5,326	82.9%
Upper GIT	504	829	79.4%	84.7%	489	804	45.7%	52.6%	1,176	76.9%
Colorectal	286	422	82.9%	85.4%	272	406	52.6%	56.1%	579	80.0%
Breast	178	235	86.0%	91.8%	169	228	62.4%	65.9%	298	86.1%
Neurosurgery	178	325	41.5%	44.0%	162	299	25.3%	28.2%	434	41.0%
Head & Neck	145	270	80.5%	85.8%	139	262	63.8%	67.6%	304	78.4%
Plastic & Reconstructive	393	840	57.2%	72.7%	383	828	27.2%	36.0%	1,760	76.6%
Vascular	274	404	68.4%	78.5%	264	383	43.6%	48.3%	574	72.4%
Dentistry	243	342	66.3%	72.5%	234	334	30.9%	37.1%	694	77.1%
Total	4,190	7,270	71.6%	79.6%	3,952	6,921	41.0%	47.9%	11,146	77.1%

For BHS:

▶ General surgery type services included around 4,200 surgical separations for a primary catchment market share of 72%, which is relatively low; and

▶ The market share is expected to increase by 2036-37 to 80% with 7,270 surgical separations.

For the catchment, self-sufficiency is expected to be around 77%.

The current and emerging issues for general surgery are:

▶ **Demand.** It is expected that the increase in general surgery from 4,200 to 7,270 by 2036/37 will require a substantial increase in capacity and capability, including acute beds and operating theatres, and specialist general surgeons;

▶ **Core services.** General surgery is seen as a core service for BHS. However, it should also be seen to be complementing general surgery performed at other hospitals, particularly at Ararat and Maryborough. This could be undertaken on an outreach basis, and form part of BHS' regional leadership role;

▶ **Medical workforce.** Directly relating to the demand and core service issues mentioned above, there are two significant issues relating to the general surgical workforce. The first is the need to progressively ensure that there is a planned net expansion of general surgeons at Ballarat to meet local demand, and secondly, a capability to provide outreach surgery at other hospitals;

▶ **Improved patient flow management.** As with general medical services, there are opportunities to improve patient flow for general surgery patients. *This requires agreed clinical pathways and protocols* and a series of inter-related strategies that will assist in continuous improvement including:

- The timely internal flow of clinical information;
- Specific admission policy and clinical protocols;
- More comprehensive clinical handover;
- The development and introduction of Criteria-Led Admission, (CLA) and Criteria-Led Discharge (CLD) across all surgery to improve patient experience, enhance patient safety through criteria led transfers of care to subacute or discharge, reduce LOS and improve staff experience;

▶ **Discharges.** As an innovative service model that establishes a single point of contact within BHS relating to all complex discharges that require patient referral or subsequent coordination, including liaison with community-based service staff, residential aged care facilities, community-based services, GPs, and to other health services; and

▶ **Neurosurgery.** As previously noted, BHS has been typically undertaking low level neurosurgery, mainly undertaken by general surgeons (such as carpal tunnels). The extent to which BHS seeks to further develop neurosurgery, whether spinal or cranial, will need to be undertaken cautiously and in a planned manner.

4.2.2 SUB-SPECIALTY SURGERY

Breast surgery

BHS general surgeons, with specialisation in breast surgery, provided 178 procedures in 2015-16. This represented a high 86% market share for breast surgery from the primary catchment (which translated to 62% of the total catchment breast surgery). This is consistent with the role of a regional health service.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Breast Surgery	178	235	86%	92%	169	228	62%	66%	298	86%

It is expected that BHS will incrementally increase its market share in the primary catchment from 86% to 92%, and the total catchment from 62% to 66%. There is expected to be fewer breast surgery procedures performed at other health services in the catchment by 2036-37, indicating a greater role for BHS in breast surgery in the foreseeable future.

By 2036-37, the projections indicate total catchment self-sufficiency for breast surgery of 86%, which is appropriate. The main issues for breast surgery are:

- ▶ An expected increase in the level of specialisation of breast surgery at BHS; and
- ▶ The development of structures that result in closer and more collaborative clinical decisions between breast surgeons, radiotherapy and medical oncology.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
ENT	965	1,481	77%	81%	921	1,420	47%	52%	2,268	84%

ENT is a common specialty service delivered by regional and sub-regional hospitals. This is reflected in the catchment activity.

The projected activity is estimated to be 1,481 separations or 81% of the primary catchment. The modelling brings the ENT to within the expected range of market share for BHS. The increase in BHS' market share flows through to an increase in total catchment market share of 52%.

By 2036-37, the projections indicate total catchment self-sufficiency for ENT of 84%, which is appropriate.

The current and emerging issues for ENT include:

▶ **Hub-spoke service models.** ENT is a specialty that lends itself to support regional needs. This includes providing surgical services by Ballarat-based ENT surgeons to Bacchus Marsh, Maryborough and into the Wimmera on a visiting basis; and

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Gynaecology	1,261	1,997	67%	76%	1,171	1,877	44%	51%	3,187	87%

Ear, Nose & Throat

There were 965 ENT separations in 2015-16 at BHS. This represented a market share of 77% for public hospital separations in the primary catchment, and a much lower 47% in the total catchment. This indicates that there are other hospitals in the broader catchment that are providing a significant ENT service. Prima facie, the role of BHS is marginally below the 80% to 85% that might be expected.

▶ **Ambulatory paediatric unit.** As indicated in 4.3.4 it is proposed to examine the feasibility of a new service model that combines a paediatric short stay observation unit for children post ED presentation and post-procedure recovery area.

Gynaecology

There were 1,261 gynaecology separations in 2015-16 at BHS. This represented a market share of 67% for public hospital separations in the primary catchment, and a much lower 44% in the total catchment. The BHS market share in the primary catchment is relatively low, as is reflected in the total catchment market share. Prima facie, the role of BHS is below the expected 80% market share for the primary catchment.

Gynaecology is a common specialty service delivered by regional and sub-regional hospitals. This is reflected in the catchment activity to a significant extent. The projections do indicate an increase in gynaecology activity to 1,997 separations, or 76% market share of the primary catchment, with 51% of the total catchment activity. However, the current and expected future activity levels remain lower than the 80% that might otherwise be expected due, in part, to a lower share of the market for terminations and related procedures. Conversely, it is noted that there are more than 100 patients who come to BHS from outside the catchment for gynaecological procedures.

By 2036-37, the projections indicate total catchment self-sufficiency for gynaecology of 87%, which is acceptable.

The current and emerging issues for gynaecology are:

- ▶ *Hub-spoke service models.* Gynaecology is a specialty that lends itself to support regional needs. This includes providing surgical services by Ballarat-based gynaecologists to Bacchus Marsh, Maryborough, Ararat and into the Wimmera on a visiting basis;

- ▶ Opportunities for joint appointments across health services;
- ▶ Opportunities to extend oncological gynaecology; and
- ▶ Opportunities for the development of gynaecology clinics, on an outreach basis or by remote.

Neurosurgery

There were 178 neurosurgery separations in 2015-16 at BHS. This represented a market share of 42% for public hospital separations in the primary catchment, and a much lower 25% in the total catchment. The BHS market share in the primary catchment is low, which is expected for this clinical stream. Almost all of the surgical activity has been performed in the low complexity areas of carpal tunnels. The level of market share is commensurate with expectations.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Neurosurgery	178	325	42%	44%	162	299	25%	28%	434	41%

Neurosurgery is principally a tertiary and complex surgical stream, with only relatively low complexity separations at regional level. The projected activity is consistent with the ongoing low complexity neurosurgical role at BHS with an increase to 325 separations for 44% market share of the primary catchment and 28% of the total catchment.

By 2036-37, the projections indicate total catchment self-sufficiency for neurosurgery of 41%, which is acceptable.

The main emerging issue for neurosurgery is the extent to which BHS could and should develop neurosurgery as a sub-specialty. There are current opportunities to consider niche (spinal) neurosurgery. The important strategic consideration relating to neurosurgery, including the future potential for complex neurosurgery, is the feasibility of establishing the critical mass for a viable hub service for northern and western Victoria. Ballarat could conceivably develop neurosurgery just as Barwon Health is developing cardiac surgery, and Bendigo Health develops a complementary complex sub-specialty surgical competency.

This would be a longer-term objective, accompanied by limitations to the type of neurosurgery performed. It is proposed that a feasibility assessment be undertaken that initially focuses on the potential volumes by casemix (DRG) of neurosurgery at BHS, and the critical mass of neurosurgeons to ensure a safe and sustainable service.

Ophthalmology

There were 359 ophthalmology separations in 2015-16 at BHS. This represented a very low market share of 28% for public hospital separations in the primary catchment, and a much lower 15% in the total catchment.

The very low market share is in part due to a well-considered strategy to 'shift' most ophthalmology to Ararat hospital for patients in the primary catchment.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Ophthalmology	359	683	28%	28%	344	649	15%	16%	3,319	84%

Ophthalmology is a common specialty service delivered by regional and sub-regional hospitals. The specific strategy of undertaking most ophthalmology procedures at a smaller hospital able to specialise in ophthalmic procedures is now becoming a widespread practice across the state with successful models at Neerim South, Benalla and as well as Ararat.

The projected activity is estimated to be 683 separations, which maintains the primary catchment market share at the current 28%. The projections assume that the current strategy of utilising a third-party hospital to deliver core ophthalmology services will continue. This is an appropriate strategy for the future.

By 2036-37, the projections indicate total catchment self-sufficiency for ophthalmology of 84%, which is appropriate.

The current and emerging issues for ophthalmology include:

- ▶ *Service model.* Ophthalmology is well suited to visiting sessional appointments at smaller hospitals. The continuing use of Ararat to deliver the majority of ophthalmology procedures remains an appropriate strategy into the foreseeable future. The strategy could be extended to other hospitals including Maryborough if required; and
- ▶ *Operating theatre sessions.* The 'diversion' strategy for the majority of ophthalmic procedures at Ararat continues to assist with the pressures on the operating theatres, which means that ophthalmology will not compete for theatre sessions.

Orthopaedics

There were 2,339 orthopaedic separations in 2015-16 at BHS. This represented a modest market share for the primary catchment of 71%, which is also reflected in the modest 41% of the total catchment market share. The market share is lower than might be expected, especially given that BHS is the main site for emergency orthopaedic surgery. It would be expected that orthopaedics would be around 85% for the primary catchment.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Orthopaedics	2,339	3,786	71%	81%	2,156	3,558	41%	48%	6,203	83%

Orthopaedic surgery is a common specialty service delivered by regional and sub-regional hospitals. The regional service at BHS would be expected to manage all orthopaedic conditions that presented in the region (except where orthopaedic surgery would form part of a major trauma response).

Projections yield 3,786 separations at 81% market share for the primary catchment and 48% for the total catchment. The projections for orthopaedics increase the market share from the current low level, however it remains slightly lower than the expected 85%.

By 2036-37, the projections indicate total catchment self-sufficiency for orthopaedic surgery of 83%, which is on the low side of acceptable.

The current and emerging issues for orthopaedic surgery are:

- ▶ *Demand.* The increase in orthopaedic activity at BHS is significant, increasing by around 1,500 separations to 2036-37. This will place considerable pressure on capacity and capability at BHS;
- ▶ *Hub-Spoke Service Model.* Elective orthopaedics is a specialty that lends itself to support regional needs. This includes providing surgical services by Ballarat-based orthopaedic surgeons to Bacchus Marsh, Maryborough, Ararat and into the Wimmera on a visiting basis.

The model would have formal clinical pathways and protocols for emergency orthopaedic cases. There will invariably be 'grey areas' where emergency orthopaedics may be 'held over' (i.e. not transferred) for surgery in an

elective session the following day etc. Nevertheless, there needs to be a stronger focus on increasing market share;

► **Medical workforce.** The medical specialist workforce will:

Need to grow in the short-term to rectify the low self-sufficiency for a regional health services that provides emergency orthopaedics;

It is expected that the current visiting sessional appointments will continue as the backbone of the orthopaedic service at BHS. However, with the increase in growth, there may be opportunities to consider a hybrid staff and VMO model in to the future; and

Continue to operate an outreach model to other health services in the catchment;

► **Diversion and substitution.** Based on the demand analysis, there are opportunities to develop community-based diversion and substitution programs that reduce admissions such as MRI in lieu of arthroscopies, and an osteoarthritis hip and knee screening clinic (OAHKS). Anecdotally, there is a range of patients who would benefit from community-based orthopaedic rehabilitation programs that could either avoid/delay the need for surgery or reduce further deterioration whilst waiting for surgery. This type of service is not currently available. It could be a program that could be clinically incorporated into the existing SACS program with the right workforce skill mix;

► **Operating sessions.** A dedicated emergency theatre would significantly improve operational efficiency as well as improve ALOS in acute beds due to the delay in surgery of fractured necks of femur, and broken ankles; and

► **Bundled payment²³.** BHS explore with the department, and with private health insurers, options innovative service models that would suit bundled payments for the episodes of care associated with hips and knee assessment and pre-admission, procedure, inpatient acute and rehabilitation, and post-surgery ambulatory rehabilitation.

Plastic surgery

There were 393 plastic surgery separations in 2015-16 at BHS. This represented a low market share for the primary catchment of 57%, which is also reflected in the low 27% of the total catchment market share. The market share is much lower than might be expected, especially given the ED role, cancer surgery and major abdominal surgery. It is expected that market share for the primary catchment would be around 80% to 85%.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Plastics & Recon	393	840	57%	73%	383	828	27%	36%	1,760	77%

The projected separations are 840 which more than doubles current activity. The projections provide for a significant increase in market share for the primary and total catchment of 73% and 36% respectively. However, they remain lower than otherwise expected.

By 2036-37, the projections indicate total catchment self-sufficiency for plastic surgery of 77%, which is relatively low.

In summary, the overwhelming issue for plastic surgery is low market share, which is directly attributed to not having a public plastic surgeon appointment at BHS. Most stakeholders identified plastic surgery as a significant service gap, and a priority initiative. General surgeons undertake virtually all plastic surgery at BHS in the absence of a plastic surgeon appointment. Many plastic surgical patients, either on presentation at ED or post-operative cancer or ENT surgery, are referred to Geelong or Melbourne for their plastic surgery.

23. Bundled payments are reimbursement to health service providers for a particular episode of care. They are also referred to as episode-of-care payments. Bundled payments, give the health service discretion as to how the payment is apportioned for the different components of the individual care episode.

Urology

There were 1,213 urology separations in 2015-16 at BHS. This represented a high market share for the primary catchment of 88%, which is also reflected in the high 56% of the total catchment market share. The market share is high due mainly to the historical range of urological procedures and the broad referral base of the urologists at BHS.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Urology	1,213	2,180	88%	91%	1,008	1,813	56%	59%	2,544	83%

The projections indicate demand by 2036-37 will increase to 2,180 separations at 91% market share for the primary catchment, and 59% in the total catchment.

By 2036-37, the projections indicate total catchment self-sufficiency for urology of 83%, which is appropriate.

The current and emerging issues for urology are:

► **High market share.** A key consideration is the capability to maintain the high market share for urology. To a significant extent this will be dependent on effective succession planning of the Ballarat-based urologists, combined with maintaining the broad referral base from Maryborough, Ararat and particularly from Bacchus Marsh. Urology is seen as one of the clinical specialties that could form part of the strategic direction to better support the specialist health needs of Moorabool and Golden Plains Shires; and

► **Clinics.** The need for outpatient clinics to address waiting lists in urology.

Vascular surgery

There were 274 vascular surgery separations in 2015-16 at BHS. This represented a relatively low market share for the primary catchment of 68%, which is also reflected in the high 44% of the total catchment market share.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Vascular	274	404	68%	78%	264	383	44%	48%	574	72%

The projections indicate demand by 2036-37 to 404 separations at 78% market share in the primary catchment and 48% in the total catchment. The projections provide for a 10% increase in market share for the primary catchment. Even with the increase, the 78% remains modest, and would be expected to be around 80%.

By 2036-37, the projections indicate total catchment self-sufficiency for vascular surgery of 72%, which is appropriate.

The current and emerging issues for urology are:

► **Medical specialisation.** A key consideration for the modest market share is the capacity to increase vascular surgery

within a general surgeon framework. The future development of a dedicated vascular surgeon is likely to have greater capability to increase market share but would potentially reduce the available pool for on-call general surgeons, as well as increase competition for theatre sessions and acute beds, including HDU; and

► **Service model.** As part of a general surgeon outreach model, low complexity vascular could form an important service to the region.

4.3 Women's and children's services

This section provides an overview of general women's health services including reproductive health, maternity services, neonatal and paediatric services. Gynaecology as a speciality is discussed in section 4.2.2.

4.3.1 WOMEN'S HEALTH SERVICES

Consistent with the first Victorian *Women's sexual and reproductive health strategy 2017-2020 and priority action plan* released in March 2017, women's health services provided through Victorian public health services need to focus on improving women's health literacy, enhance the knowledge of health professionals and ensuring that services better meet women's full spectrum of health needs.

This includes proactive and preventative action on issues related to family violence in the context of impacts on the health and wellbeing of women and children.

BHS also has a role in improving access to reproductive and family planning services; prevention, early diagnosis and treatment of sexually transmissible infections and addressing other health inequalities including higher rates of mental ill-health, different patterns of cancer. A key area of women's health services for BHS relates to maternity services given the higher fertility rates within the catchment.

4.3.2 MATERNITY SERVICES

There were 2,477 obstetric separations (including 1,423 births) in 2015-16 at BHS. This represented a very high market share for the primary catchment of 94%, which is also reflected in the high 61% of the total catchment market share. The market share is high due the broad referral base BHS.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Obstetrics	2,477	3,381	94%	95%	2,377	3,242	61%	65%	4,340	87%
Births	1,423	1,979	95.0%	95.9%	1,369	1,892	56.9%	60.3%	2,712	86.4%

The projections indicate obstetric demand by 2036-37 to be 3,381 separations (including almost 2,000 births) at 96% market share for the primary catchment, and 60% in the total catchment. The very high market share is expected to be consolidated. The increasing market share for the total catchment relative to the primary catchment indicates that there is likely to be reducing capability for obstetric services in the catchment.

By 2036-37, the projections indicate total catchment self-sufficiency for obstetrics of 87%, which is appropriate.

The current and emerging issues for maternity are:

► **High market share.** The market share is high by any rural benchmark and is expected to consolidate. As noted above, the projections assume that there will be some diminution of obstetric capability within the region that will be transferred to BHS, either due to tightening risk criteria or reducing hospitals that offer birthing services;

► **Clinical frameworks.** BHS provides obstetric services consistent with a Level 5 maternity service. BHS provides the regional referral maternity service;

► **Service quality.** A key consideration for BHS is to continue to examine the relatively high rates of adverse outcomes at BHS;

► **Demand.** There is expected to be a modest increase in maternity services of 2.8% per annum, mainly births, to 2036-37. However, it is also evident that there is variability in the demand for maternity. The current capacity of 25 maternity beds and LDRs will be just sufficient to accommodate demand, and the peaks in demand, over the next two decades.

Although the inpatient requirements will be met by the current infrastructure, it is expected that reduced ALOS will require a more comprehensive and supportive lactation and domiciliary service for discharged maternity patients that can integrate care with maternal and child health and other services.

Over the course of the next decade, birthing services at sites in the region may change, which will have some impact on the volume of births at BHS. The current projections assume that the existing birthing service sites will continue;

► **Regional role.** Further development of BHS' regional role is required by:

- Establishing clinical protocols for births with other small health service providers;
- Supporting GPs to continue to undertake non-complicated births at small health services such as

Ararat and Maryborough; and

- Providing training for student midwives from other health services; and

► **Parenting services.** With relatively high rates of young pregnant women in the primary catchment, there is an identified need for specific parenting services for mothers under 20 years, and indigenous young mothers and fathers. This may be undertaken either from an existing or new ante natal clinic.

BHS also actively supports the 'Sleep and Settling' service delivered by Ballarat Community Health.

In addition to the requirements of a sustainable regional obstetrics service model, maternity services in the catchment should include:

► **Specialist Acute Clinics** – The growth of maternity services at BHS will necessitate a change in the ambulatory service model over time. It is expected that there will be greater opportunities for multi-disciplinary team involvement in ambulatory clinics and more complex patients to be delivered off-site in a more conducive environment;

► **Setting.** It is expected that the service model can be established in a 'non-clinical' setting, preferably away from the hospital. There is a premise particularly suitable and renovated on the periphery of the campus in Mair St. able to deliver a full range of ambulatory services for the low to the very high-risk patients, and for education and support services;

► Ambulatory clinics would also extend to teleconference with a consultant obstetrician and midwives to other communities in the catchment;

► Examine the feasibility of high-level ultrasounds, and for amniocentesis procedures, for complex pregnancies; and

► The development/expansion of *nurse-led clinics*, including a cystoscopy clinic.

4.3.3 NEONATAL SERVICES

There were 505 qualified neonatal separations in 2015-16 at BHS. Relative to the number of births and the number of 'metropolitan step downs' to BH, the self-sufficiency is modest at 47%.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Qualified Births	505	613	47%	41%	475	577	60%	61%	703	75%

The projections provide for an increase in neonatal separations (613) but a reduction in market share from the primary catchment (47% to 41%) counteracted by a slight increase in the total catchment market share (60% to 61%). The basis for the reduced number of qualified neonatal separations appears to be due to an overall reduction in new babies qualifying as separate admissions, not a reduced role for BHS.

By 2036-37, the projections indicate a total catchment self-sufficiency for qualified newborns of 75%, which is appropriate.

The current and emerging issues for newborn services are:

► **SCN capability** – BHS provides a Level 4 Specials Care Nursery (SCN). It is expected that this will be maintained to support the level 5 maternity service; and

► **SCN Capacity** – There is projected to be a significant increase in the utilisation of BHS' SCN to 2036-37 due to increasing complexity of birthing mothers and the flow on impact for babies, receiving returning former neonatal intensive care babies from Melbourne, and referrals from the region. The current 10 cots are sometimes not adequate to meet demand. The unit has capacity to flex-up to 12 cots for limited periods. This will increase to 16 cots by 2036-37.

4.3.4 PAEDIATRIC SERVICES

BHS is one of two providers of paediatric services in Grampians region. Wimmera Health Care Group is the other provider.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37	2036-37	2036-37
Dentistry	97	139	69.7%	76.0%	97	139	33.2%	41.2%	260	77.3%
ENT	416	565	85.5%	88.1%	402	551	51.0%	56.4%	866	88.8%
Endocrinology	57	95	86.0%	92.5%	55	93	46.2%	63.9%	104	71.7%
Gastroenterology	102	138	86.5%	83.6%	98	135	58.3%	58.0%	157	67.5%
Immuno & Infctns	48	63	87.5%	85.7%	48	63	45.3%	46.4%	91	66.3%
Neurology	66	93	69.6%	67.3%	62	90	47.3%	46.8%	106	55.1%
Non-Subsp Med	249	365	70.1%	85.9%	239	357	44.6%	55.1%	414	63.9%
Non-Subsp Surg	240	369	77.8%	90.9%	222	353	46.8%	58.1%	447	73.6%
Orthopaedics	231	282	64.6%	74.3%	217	270	48.8%	52.2%	311	60.4%
Respiratory	316	608	80.1%	80.6%	295	567	53.8%	58.3%	708	72.8%
Urology	43	68	71.4%	73.3%	43	68	47.8%	54.2%	76	60.7%
Other*	198	273	48.8%	51.1%	190	266	28.7%	30.6%	367	42.2%
Total	2,063	3,057	72.8%	78.6%	1,968	2,951	45.1%	51.3%	3,907	67.9%

*All Other Paediatrics includes clinical disciplines with fewer than 50 separations reported at BHS in projection period.

BHS provides a wide range of acute and specialist services clinics, including general clinics, a 'child at risk' clinic, refugee health clinic, paediatric and adolescent diabetes clinic, behaviour and developmental clinic, continence clinic, endocrine clinic, and feeding clinic. The range of paediatric services is extensive, and appropriate for a regional health service.

BHS also provides effective consultation and advisory services to ED, GPs, and regional health services. It is expected that this will continue.

The current and emerging issues for paediatric services are:

- **Occupancy.** The 16 bed paediatric unit experiences significant variability in occupancy (of paediatric patients), with trends toward greater occupancy in winter. Management of this variability will continue to be a challenge as the care of children becomes increasingly diverted to non-bed based services. Flexible 'swing bed' design is required for paediatric services in the future;

- **Service models.** Some aspects of the service model for paediatrics is well developed including minimising admissions and treat children in an ambulatory setting. This includes developing home-based acute care. The model also has a direct admission practice from the paediatrician's rooms for same day stay patients. However, the current service model at BHS would benefit from refinement to ensure that it is comprehensive from neonatal services to young adult services across the health spectrum. This could be achieved through a series of 'workshops' with key stakeholders;

- **Coordinating complex care.** Related to the above point, there is a case for improved coordination of complex care for children amongst the many agencies delivering health and community services. BHS should be active in (and potentially sponsor) the development of a coordination system;

- **Same day recovery.** It is understood that the current policy position is that children that have undergone same day procedures are cared for on the inpatient unit, not in the general day recovery chairs. This is reported to be due to inappropriate and vulnerable setting for children;

- **Emergency presentations.** Paediatric presentations constitute approximately 21% of the current 2015-16 emergency presentations at BHS. However, there are limited and inappropriate waiting and treatment areas for children in ED, and even more unsuitable areas for short-stay monitoring. A future redevelopment of ED would design a dedicated children's environment in ED along with a separate waiting area, and separate triage and processing system for children;

- **Ambulatory paediatric unit.** Combining the issues in the two above points, it is also proposed that a clinical and financial feasibility study be undertaken that examine an ambulatory paediatric unit that combines a short-stay paediatric area in reasonable proximity to with a same day procedure recovery area. Combined this initiative would appear to have the benefit of:

- Improving the paediatric patient experience within the ED;
- Improving patient flow;
- Reducing exposure of children to unsuitable behaviours and experiences;
- Enhancing paediatric skills;
- Positively impacting on NEAT targets; and
- Improving access to day surgery for paediatric cases, including ENT surgery.

Depending on the location and configuration of an ambulatory paediatric unit, it could also include the infrastructure to collocate general paediatric outpatient clinics to form a comprehensive paediatric service. This would include paediatric forensic assessment service (as part of the agreement with the Victorian Forensic Paediatric Medical Service);

- **Ambulatory clinics.** There is a strong private ambulatory clinic history with bulk-billing. Over recent times, there has been a limited registrar-led paediatric clinic to support an overloaded service. This will include clinics for mental health and AOD adolescents (possibly through Headspace or the Child & Adolescent Mental Health Service);

- **Specialist outreach services.** It is proposed that:

- A specialist paediatric clinic be provided in Maryborough; and

- The development of more formal and structured agreements with regional health services with respect to paediatric medical services. This would form part of the broader clinical governance regimes and clinical council structures;

- Develop a program of telehealth clinics that expand services to sub-regional centres;

- **Integrated paediatric models of care.** Continue to work toward a holistic model of care in paediatrics, including multi-disciplinary ambulatory services involving allied health, CAMHS, and BADAC for indigenous children; and

- **Victorian Paediatric Rehabilitation Service.** The VPRS at BHS is small. There are opportunities to enhance this service to minimise travel to Melbourne and to enable access to services for some patients for the first time including the development of a business case to scope of opportunity.

4.4 Hospital in the Home

Hospital in the Home (HITH) is widely considered as a necessary service to support efficient patient flow, manage ED demand, reduce hospital-based ACSCs, and to provide best practice care in the least restrictive environment. Studies have found that HITH reduces mortality, readmission rates and cost compared with inpatient care. More importantly from a patient focused perspective the results also indicate that HITH increases patient and carer satisfaction but does not impact carer burden.²⁴

Notwithstanding the advantages of HITH, it has been an under-developed, and 'neglected' service at BHS. BHS now has an opportunity to develop HITH in many of its traditional clinical types, and examine the clinical feasibility of providing clinical care into new types of acute home-based services in potentially new areas such as chemotherapy and cardiology, amongst others. 'Pushing the envelope' can potentially provide a very sound clinical platform for diversion and substitution services.

A key objective of this CSP is a revitalised HITH service, which should include the following characteristics:

- A scale of operation that provides the critical mass of medical and nursing staff in a HITH unit (as is the case in some Melbourne Hospitals). This would include sessional time of an Infectious Diseases physician. This certainly includes a broadening of the range of clinical conditions suitable for HITH;

- Active medical management of the service, including senior medical management and medical specialist liaison;

- A close clinical connection between HITH and ED and acute wards, supported by robust clinical protocols and referral pathways;

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

- ▶ Clinician buy-in for clinical protocols;
- ▶ Active patient management of patient stay whilst on HITH;
- ▶ The information technology for interactive patient monitoring patients in home in real time. This includes hand-held devices;
- ▶ Extending HITH hours more consistent with a 7-day service; and
- ▶ Nurses that have the technical skills to manage acute conditions in a community/home setting.

4.5 Clinical support services

4.5.1 ANAESTHETICS

Anaesthetics is a specialist service that underpins much of acute care. It is the cornerstone of surgical activity and a critical component of other services such as critical care and pain management. The capacity of anaesthetic services can therefore have a major impact on the range, level and volume of services provided, and a significant impact on the achievement of service development strategies.

There are over 30 different anaesthetists that work at BHS. There are six or seven staff and 21 different Visiting Medical Officers (VMOs). There are also seven registrars.

The current and emerging issues for anaesthetics are:

- ▶ *The consolidation and growth* of an anaesthetic workforce will be a rate limiter. Addressing increasing future demands due to patient complexity and volume growth expected over the next ten years will be challenging. This will include effective training, recruitment and retention as the average age of anaesthetists is increasing and undertaking additional, on-call and/or out-of-hours work becomes less attractive;
- ▶ *Continuity and 'future-proofing' of service* was identified as a critical strategic issue. At its core, the strategy would develop a specific recruitment program for anaesthetics as it relates to expected workforce demand for anaesthetists and nurse practitioners in anaesthesia at BHS as well as in the region. This should form part of a Grampians-wide recruitment and workforce retention program that supports outreach services to the whole catchment;
- ▶ *Medical workforce capacity.* The current capacity is reported to be problematic based on coverage of at least 60 operating sessions per week plus out-of-hours and weekend emergency sessions/coverage, in addition to supporting CCU, acute pain management, pre-admission clinics, oncology, and medical imaging activities, the workload for anaesthetists is seen to be challenging;

- ▶ *Regional anaesthetics program.* It is proposed that as part of the clinical leadership role of BHS, develop a regional recruitment program where engages additional anaesthetists at BHS to create an anaesthetics hub that can outreach to the Wimmera, Ararat and Maryborough and support a vibrant surgical program at these sites;

- ▶ *Workforce model – medical specialists.* BHS operates a mixed model of staff and VMO anaesthetists. The current workforce model is the right approach for BHS. However, it is not without its ongoing challenges to blend the best of a staff workforce with the best of a VMO workforce that results in a more productive, efficient and engaged workforce;

- ▶ *Workforce model – anaesthetic registrars.* Further extend the anaesthetic (senior) registrar training program to meet anticipated growth in demand for theatres and ambulatory services; and

- ▶ The high levels of unmet demand for ambulatory pain management. Chronic pain management has been widely identified as a service gap in the primary catchment as well as in the Wimmera. This is consistent with service gaps across rural Victoria for chronic pain management services. It is proposed to meet increasing demand through an enhanced chronic pain program, most likely managed by clinical nurse consultant or nurse practitioner with anaesthetist supported chronic pain clinics at Ballarat and outreach to other health services.

4.5.2 PERI-OPERATIVE SERVICES

BHS has six operating theatres, two procedure rooms and a cardiovascular suite. Another cardiovascular suite is due to be opened later in the year. The current and emerging issues for peri-operative services are:

- ▶ *Demand.* Total theatre throughput from 2013-14 to 2015-16 has been relatively stable, with an average of around 13,000 cases per year. 2015-16 theatre utilisation indicates 13,595 actual cases per annum, excluding cancelled cases. Demand projections indicate 17,706 cases per annum by 2036/37, an increase of 30%;

- ▶ *Service capacity.* There have been representations that the existing access to operating theatres (and surgical beds) was resulting in varying levels of frustration. There has been a recent Ministerial announcement that makes provision of planning for additional theatres.

This is a perplexing issue and the common perception of high utilisation and difficult access does not accord with the actual throughput of the theatres compared with the departmental benchmarks²⁵. A strict use of the benchmarks indicates capacity needs a much less than actual, namely, only 3.5 general theatres, 1.7 procedure rooms and 0.7 endoscopy suite;

- ▶ *Operational efficiencies.* On the basis of the difficult access and the low benchmark rates, there would appear to be a prima facie 'inefficiency quotient' of around 35%.

Notwithstanding departmental benchmarks and anecdotal issues relating to theatre access, there would appear to be four issues that are contributing to the current operational inefficiencies:

- Custom and practice (such as late commencement, non-alignment of work practices etc);
- Physical infrastructure, most notably the inadequate patient waiting areas and anaesthetic rooms causing delays in turnover;
- The necessary mixing of general and same day cases in theatre lists to efficiently use sessions; and
- Interruptions to planned theatre activity due to emergency cases. There is an increasing rate of emergency cases 'bumping' elective theatre cases.

Each of these factors need to be addressed over the coming years. The custom and practice changes are not specifically addressed in this plan.

- ▶ Most theatre cases consist of emergency theatre procedures (19.9% of total activity), followed by endoscopy (11.2%), cardiology (10.5%), and general surgery (10.2%); and

- ▶ *Patient-centred care.* Staggering presentation times for patients in day theatre.

4.5.3 INTENSIVE CARE AND CORONARY CARE

The intensive care unit (ICU) operates as a combined 13 bed intensive, high dependency and coronary care unit. Bed use is flexible, based on the most appropriate patient mix. However, there is a maximum capacity of six intensive care patients at any one time.

The current and emerging issues for intensive care services are:

- ▶ *Current bed capacity* within the ICU/CCU is generally seen to be a limiting factor for access from ED and higher complexity surgery. There are reported to be times of the day, and days of the week, when access to beds is very tight due to the mix and/or number of patients. All categories of critical care patients may experience periodic access difficulties, resulting in patients being held in ED, cancelled surgery or occasionally cases being transferred to Melbourne.

It is expected that the capacity of ICU/CCU will increase over time, particularly for coronary and higher risk surgical patients and patient activity increases to 2036-37.

- ▶ BHS has an effective working relationship with the seven bed HDU at St John of God –Ballarat (SJG-B), which is mostly used for cardiology and cardiac catheter patients. There is mutual support to address workforce as well as

peak demand overflows between the two services.

- ▶ *Regional intensive care.* It is proposed that the long-standing relationship between BHS and SJG-B intensive care services would continue and that there is an additional formal relationship established with Wimmera Health Care Group (WHCG) ICU. The ICU at WHCG is the only other intensive care service in the region. There are important synergies and improved capability that can come from formal clinical links, telehealth, secondary consultation and advice, staff rotations, reduces clinical risk associated with the small unit at Horsham, and other benefits that could be derived. This would form part of BHS' clinical leadership role.

- ▶ At BHS, there has been a proposition that there are benefits associated with *splitting the CCU beds from the ICU/HDU beds*. The principal arguments for splitting the unit is:

- Relatively little in common clinically between intensivists and cardiologists relating to clinical care;
- Competition for beds in the unit between intensive care and coronary care creates tensions relating to bed availability. As intensivists have management control of ICU, coronary care patients may not get access to beds when required. Splitting the unit is seen to resolve the tensions of competing bed demands; and
- There are generally preferences of nursing staff in caring for intensive or coronary care patients.

There are also important considerations relating to the retention of the critical care beds as a single unit; including:

- The unit is small. Splitting the unit will create 'two micro units' that have no economies of scale will increase costs and generate no additional revenue;
- The current competition for beds will not dissipate. It will simply take another form where priority bed allocation will be taken by a third party rather than discussions between intensivists and cardiologists. This will unnecessarily delay patient flow;
- Reducing the flexibility of staffing the two units as well as compounding the rostering of nurses across two small units;
- There is already notional allocation of coronary care beds within the total 13 bed capacity. The tensions occur at the margins;

On balance, there would appear to be no compelling reason to split what is already a small unit. Indeed, what appears to be a simple functional separation will not necessary resolve the core issues of splitting the unit and it will definitely increase costs and make rostering and unit management more difficult. Even if tensions with bed allocation would be dissipated by splitting the unit, this would result in a more inefficient use of beds, lead to higher costs, and make no gains in patient outcomes. Functionally separating ICU and CCU is not a recommended strategy. Consideration could be

25. The benchmark is 'DHHS Functional Benchmarks' to be used to calculate hospital service requirements (undated) for a Level 4 health service.

given to splitting the unit once it gets to 20-25 beds, and the economies of scale, costs, and the rostering become more feasible.

There will be growth in clinical care, including coronary care in the short and medium term. If there is no growth in critical care beds over this time one appropriate response to meeting demand is to develop increased capacity for telemetry monitored beds on a general medical ward(s);

- ▶ The interest of *nurses in undertaking specialised critical care training* is reported to be waning for two main reasons. Firstly, nurses are required to pay for their training courses. Secondly, many of the nurses that express an interest in training would have their salary reduced as they would commence as a critical care nurse at levels lower than their current grade. Both are real disincentives and will need to be considered as part of broader strategies for professional development and training;

- ▶ A *medical emergency team (MET)* system has successfully operated at BHS for some time. It is reported to have appropriately responded to clinical emergencies within the hospital as well as in training and up-skilling of general ward staff. A concern for the future is that there are an increasing number of MET calls that is beginning to have an impact on the availability of nurses in ICU; and

- ▶ As a strategy to partly address the higher MET calls and the CCU bed pressures, it is proposed to consider an additional four telemetry beds on the acute ward (also linked to ICU telemetry system).

4.5.4 ALLIED HEALTH

Allied health services in the form of physical therapies (physiotherapy, occupational therapy, speech pathology, dietetics, psychology, orthotics, orthoptics, social work, audiology, amongst others, provide necessary ancillary clinical service that support (and sometimes drive) medical and nursing care and treatment. Allied health professionals are integral to a multi-disciplinary approach to care and should be involved in the episode of care from the outset.

Allied health professionals across acute and subacute care have a significant impact on the rates of improvement, functionality and psychological state of patients as inpatients, outpatients and in community based settings. The role of the allied health professional is potentially pivotal to driving changes in the health care system based on innovative ways of treating and caring for patients.

Current and emerging issues for allied health are generally incorporated into the specific service strategies identified elsewhere in the report. Nevertheless, some key issues are identified below:

- ▶ *7-Day service.* As part of the progressive development of a 7-day health service, allied health disciplines are likely to be more available after hours and weekends to ensure that there is the same level of care and program intervention regardless of the time of day or day of week. It is proposed

that there is a plan developed that identifies high priority areas for additional allied health resource to have the greatest impact on patient care;

- ▶ *Operational efficiency.* BHS is unusual for a regional health service to have heads of all allied health disciplines that are almost exclusively non-clinical. In the interests of expansionary plans to develop 7-day hospital and increased clinical capacity at a time of funding constraint, it is proposed that the operational management of allied health be reviewed, with the view to reduce overhead costs associated with non-clinical time of heads of units, or the rationalisation of heads of units themselves;

- ▶ *Role and enhanced scope of practice.* In the context of continued patient-centred care there is potential for the role of several allied health disciplines to be expanded in the future, including enhanced scope of practice. This means substituting experienced senior *credentialed* allied health practitioners to undertake some aspects of care/ treatment that would otherwise be undertaken by a medical practitioner. This allows for innovative models of care. To provide a foundation for an expanded role for senior allied health practitioners, it is proposed to:

- ▶ Examine the potential (new) areas where allied health professionals can have the most significant impact in improving care integration and patient outcomes (and reducing LOS) and substituting aspects of care currently delivered by medical specialists. This includes the revitalisation of an OAHKS clinic, or a broader Orthopaedic Physiotherapy Screening Clinic.

- Develop an evaluation framework that assesses the relative impact of allied health services on patient outcomes and patient flow;
- Ensure that the appropriate allied health professional is involved in the patient episode of care from the outset, particularly in relation to acute admissions so that care can be planned. This will be particularly important as part of the RAMU team; and
- Support the Deakin and Australian Catholic Universities to extend the development of local training schools for allied health disciplines;
 - ▶ *Leadership and a regional allied health workforce.* The difficulties recruiting and retaining allied health practitioners in rural areas more broadly are well documented. It is proposed that BHS work in collaboration with Ballarat-based health providers and Grampians region health services to develop a comprehensive allied health development strategy that includes local training, recruitment and outreach, mentoring and professional development opportunities in the Grampians region. This is a regional leadership opportunity for BHS;
 - ▶ *Demand.* Within BHS, systematically assess the relative resourcing of each allied health discipline across divisions and service streams, including allied health assistants, and then assess innovative models that can address allied health

shortages across the organisation;

- ▶ *Research.* Consideration also needs to be given to ways in which allied health can be encouraged to undertake research projects that support the organisation's objectives as well as professional development; and

- ▶ *Professional support.* The consultations indicated that many allied health professionals operate in units where they are the only practitioners in their discipline. It is important that for each allied health staff member there is a professional support link that is explicit and clear.

4.5.5 PHARMACY

Pharmacy services provide a central role in the functioning of the health service. Pharmacy relates directly with almost all areas of BHS. On-site pharmacy services include the main pharmacy at the acute campus and a smaller facility at QEC that provide:

- ▶ A dispensing service to inpatients and outpatients;
- ▶ A counselling and advisory role for both staff and patients;
- ▶ Education and training of pharmacists on rotation and on-site training for pharmacy technicians;
- ▶ Research in such areas as medication error detection and monitoring, including drug interactions;
- ▶ Time-critical medications under appropriate storage conditions, such as antivenins and cancer drugs; and
- ▶ An essential part of the multidisciplinary input into patient care, especially ward based pharmacy.

The pharmacy is a full PBS pharmacy for discharge and outpatient drugs, including 'highly specialised drugs' under PBS Section 100.

The current and emerging issues are:

- ▶ *7-day pharmacy.* Like other allied health services, pharmacy is not a 7-day service. There are significant periods of out-of-hours and weekends that have skeleton or no coverage. It is expected that the coverage will increase commensurate with the progressive move to a 7-day consistent service;
- ▶ *Satellite support.* Examining the feasibility of:
 - Contracting with other health services in the region to undertake their pharmacy function; and/or
 - Supporting and supplementing other health services existing clinical pharmacy service; and/or
 - Supporting a regional locum service at smaller hospitals, as part of a regional leadership role;
- ▶ *Community liaison pharmacy.* Examining the feasibility of developing the role of a 'community liaison pharmacist' that could support residential aged care, pharmacotherapy programs, and GPs with medication reviews;

- ▶ *PBS compliance.* Support smaller health services to be PBS compliant, particularly larger health services such as Maryborough District Health Service and East Grampians Health Service. This would form part of BHS' regional leadership role;

- ▶ *Electronic prescribing.* Examining the feasibility, and undertaking a business case for, the roll-out of electronic prescribing. Electronic prescribing, enhanced by a sound decision support system, is considered to have the greatest single potential impact on reducing medication errors and improving efficiency in dispensing. It would also assist with PBS compliance requirements;

- ▶ *Consultation and education role.* Developing a capacity to consult with specialists and HMOs, and community GPs regarding pharmacology issues, particularly for patients with complex care needs;

- ▶ Providing *policy and practice guidelines* for pharmacology on the intranet as an additional resource to clinicians;

- ▶ Support the further development of the pharmacotherapy program;

- ▶ *Patient flow.* Working with clinical units to improve the notification time of discharge requests, and improving the turnaround time for dispensing, to minimise any patient discharge delays due to waits for pharmacy;

- ▶ More effectively use the skills of pharmacy technicians to take patient histories on admission and more effectively utilise the pharmacist's skills; and

- ▶ Ensuring that pharmacy has the resources and skills to support the development of clinical trials, and broader oncology research capacity, as a critical component of BHS' role as a comprehensive cancer services.

4.5.6 MEDICAL IMAGING

BHS provides an in-house medical imaging (MI) service with a contracted radiologist service. BHS operates the following modalities:

- ▶ Digital x-ray machines (two sites);
- ▶ Ultrasound machines, plus one portable machine in ED;
- ▶ CT units;
- ▶ An MRI unit;
- ▶ A fluoroscopy suite;
- ▶ Gamma camera (nuclear medicine) SPECT;
- ▶ OPG unit;
- ▶ Digital mammography unit;
- ▶ DEXA unit; and
- ▶ Image Intensifiers in theatre.

Radiology is an essential part of clinical medicine. Over the past 20 years, the impacts of increasingly sophisticated technologies that provide more accurate diagnoses and interventional radiology have also led to an increased reliance on MI services for patient care.

The current and emerging issues for medical imaging are:

- ▶ **Demand.** The demand for medical imaging at BHS:
 - Is increasing at double-digit rates, higher than rates of increase for ED presentations and acute separations due to the increased use of medical imaging per patient contact. It is expected that these rates of growth will continue over the foreseeable future, putting pressure on expansion requirements for medical imaging services; and
 - Increases private ambulatory referrals due to BHS' bulk-billed pricing policy for most modalities;
- ▶ **Workforce and training.** Like many health professionals, medical imaging technologists (or radiographers) are in short supply. This situation will become increasingly problematic as the increase in graduate radiographer numbers slows below the growth in demand across the private and public sectors. The shortage of radiographers could become a major limiting factor in enhancing services over the next five years. It will impact on almost all acute service streams and ED. Supporting the training of radiographers, and in particular sonographers, is a critically important development for the service;
- ▶ **A 7-day MI service.** BHS has over recent years extended its standard hours of operation. However, there will be acknowledged difficulties in developing a 7-day service in the context of radiographer shortages, especially for sonography and CT trained radiographers, and the relatively high cost and low volume coverage;
- ▶ **Agency hub.** Examine the feasibility of developing BHS MI services as an 'agency hub' for the digital capture, transfer, storage and retrieval of medical images for other hospitals in the region to support their respective medical imaging services, or to enable access to medical images by clinicians who are no longer able to provide an onsite medical imaging service. This is a regional leadership role for BHS;
- ▶ **Business unit opportunities.** Undertake a feasibility study for the expansion of BHS as a MI service at other health services in the region; and
- ▶ **Infrastructure.** The position and functional space of medical imaging is not optimal. The requirement for transport of patients from ED to MI is not ideal, and is inefficient. The growth in volume is already adding pressure points due to limited space in the department.

4.5.7 BARIATRIC SERVICES

Bariatric services manage a patient cohort who are likely to have more comorbidities and more severe comorbidities, which makes them even more vulnerable than non-bariatric patients. The task of caring for the bariatric patients is therefore more challenging as it puts workers at risk for injuries during repositioning and nursing care activities that assist patients in meeting their daily activity needs, including hygiene, bathing, ambulation, and dressing changes.

The rates of overweight persons within the broader BHS catchment is variable with parts of the catchment having markedly higher rates of overweight and obese persons than others. Based on data in the Victorian Population Health Survey, 2015 Central Goldfields (38.9%), Hindmarsh (38.5%) and Yarriambiack (36%) all have higher rates of overweight persons than the Victorian rate of 32.5% and the rural Victorian rate of 34.3%. Additionally, the rate of obesity in Yarriambiack (30.9%) is almost double the Victorian rate of 17.3%, and also significantly higher than the rural Victorian rate of 20.7%. This translates to a catchment population of around 50,000 obese people; and rising. Based on the standard utilisation rates in the population, it is expected that there will be in the order of 22,000 hospitalisations of obese patients per annum, not all of whom require bariatric care. There is no indicative data that translates obesity hospitalisations into bariatric care. However, it should be noted that the rate of hospitalisations of obese persons is likely to be a higher rate than that of the general population.

Almost all hospitals in the Grampians are unable to clinically manage bariatric patients. This places additional pressures on BHS as the sole provider of bariatric services for virtually all clinical conditions, including sub-specialty surgery that is within BHS' scope of service.

The increasing incidence of obese patient presentations is requiring specific measures to cater for obese patients across the care spectrum. BHS will adopt regional and statewide protocols, and referral procedures relating to bariatric medicine which are currently under development by the department. In the interim, it is important to move on two fronts;

- ▶ Collaboratively develop a regional model for bariatric services that includes an audit followed by a specific plan relating to clinical referrals and pathways, to and from BHS. This includes the role of sub-regional health services in relation to bariatric patients. This initiative could form part of BHS' regional leadership role;
- ▶ Bariatric equipment/aids requirements;
- ▶ The training of staff across the high utilisation areas of ED, critical care, operating theatre and acute and subacute medical beds; and
- ▶ The extent and type of bariatric surgery that would be suitable for BHS to develop.

4.6 Subacute inpatient services

BHS provides a regional specialist subacute program including:

- ▶ Rehabilitation (30 beds);
- ▶ GEM (30 beds in total of which 24 are located in the Inpatient Complex Care Unit); and
- ▶ Palliative care (11 beds in the Gandarra Palliative Care Unit).

In addition, BHS manages regional Transition Care Packages at six sites including at BHS (remaining sites are at Hepburn Health Service, Wimmera Health Care Group, Stawell Regional Health, Ballan Health Service, and Beaufort and Skipton Health Service.

4.6.1 SUBACUTE INPATIENT SERVICE MODEL

With increasing demand pressures on acute care services due to population ageing, there will be an increasing requirement for BHS to re-appraise its subacute service model. It is evident from the data and consultations that there has been misalignment between the clinical capability and service models for acute and for subacute services. This had been a widely acknowledged issue and one that was reinforced by the 'Sturt St divide' that separates the acute and subacute campuses. There has been a tension between the two programs relating to bed access, 'patient selection' and clinical capability.

There have been recent changes to this situation, supported by changes to the subacute funding model. Notwithstanding the expected improvements in subacute patient outcomes and operational efficiencies, there are important strategic service model issues for consideration including:

- ▶ **Model of care.** The strategic issue for BHS is to change the model of care to more appropriately deliver effective subacute care for more complex patients by:
 - Siting subacute acute beds on the acute campus for more complex subacute patients;
 - Functionally integrate GEM beds with RAMU on the acute site;
 - Enhance subacute to operate at a consistently high clinical capability on a 7-day basis;
 - Develop a more responsive and flexible GEM service, including a feasibility assessment for a GEM-in-the-home program to complement HITH and HARP for ED patients who would benefit from a GEM model of care;
 - Progressively develop care pathways for many common conditions of GEM patients from inpatient acute/subacute to specialist ambulatory and then to primary care;

- Develop medical specialist models that provide sufficient clinical coverage. It is expected that there would be (at least) three FTE geriatricians, two FTE rehabilitation specialists and two FTE palliative care physicians; and
- Enhancing medical and nursing competencies at the QEC to enable management of a wider range of patients.

These measures represent a significant change to the current model of care for subacute. There are opportunities for enhancing the current service model that are more contemporary and patient-oriented. A change in the service model does have capital development implications. Improved clinical capability at the QEC (across 7 days) means more consistent medical and nursing specialist capability to enable more timely and appropriate transfer of patients from acute beds and from ED;

▶ **Patient flow.** Effective patient flow requires smooth and timely transition from acute care to subacute care services and appropriate discharge of patients from subacute inpatient services. Delays in accessing subacute care service have a clear adverse impact on patient flow from the acute care sector and contribute to bed utilisation pressures. From a patient care perspective, it is imperative that access to subacute care services occurs as soon as clinically appropriate to facilitate recovery and to minimise risk of functional decline in acute care settings.

Strategies that strengthen the patient flow are:

- **Clinical pathways.** There are expected clinical pathways that are well developed for the main clinical conditions progressing to subacute care, but these are variously applied by medical and nursing staff;
- **Real-time monitoring** at key decision points of care supported by a 'pull system' from subacute;
- **Cross-program integration.** Timely GEM and rehabilitation assessments for patients in acute beds and in ED; and
- **Transition care.** Continued growth of Transition Care as a valid service niche for a cohort of patients;
 - ▶ **Demand.** The forecast demand for all types of subacute inpatients is significant, increasing by an average of 3.3% per annum to 1,855 patients by 2036-37. The forecast demand translates to an increase of 50 beds from approximately 76 beds to 126 beds based on benchmark ALOS and the existing model of care;
 - ▶ **Workforce.** There are current and future workforce challenges for subacute services including:
 - The need for staff who are able to operate more independently and across a range of settings - bed-side, community and home;
 - Multi-skilling of staff and the more effective use of nursing and allied health assistants.

► *MBS clinics.* Examine the viability of specialised clinics in pain management, geriatrics at other health services in the region, and more frequent CDAMS services; and

► *Regional networks.* BHS is a Level 4 provider of subacute care for inpatient rehabilitation and GEM services as well as for SACS under the Victorian Subacute Service Capability Framework.

A significant focus of the framework is for BHS to perform the regional role as a centre of expertise and support for the region as a whole. This model envisages a shift from the historical focus on inpatient care to the provision of care in clinically appropriate settings and the support of integration in the community.

4.6.2 GEM SERVICES

There is strong growth projected in demand for GEM services, with demand doubling over the projection period, with 352 separations in 2015-16 increasing to a projected 706 separations 2036-37. An already high market share of 94.7% for GEM services is projected to further increase to 96.0%. Across the total catchment, BHS is projected to increase market share from 54.3% to 61.5%.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
GEM	352	706	94.7%	96.0%	348	704	54.3%	61.5%	997	87.2%

Key issues specific to GEM will be:

► *Service model.* The model of care operates in relative isolation from the acute services. There are other identified areas for enhancement including technical nursing skills, and limited medical cover after hours and weekends. In other words, the services have not been operating at a clinical level that might be expected of a regional subacute referral service;

► *Efficiency.* Further consolidating ALOS efficiencies (which have already seen a substantial reduction from 36.8 days in July to December 2015 to 28.9 days in the same period in 2016);

► *Outcomes.* Driving improvements in patient outcomes to maximise the independence of GEM patients (with a focus on FIM efficiency);

► *Linkages.* Strengthening linkages with ambulatory programs and home-based GEM programs;

► *Integration with RAMU.* Integration of GEM with the RAMU model to maximise patient outcomes and patient flow; and

► *Partnerships.* Supporting other providers of GEM services in the region, consistent with the expectations of a Level 4 GEM service.

4.6.3 REHABILITATION SERVICES

Future demand for subacute rehabilitation services is also high, with a projected doubling in BHS activity from 388 separations in 2015-16 to 780 separations in 2036-37, a growth rate of 3.4% per annum. Market share in the primary catchment is currently high (82.2%) and projected to increase further to 90.3%. For the wider catchment, BHS' market share is projected to increase from 52.2% to 63.0%.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Subacute Rehabilitation	388	780	82.2%	90.3%	377	769	52.2%	63.0%	937	76.7%

Key issues specific to rehabilitation will be:

► *Training.* Continued active participation as an accredited training site for AFRM trainees and provision of education/training modules to staff in Levels 2 and 3 services;

► *Model of care.*

- Enhancing the skill sets and competencies of rehabilitation ward staff to be able to manage more complex patients for rehabilitation;
- Enhancing the 'team-approach' to patient rehabilitation through genuine engagement of nursing and allied health staff who can deliver subacute care with an interdisciplinary focus;
- Developing a rehabilitation program within the acute setting to minimise delays in access to subacute care, and for assessed patients who meet the model of care criteria, to enable completion of the complete rehabilitation episode on the acute site, without the need for a transfer to QEC;
- Developing a more responsive and flexible rehabilitation-in-the-home program;
- A significant expansion of home based rehabilitation in response to increasing bed pressures and to improve patient outcomes for those who are best managed in a familiar environment where cognitive and social factors are not disrupted. The service should be able to substitute for future demand to 2022 at an equivalent of 12-21 beds. This will be particularly important for:
 - Many stroke/neurological rehabilitation patients;
 - Orthopaedic patients; and
 - A flexible and responsive home rehabilitation program that enables access to rehabilitation for a cohort of patients who do not receive rehabilitation.

The effective use of tele-health in a home environment will be essential to develop this service; and

- The progressive development of care pathways for many conditions from acute to primary care;

► *Operational efficiency.* Over recent months there have been gains in operational efficiency in rehabilitation at QEC as measured by LOS relative to ALOS. There has been a substantial (21%) reduction in ALOS from 25.8 days in July-December 2015 to 20.3 days in July-December 2016. There continues to be scope to improve operational efficiency for rehabilitation as it relates to admission/discharge and delivery of rehabilitation programs;

► *Service range.* There are opportunities for BHS to develop its neurological rehabilitation with respect to stroke and Acquired Brain Injury (ABI), along with orthopaedics (including cases resulting from road trauma). Potential collaborations in relation to specialist services should be explored with providers including Calvary Health Care Bethlehem and Mental Health;

► *Service integration.* There is scope to strengthen the level of integration between inpatient rehabilitation and the SACS program. This is important to further drive improvements in patient outcomes and patient flow. This focus will be enhanced through vigilant tracking of KPIs including time from referral to first service together with discharge destination (from subacute rehabilitation) and referral source (for SACS clients); and

► *Partnerships.* Supporting other providers of rehabilitation services in the region, consistent with the expectations of a Level 4 rehabilitation service.

4.6.4 PALLIATIVE CARE

BHS provides a dedicated 11-bed hospice at QEC, and specialised community palliative care services along with the specialist community palliative care team that is auspiced by Ballarat Hospice.

Clinical Stream	Ballarat Health Service – Activity & Market Share								Total Catchment	
	Separations		Primary Catchment Market Share		Total Catchment Separations		Total Catchment Market Share		Catchment Projection	Catchment Self-Sufficiency
	15-16	36-37	15-16	36-37	15-16	36-37	15-16	36-37		
Palliative Care	204	368	96.0%	96.7%	201	366	62.8%	59.4%	578	93.9%

There is a range of issues for development in relation to palliative care over the next planning period including:

► *Demand.* In 2015-16, there were 3,591 care-type 8 palliative care bed-days reported at QEC, which has an occupancy of 89%. The market share for the primary catchment is high at 96.0% in 2015-16 and is projected to remain high (96.7%) through to 2036-37;

► *Integration.* Continued focus on the integration between inpatient palliative care and community-based palliative care (delivered by Ballarat Hospice in the Ballarat catchment) is critical to ensure future demand pressures from an ageing population can be met and to enable patient-centred care in the setting which respects patient choice;

► *Referrals.* A key consideration is timely referral of services

to palliative care, from medical specialists, GPs, and community health services;

► *Respite.* There is an under-supply of respite service opportunities – residential and community – for palliative care services that need to be addressed over the next few years to avoid unnecessary admissions. These services may be best delivered by community non-government organisations; and

► *Regional service.* The current medical specialists provide a regional clinical management and advisory service. This needs to be strengthened in the Wimmera.

4.7 Acute and subacute demand

Projected demand for acute and subacute inpatient services over the period 2015-16 to 2036-37 is summarised in Table 4-4. Demand for acute services over the projection period is expected to increase from 38,854 separations to 67,056 separations, a per annum growth rate of 2.6%; subacute services demand is projected to almost double from 944 separations to 1,809, a per annum growth rate of 3.3%, reflecting the impact of population ageing.

Table 4-4: Current and projected acute and subacute demand, 2015-16 to 2036-37

SERVICE TYPE	2015-16	2036-37 baseline	2036-37 adjusted	2036-37 adjusted less 2015-16	Change % p.a.
Acute	38,854	65,733	67,056	28,202	2.6%
Subacute	944	1,809	1,855	911	3.3%
Total	39,798	67,542	68,911	29,113	2.6%

4.8 Ambulatory services

“No local health system based on the primary care approach can work without the involvement and support of a hospital, and an efficient system of referring patients who need more specialised care than can be given outside the hospital. However, it is equally important that the hospital does not offer treatment that can be provided by other levels of health service; if it does it will become overloaded and unable to provide proper support to the community.”²⁶

The WHO statement sets the tone for the future development of ambulatory and community-based services in the primary catchment. The overall objective is to ensure that the service system operates to enable seamless patient care across all service providers, and that service gaps are minimised.

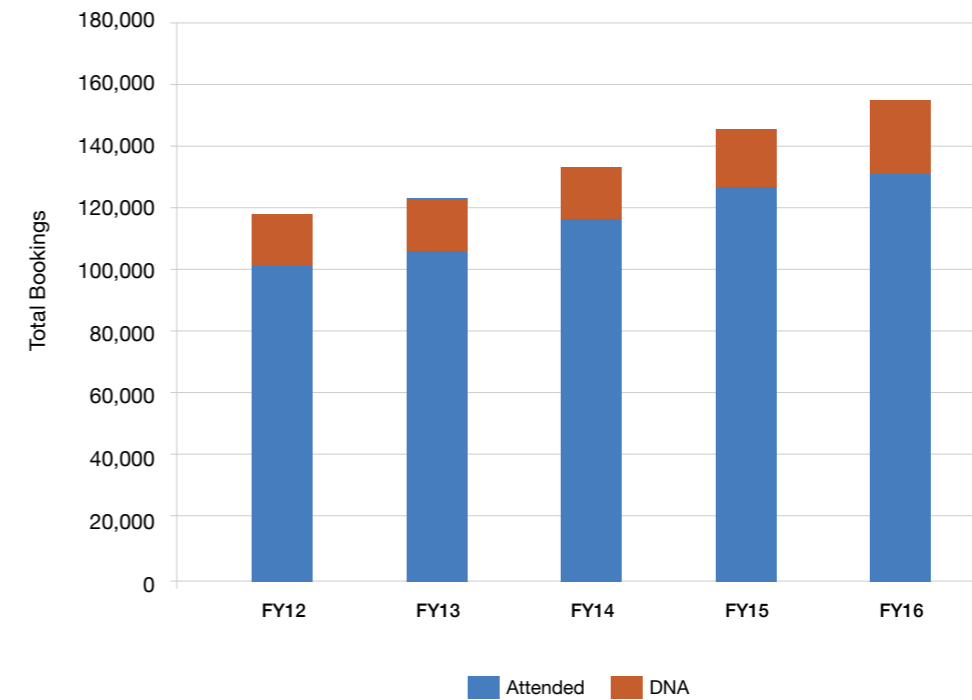
4.8.1 OUTPATIENTS

BHS provides an extensive range of acute outpatient clinics. Clinics tend to be organised on the traditional two sessions per day across five days. These are a mix of public (VACS) funded clinics and increasingly, MBS-funded clinics. The MBS clinics associated with BHS operate on a 100% donation model, and there are no out-of-pocket costs to the patient.

The clinics themselves are a combination of medical specialist-led, nurse-led, and allied health practitioner-led.

Outpatient attendances for 2011-12 to 2015-16 are shown in Figure 4-1, together with the “did not attend” (DNA) numbers. Attendances have grown by 6.8% per annum from 101,312 in 2011/12 to 131,914 in 2015/16. The DNA rate in 2015/15 was 13.9% and has ranged from a low of 13.3% in 2012/13 to a high of 14.5% in 2011/12.

Figure 4-1: Outpatient Attendances, BHS – 2011-12 to 2015-16



There is anecdotal evidence that the current service provision does not represent demand. Whilst there are referrals to specialist clinics that do not require a clinic appointment (and some of these are “filtered”), there are reported to be considerably more patients that do not get timely access, leading to a deterioration of their conditions. Waiting lists at BHS illustrate this fact to a point.

Table 4-5 provides a summary of the waiting times for outpatients by clinic type between 2011-12 to 2015-16.

Table 4-5: Outpatient Average Waiting Times by Specialty, 2011-12 to 2015-16

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT						RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17		
EAR, NOSE & THROAT	999	1085	1289	1107	1239		240	24%
GASTROENTEROLOGY	601	1013	983	884	961	172	360	60%
GENERAL MEDICINE	349	708	1011	978	899	15	550	158%
GENERAL SURGERY	999	1137	1080	944	993	213	-6	-1%
GYNAECOLOGY	1260	1290	1338	1363	1770		510	41%
LYMPHODEMA PROGRAM	854	794	626	369	356		-497	-58%
NURSING		389	9	21	20		20	0%
OBSTETRICS	93	585	966	917	970	1	877	941%
ONCOLOGY	510	1053	1259	1060	1079		569	112%

26. WHO, *Hospitals and health for all – Report of a WHO Expert Committee on the Role of Hospitals at the First Referral Level*, Technical Report Series 744 (1987)

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
OPHTHALMOLOGY	1117	1120	1128	1130	1242	734	125	24%
ORTHOPAEDICS	657	778	781	686	582	205	-75	-11%
PAEDIATRICS	945	1459	1515	1502	1558		613	65%
PHYSIO ASSESSMENT	2013	1893	1092	638	520	31	-1493	-74%
PLASTIC SURGERY	1228	1819	1874	2012	2026		798	65%
PRE-ADMISSION	342	343	467	459	223		-120	-35%
PRE-DIALYSIS EDUC	596	56	44	194	129		-467	-78%
SLEEP DISORDERS	1289	1628	1721	1721	1721		433	34%
UROLOGY	900	1156	1209	983	856	386	-44	-5%
VASCULAR	992	1026	1050	942	1075	721	84	8%
Acute Clinic Average	875	1018	1023	943	959	275		
FEE FOR SERVICE	212	183	178	114	163	151	-49	-23%
FFS CARDIOLOGY	174	197	781	233	245	18	71	41%
FFS DIABETES CLINIC	1216	1216	989	400	231		-985	-81%
FFS ENDOCRINOLOGY	107	266	794	239	249		142	133%
FFS GASTROENTEROLOGY	167	1096	838	305	294	97	127	76%
FFS GENERAL MEDICINE				37	150	19	150	0%
FFS GYNAECOLOGY	604	1382	826	280	201		-403	-67%
FFS HAEMATOLOGY			90		173	6	173	0%
FFS NEUROLOGY	245	192	606	384	307	12	62	25%
FFS NEUROSURGERY			999	736	377		377	0%
FFS OBSTETRICS				53	138	5	138	0%
FFS ONCOLOGY	327		177	267	178	5	-150	-46%
FFS ORTHOPAEDICS	1274	1230	786	488	473	0	-801	-63%
FFS PAEDIATRICS	1385	1093	937	425	215	3	-1171	-85%
FFS PAIN MANAGEMENT	1159	1247	1131	864	636	91	-522	-45%
FFS PALLIATIVE CARE					1	4	1	0%
FFS PRE-ADMISSION					46	0	46	0%
FFS UROLOGY	242		740	491	329		87	36%

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
Fee For Service Average	593	810	705	354	245	32		
ABI SERVICE	98	117	55	75	58		-40	-41%
AQUATIC PHYSIO	96	103	104	104	94		-2	-2%
BACK IN CONTROL			126	172			0	0%
BALANCE GROUP	4	130	112	65	93		89	2213%
BREASTCARE	971	975	776	685	813		-158	-16%
CARDIOLOGY	891	1492	1549	1503	1491		601	67%
CARDIOPULMONRY REHAB	49	242	161	190	163		115	236%
CDAMS CLINIC	43	66	41	152	38		-5	-12%
COMMUNITY REHAB	1146	76	75	89	65		-23	-26%
CONTINENCE CLINIC	88	994	489	211	149	31	-998	-87%
CSS CLINIC	583		266		28		-555	-95%
DIABETES ED SERVICE	653	942	1411	853	482		-171	-26%
DIABETES MED CLINIC	1177	1496	1390	1522	1512		335	28%
DIETETICS	92	507	768	595	602		511	557%
DOMICILIARY	102	125	79	89	97		-5	-5%
EXERCISE THERAPY	268	424	84	120	102		-166	-62%
GAIT BALANCE CLINIC	191	304	172	210	158	37	-34	-18%
HARP	119	11	11	112	8		-110	-93%
HBP SCPM		99					0	0%
HEALTHY WEIGHT MX	78	286	713	438	627		549	705%
INDEPENDENT PROGRAMS	36	59	64		93		57	158%
OCC. THERAPY	204	217	332	244	275		72	35%
PAED DEVL AX CLINIC		123	78	216			0	0%
PAIN MANAGEMENT PROG	273	91	98	170	103		-170	-62%
PHYSIOTHERAPY	392	434	307	264	226	239	-167	-42%
PODIATRY	116	199	51	88	73		-43	-37%
PROSTHETIC ORTHOTICS	392	705	381	175	94		-297	-76%
PSYCHOLOGY	416	463	301	299	226		-190	-46%

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17			
REHAB IN THE HOME	16	26					-16	-100%	
SACS MASTER	649	2388	2388	2388	2388		1739	268%	
SMOKING CESSATION	60						-60	-100%	
SOCIAL WORK	125	133	497	583	627		502	401%	
SPASTICITY MX CLINIC		171	253				0	0%	
SPEECH PATHOLOGY	282	509	216	235	273	329	-10	-3%	
VACS MASTER				690	690		690	0%	
VPRS	39	106		306			-39	-100%	
WOUND MANAGEMENT	350	758	1003	692	930	0	580	165%	
SubAcute Clinic Average	312	448	448	437	419	127			

Overall, the average waiting times are very long between acceptance of a referral to first appointment.

The data suggests in 2015-16:

- ▶ The average waiting time to get an appointment is very long. For public acute clinics it averages 959 days, a shorter 245 days for fee-for-service clinics (MBS), and in between 419 days for subacute clinics;
- ▶ For public acute clinics:
 - There is a very wide range of average waiting times from a low of 20 days for nursing clinics to 2,026 days for plastics clinics;
 - There are very significant wait times of over 1,000 days for ENT, gynaecology, oncology, ophthalmology, paediatrics, plastic surgery, sleep disorders, and vascular surgery;
 - There were only three clinics under 500 days wait; and
 - The waiting times have become progressively worse for general medicine, obstetrics, paediatrics, plastics and gastroenterology;
- ▶ For MBS clinics:
 - There was a more consistent wait time, ranging from a low of just 1 day for palliative care to 736 days for neurosurgery;
 - Most clinics had waiting times between 100 and 300 days; and

- The trend in waiting times has deteriorated significantly in endocrinology and gastroenterology;
 - ▶ For subacute clinics:
 - There was a wide range of average waiting times from a low of just 8 days to over 2,000 days for the general SACS clinics;
 - Clinics with waiting times over 1,000 days include cardiology, diabetes, and general SACS clinic; and
- The trend in waiting times has deteriorated significantly in dietetics, cardiopulmonary, general SACS, healthy weight management, and wound management.

Table 4-6 indicates the referrals by specialty between 2011-12 and 2015-16.

The new referral data indicates that:

- ▶ There were 8,120 new referrals in 2015-16. This was a reduction of 1,170 new referrals from the 9,290 in 2014-15;
- ▶ There has been a reduction of over 1,500 new referrals for public VACS clinics between 2014-15 and 2015-16. This is the same time as the previous analysis indicates an increase in average waiting times. This means that there is a reduced investment in public outpatients and/or there is a slower 'churn' of 'review' patients;
- ▶ MBS clinic referrals have increased by over 700 between 2014-15 and 2015-16. Notwithstanding the increase in referrals average waiting times actually reduced;

▶ The analysis is indicating counter-intuitive results for acute outpatients that suggests that the management of the outpatient services, and the drivers for operating efficiently and effectively are not in place; and

▶ Subacute ambulatory services have also indicated fewer new referrals between 2014-15 and 2015-16 by around 250 patients. There has nevertheless been a 32% increase since 2011-12. Apart from dietetics, the specialties with the highest average wait times indicate that there has not been significant growth in new referrals.

Table 4-6: Outpatient Referrals by Specialty, 2011-12 to 2015-16

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17			
EAR, NOSE & THROAT	535	575	496	705	503		-32	-6%	
GASTROENTEROLOGY	61	200	297	379	235	2	174	285%	
GENERAL MEDICINE	188	216	169	181	198	5	10	5%	
GENERAL SURGERY	1,401	1,452	1,408	1,430	899	4	-502	-36%	
GYNAECOLOGY	590	674	631	483	338		-252	-43%	
LYMPHODEMA PROGRAM	37	65	113	42	43		6	16%	
NURSING		1	1	1	1		1	0%	
OBSTETRICS	80	57	50	57	55	4	-25	-31%	
ONCOLOGY	42	49	40	60	61		19	45%	
OPHTHALMOLOGY	243	377	412	405	290	1	47	19%	
ORTHOPAEDICS	696	621	649	798	439	1	-257	-37%	
PAEDIATRICS	210	326	330	329	299		89	42%	
PHYSIO ASSESSMENT	12	14	31	82	87	4	75	625%	
PLASTIC SURGERY	216	155	150	135	133		-83	-38%	
PRE-ADMISSION	8	8	12	24	21		13	163%	
PRE-DIALYSIS EDUC	5	1	3	3	4		-1	-20%	
SLEEP DISORDERS	100	142	147	147	147		47	47%	
UROLOGY	243	255	239	312	334	1	91	37%	
VASCULAR	155	217	269	270	131	1	-24	-15%	
Total Acute Clinic Referrals	4,822	5,405	5,447	5,843	4,218	23	-604	-13%	
FEE FOR SERVICE	699	598	413	350	263	9	-436	-62%	

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
FFS CARDIOLOGY	2	2	3	75	211	4	209	10450%
FFS DIABETES CLINIC	1	1	2	6	35		34	3400%
FFS ENDOCRINOLOGY	1	3	4	44	50		49	4900%
FFS GASTROENTEROLOGY	1	4	8	62	136	5	135	13500%
FFS GENERAL MEDICINE				6	35	5	35	0%
FFS GYNAECOLOGY	2	3	8	66	390		388	19400%
FFS HAEMATOLOGY			1		6	4	6	0%
FFS NEUROLOGY	13	3	31	140	168	13	155	1192%
FFS NEUROSURGERY			1	2	7		7	0%
FFS OBSTETRICS				7	130	17	130	0%
FFS ONCOLOGY	4		10	22	31	9	27	675%
FFS ORTHOPAEDICS	8	9	32	146	69	1	61	763%
FFS PAEDIATRICS	3	7	14	48	138	1	135	4500%
FFS PAIN MANAGEMENT	9	39	48	64	68	5	59	656%
FFS PALLIATIVE CARE					1	3	1	0%
FFS PRE-ADMISSION					2	6	2	0%
FFS UROLOGY	1		7	44	53		52	5200%
Total Fee For Service Referrals	744	669	582	1,082	1,793	82	1,049	141%
ABI SERVICE	7	16	11	25	14		7	100%
AQUATIC PHYSIO	22	24	58	50	20		-2	-9%
BACK IN CONTROL			2	3			0	0%
BALANCE GROUP	1	8	9	7	10		9	900%
BREASTCARE	16	37	66	32	8		-8	-50%
CARDIOLOGY	310	302	297	307	303		-7	-2%
CARDIOPULMONRY REHAB	20	22	34	27	34		14	70%
CDAMS CLINIC	15	44	24	12	15		0	0%
COMMUNITY REHAB	23	36	100	84	69	1	46	200%
CONTINENCE CLINIC	127	167	107	198	129		2	2%
CSS CLINIC	3		2		1		-2	-67%

CLINIC TYPE	AVERAGE WAIT TIME IN DAYS - ACCEPTED REFERRAL TO APPOINTMENT							
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	RAW CHANGE 2011-12 TO 2015-16	% CHANGE 2011-12 TO 2015-17
DIABETES ED SERVICE	18	9	6	10	18		0	0%
DIABETES MED CLINIC	126	143	163	146	146		20	16%
DIETETICS	54	151	157	251	277		223	413%
DOMICILIARY	58	66	39	44	40		-18	-31%
EXERCISE THERAPY	34	25	38	80	82		48	141%
GAIT BALANCE CLINIC	14	9	33	27	39	2	25	179%
HARP	15	20	8	13	8		-7	-47%
HBP SCPM		1					0	0%
HEALTHY WEIGHT MX	13	24	9	15	10		-3	-23%
INDEPENDENT PROGRAMS	6	9	9		4		-2	-33%
OCC. THERAPY	57	135	134	169	135		78	137%
PAED DEVL AX CLINIC		2	3	6			0	0%
PAIN MANAGEMENT PROG	75	19	28	22	48		-27	-36%
PHYSIOTHERAPY	188	214	343	308	219	1	31	16%
PODIATRY	53	64	32	47	41		-12	-23%
PROSTHETIC ORTHOTICS	46	33	74	72	71		25	54%
PSYCHOLOGY	121	125	78	80	116		-5	-4%
REHAB IN THE HOME	4	3					-4	-100%
SACS MASTER	5	1	1	1	1		-4	-80%
SMOKING CESSATION	4						-4	-100%
SOCIAL WORK	38	114	112	97	90		52	137%
SPASTICITY MX CLINIC		3	4				0	0%
SPEECH PATHOLOGY	115	406	175	225	157	1	42	37%
VACS MASTER				1	1		1	0%
VPRS	2	5		1			-2	-100%
WOUND MANAGEMENT	3	3	4	5	3	1	0	0%
Total Sub - Acute Clinic Referrals	1,593	2,240	2,160	2,365	2,109	6	516	32%

There was a universal view that acute outpatients was in need of significant reform. Outpatients have been described as having a wide range of shortcomings that extend to clinical capability, service gaps, and are lacking system and direction.

The *range of issues* identified includes:

► **Demand and waiting times.** It is clear from the above analysis there are long wait times for many clinic types. Hence, there is considerable delay in treatment, not withstanding an overall reduction in new referrals. There is a fundamental access problem;

► **Outpatient system management and clinical 'ownership'.** There is a central referral and assessment process for most clinics, and time blocks are allocated for appointments up to four weeks. There is no tailoring of outpatient appointments to patient needs. The traditional organisation of the block appointment through largely administrative processes works to nobody's benefit, least of all the patient;

The exception is for maternity and paediatrics where the clinical staff from each area have taken ownership of the referral and assessment process, and manage waiting times, which has markedly improved the service. There is a clear understanding that once there is ownership by the clinical stream the service operates at a higher level, is more responsive to patients and there is more active patient management.

There have been smaller clinics that have attempted to take control of outpatient management without success due to the many organisational obstacles.

The current organisation and management of outpatients is the antithesis of an integrated, accessible and smoothly functioning service;

► There are nurses allocated sessional times in clinics. This seems to be a historical practice that does not occur at Barwon, Bendigo or in metropolitan hospitals;

► Clinic locations are determined more by the funding method, and not by any service synergy or patient need;

► There is split management of outpatient services between clinical and administrative staff which further siloes and fragments the overall operation of outpatient services;

► Separate and unique appointment templates exist for each clinical area and often for specific clinicians regarding the proportion of new and review patients, and the type of patients booked. This has a major impact on waiting times and there is limited transparency as it impacts the waiting list; and

► Referrers use workaround methods in what they see as a tired and inefficient system.

Consistent with one of the key themes of the CSP, it is proposed to redesign outpatients that has as its core propositions of more timely access, 'linked care' and 'patient value'.

For consideration as part of an *outpatient redesign project*:

► Retain a central process for accepting referrals. The clinical areas would be responsible for waiting lists and average waiting times, including patient triage and bookings;

► Eliminate arcane practices such as the double handling of bookings beyond six weeks. This has inbuilt inefficiencies and critical point failure that impacts on patient access to services;

► Reconsider the value of clinical nurses assigned to clinics;

► Establish internal performance benchmarks in relation to key measures as determined through co-design;

► Develop clinical guidelines for each specialty;

► Introduce standard booking templates for each specialty, not each clinician;

► Develop formal processes for diversion and substitution for inappropriate referrals; and

► Consolidate the management of all outpatients.

4.8.2 HEALTH INDEPENDENCE PROGRAMS

BHS has a solid foundation for an effective HIP/SACS program, but more needs to be done. High priority developments include:

► **Access.** The historical trends for waiting times from referral to assessment for CRC is over 50 days, and over 40 days for Complex Care. There needs to be a streamlining of the referral process that does not rely on paper based systems that causes delay and is not transparent about the criteria for access and the service program that is delivered;

► **Service Model.** It would be timely to undertake a review of the HIP service models on the basis that the analysis indicates:

- Unacceptably long waiting times as noted above;
- Generally lower complexity clients than peers (as evidenced by high proportion of single discipline clients, a younger patient cohort than peers, and fewer contacts per episode compared with peers);
- *Team gatekeeping* approach for HIP services that ensures appropriate patient targeting and transparency of assessment and program development;
- *Moving progressively toward a 7-day service model.* This means a HIP capability to support timely discharge from hospital and ED diversion services;

► **Role delineation.** There is a lack of clarity with respect to the range and services that BHS provides as part of HIP, compared with the service profile provided by Ballarat Community Health Service. As part of the broader initiative, develop a collaborative approach with BCHC to more formally delineate the range of services that each delivers, and the level of acuity/complexity of service where it involves the same patient cohort; and

► **Community palliative care.** Community palliative care is undertaken by BHS and Ballarat Hospice. The core service provision operates with a high level of cooperation between the two organisations. It is proposed that there can be further development of more integrated and collaborative **community palliative care models** that enhance access, quality and patient choice. There are key considerations relating to the timely referral to palliative care, operating an agreed shared service model (including protocols for assessment and service delivery), the seamless care between Gandarra and community services, potential for staff exchange, and other initiatives.

Based on the current activity levels, expected demand and the consultations, the main **service gaps** include:

► **Workforce capability.** It is likely that the clinical capability of nursing and allied health staff will need to increase across the board to manage higher acuity/complexity of patients, including intravenous cannulation, stomas, and PICC line management; and

► There is relatively limited access to **specialist medical clinics** in the sub-region across most age-related services (including geriatrician clinics, CDAMS, chronic heart failure, urology, falls, and chronic pain).

4.8.3 COMMUNITY-BASED PRIMARY CARE AND CHRONIC DISEASE SERVICES

BHS provides a range of community-based primary and chronic disease services to the primary catchment. BHS is one of several providers in Greater Ballarat as well as in the broader region where BHS delivers more specialised community for these communities.

The development of community-based health services is seen as pivotal to the effective delivery of many other services including ED, acute and subacute inpatients and acute outpatient clinics, amongst others.

There are several strategic service developments that can make a difference to improved access and patient outcomes; chronic disease management, role delineation and service integration, meeting demand, and a more specialised community based workforce.

Chronic disease management

The ageing of the population is a significant driver of the incidence of chronic disease, as is lifestyle factors. Chronic disease is one of the significant causes of health expenditure and the health incidence and the costs continue to increase

at a time of fiscal constraint on health care. A more proactive approach to chronic disease management (CDM) has become a necessary strategy for any health service.

Nevertheless, chronic disease is ubiquitous. It is beyond the control of any one part of the health system. Across Ballarat there are many service providers that can impact on chronic disease management, including GPs, private medical specialists, Ballarat Community Health, Ballarat District Nursing, BADAC, Headspace, community mental health support agencies, self-help groups, and BHS to name a few.

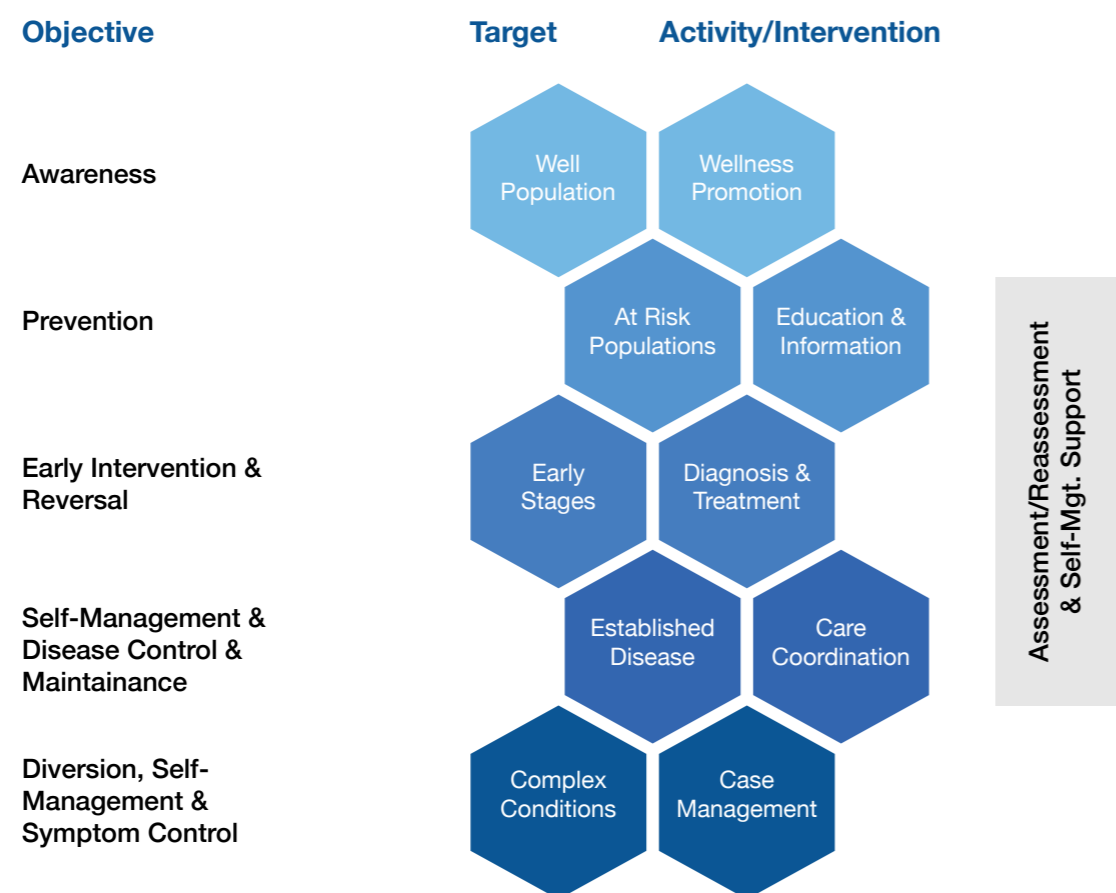
Within BHS there are key programs that are principally focused on CDM including HIP and outpatients.

A first step toward a more effective CDM in greater Ballarat is a commonly accepted framework by all providers. It is not clear that there is a common CDM approach within BHS or between BHS and other providers.

It is proposed that BHS develop a framework for the delivery of chronic diseases. The framework needs to actively incorporate the service delivered by other health providers such as GPs and Ballarat Community Health. Indeed, *the framework should provide the common basis on which services can be jointly planned and implemented, a basis for delineating roles, preventing duplication, identifying service gaps, and when/how referrals are made between health providers, depending on the stages of the disease. A common framework can be a powerful tool to systemic management of chronic disease for greater Ballarat, and by extension to the rest of the region.*

A proposed framework is schematically outlined below in Figure 4-2. The framework is adapted by Aspex Consulting from the Wagner model of chronic disease management.

Figure 4-2: Chronic Disease Management Framework



The framework has five clear stages aimed at identifying, diagnosing and managing any number of different chronic diseases. Each of these stages are explained more fully in Appendix 3.

BHS will need to develop a strategy that engages all providers, collectively or individually to progress a common CDM framework, and then use this as a basis for role delineation and enhanced service integration.

Integrated services and role delineation

For chronic disease and community based service more generally, it is proposed that:

- ▶ BHS adopt a leadership role in developing effective coordinated services between the different providers, particularly between BHS and Ballarat Community Health consistent with the CDM framework, across the main service streams;
- ▶ The master plan would develop a *collocation of all ambulatory and community-based services* – except for maternity and paediatrics;
- ▶ BHS develop a **clearing house** concept for the ‘discharge planning for complex care patients’. Patient discharge from BHS can be ‘hit and miss’. Discharge may work effectively for patients with relatively simple post-discharge needs, and would be routine for the ‘discharging unit’. However,

more complex discharges may not get the level of support required. It is not reasonable to expect acute or subacute ward nurses or medical staff to understand the broad spectrum of services that might be available to meet the specific needs of complex patients.

It is therefore proposed that a ‘clearing house’ concept be examined that would have all complex discharged passed across to a central clearing house to link discharged patients into services. The clearing house would be assessed to include consideration of a range of BHS services (such as SACS, complex care, specialist acute clinics, PAC, ACAS, GITH, RITH, CRC, TCP, palliative care) and other community based needs (such as GPs, respite CDM, housing, community mental health support, amongst other) to better direct post-discharge needs.

Specialised community based workforce

Enhancing the *specialised nurse and allied health capability* in the community to support an enhanced community-based program. This would potentially include nurse practitioners, clinical nurse consultants, and advance practice allied health staff.

The enhance capability would form the basis of effective clinical care for HITH, GITH, RITH, diversion and substitution clinics, gerontic clinics amongst other initiatives.

4.8.4 PROJECTED DEMAND FOR COMMUNITY-BASED SERVICES

Projected demand for the main community-based service streams is based on the current known service utilisation profile. It makes no assumptions regarding changing service delineations that require the support of third parties.

Current and projected demand for BHS’ ambulatory services is summarised in Table 4-7. HIP services are projected to increase by 15,425 contacts from 40,070 in 2015-16 to 55,495 in 2031-32, a per annum increase of 2.2%. Outpatient services, including MBS, are projected to increase by 39,377 contacts from 86,106 in 2015-16 to 125,483 in 2031-32, a per annum increase of 2.5%.

Table 4-7: HARP and Outpatient contacts, BHS, 2015-16 to 2031-32

SERVICE TYPE	2015-16	2031-32	CHANGE	CHANGE % P.A.
HIP - HARP	7,292	10,151	2,859	2.2%
HIP - PAC	8,773	12,446	3,673	2.4%
HIP - RIR	1,274	2,079	805	3.3%
HIP - SACS rehabilitation	15,517	20,895	5,378	2.0%
HIP - Specialist clinics	7,214	9,925	2,711	2.1%
HIP – sub-total	40,070	55,495	15,425	2.2%
Outpatients	86,106	125,483	39,377	2.5%
Total	126,176	180,978	54,802	2.4%

The projected increase in modelled capacity associated with ambulatory services is summarised in Table 4-8²⁷. It can be seen that there is a projected increase of 3 cubicles for HIP services from 2015-16 to 2031-32 and an increase of 12 outpatient cubicles over the projection period.

Table 4-8: HARP (Complex Care) and Outpatient Consulting Rooms, BHS, 2015-16 to 2031-32

SERVICE TYPE	2015-16	2031-32	CHANGE	CHANGE % P.A.
HIP	9	13	3	2.1%
Outpatients	26	38	12	2.4%
Total	36	51	15	2.4%

27. Modelled capacity is calculated as the product of the volume of clinic-based ambulatory services and the activity. Services delivered off-campus, such as RIR and PAC, are excluded from the calculation of capacity requirements for ambulatory services.

4.8.5 ILLNESS PREVENTION

There are many programs within BHS that would rightly indicate that they deliver important health promotion and illness prevention messages in their daily workplace. Notwithstanding these important activities, they are not consistent nor part of the mainstream of service delivery. There were many stakeholders that saw BHS' current efforts in health promotion and illness prevention as inadequate and/or ineffective, at times when patients may be receptive to these messages, if the messages were delivered in the right way.

It is proposed that over the next few years that BHS targets areas of high impact for health promotion. *The aim is to develop a health promotion agenda that demonstrates effectiveness.* The areas would be identified by BHS through an internal process identifying local champions, along with the development of specific programs. Services for targeting could include:

- ▶ The embedded concepts of illness prevention in the context of the proposed chronic disease model as outlined in Section 4.8.3;
- ▶ Dental services;
- ▶ Complex care;
- ▶ Selected specialist acute clinics;
- ▶ aboriginal clients;
- ▶ Emergency department (notwithstanding the difficulties); and
- ▶ RAMU.

4.8.6 COMMUNITY DENTAL SERVICES

BHS offers a comprehensive community dental program. In 2015-16, the dental service provided 9,470 patients treated that included over 87,000 treatments, including 1,400 dentures. BHS is a teaching service for fourth or fifth year Latrobe University students. This included 10,000 of the 87,000 treatments.

There are a range of innovative services undertaken by the dental service. The main focus has been on expanding the reach of dental services to peripheral groups including Supported Residential Service clients, Aboriginal & Torres Strait Islanders, dental and oral hygiene in primary schools across the Grampians region. The service was awarded the state best dental service in 2016.

The key issues for the future is to:

- ▶ Maintain and extend the very sound basis for the service. This is expected to include:
 - Local workforce training opportunities (especially indigenous dental assistants);

- A supportive private dental community that undertake voucher work;
- More supportive ways to access the dental service by aboriginal and Culturally & Linguistically Diverse patients;
- On site OPG services; and
- Corella Place services;
 - ▶ Demonstrating value for funding provided. The dental service is uncommon in rural Victoria, in that it expends all of the activity based funding. It is able to maintain and develop a workforce that is meeting need;
 - ▶ Access. Waiting times for dental services has decreased significantly. However, access to clients could still be improved with waiting times that are still significant; and
 - ▶ Maintain and extend the teaching role. Continuing the teaching role with Latrobe Dental School is a critical part of the service delivery program as well as a critical part of the future workforce in Ballarat. The teaching model is highly a successful hands-on model, and may be emulated in rural Victoria.

4.8.7 CENTRE AGAINST SEXUAL ASSAULT

The CASA service is located in Sebastopol at the Jessie Gillet Centre and provides access from the street to provide privacy for clients. CASA includes:

- ▶ Services to older persons, both male and female, who have been victims of sexual assault;
- ▶ Specialist assessment of clients referred by both children's services agencies or the Victoria Police;
- ▶ 24/7 service for recent sexual assault cases which is serviced in a shared space from within the ED;
- ▶ Services to Survivors of Institutional Abuse in the context of the Royal Commission and Victorian Parliamentary Inquiry;
- ▶ Children's services for child victims; and
- ▶ Group work and community education including schools and training across BHS.

CASA services are increasingly overlapping with family violence issues with the recent prominence to this issue. As a consequence, there needs to be a fully integrated model developed for CASA.

Future developments for the CASA service at BHS include potential development of a sexual abusive behaviour treatment service targeting younger males (15-18 years) and increasing the focus on family violence issues. This may have implications for siting of the service, which is currently located in a limited space on site at BHS.

4.8.8 ALCOHOL AND OTHER DRUGS

Alcohol and other drug services in the greater Ballarat sub-region are widely recognised by all stakeholders to be under-developed. The sub-region has a paucity of services, a fragmented service system that does not provide continuity of care for conditions that are recognised to be chronic, and there appears to be an imbalance in the mix of services where they exist. The recommissioning of AOD services has further compounded an already difficult service system.

BHS proposes to work collaboratively with other health and community service providers to identify and fill service gaps, including:

- ▶ *Specialist addiction medicine capability in Ballarat and the region;*
- ▶ *A residential facility for AOD rehabilitation;*
- ▶ *Dual diagnosis clinics;*
- ▶ *Streamline pathways to enable AOD service access;*
- ▶ *Well integrated programs with BADO; and*
- ▶ *Supporting programs that provide intensive, short duration therapies.*

4.8.9 NATIONAL DISABILITY INSURANCE SCHEME

The impact of the rollout of the NDIS remains an unknown quantity at this time. Whilst there will be significant changes to services, funding models, funding flow, and client access and purchasing, the consequences on existing service provider, and any ripple effect on other service providers such as BHS will remain unclear for some time yet.

There are three potential response for BHS; to set up as a major provider of core disability services and compete in the market, provide peripheral, brokered services as required, or not actively engage in NDIS, and assess the potential consequences of any ripple effect.

The strategic position of BHS will depend on a more detailed business case to be undertaken.

4.9 Emergency department

The BHS emergency department comprises 24 cubicles. In 2015-16 there were 53,307 presentations of which 78.4% or 41,786 were from the primary catchment area. The secondary catchment accounted for 14.1% of presentations in 2015-16, the tertiary catchment 1.3%, with 6.2% were from other areas. There has been only minor variation in the profile over the period shown. Presentations fell to 51,413 in 2014-15 but recovered in 2015-16 to be just below the highest level over the five years.

Of the presentations from City of Ballarat, 95% were seen at BHS or SJG-B ED, over the five-year period. Notwithstanding the lack of growth in ED presentations, The City of Ballarat has the 10th highest utilisation rate of EDs in the State with 411.6 presentations per 1,000 population, and the eighth highest ranking for primary care type presentations (229.0). The respective state averages are 258.8 presentations in total and 107.5 for primary care. The high utilisation rate is partly due to having two EDs in Ballarat.

The SJG-B ED influences the volume and casemix of presentations at BHS. The SJG-B service provides about 15,000 presentations per annum, principally for lower triage category conditions. A change in the clinical capability, or out-of-pocket costs to patients, at SJG-B will have an impact on BHS presentations. This is a potentially major impact.

Since 2011-12, there has been a significant increase in the proportion of emergency and urgent cases, and a corresponding decrease in semi-urgent and non-urgent cases. This is consistent with the opening of out-of-hours corporate GP services in Ballarat, and has therefore translated into higher rates of presentations being admitted to hospital, including to theatre.

Trends in ED presentations and projections by catchment for BHS based on departmental modelling indicates growth of 3.3% per annum from 53,307 presentations in 2015-16 to 101,119 by 2036-37.

Separate, revised modelling, based on demographic change utilising VIF2016 data and applying an alternative growth based on age-specific utilisation rates from FY2016 to future projected population age groups yields a more modest growth rate of 1.7% per annum, growing from 53,307 presentations in 2015-16 to 75,280 presentations by 2036-37. A further alternative scenario that allows for potential changes in utilisation rates, such as the growth associated with Ballarat GovHub, is to apply a mid-point growth factor of 2.5% which would result in 89,533 presentations by 2036-37. This is an important issue for future service capacity and capability.

Both sets of projections are detailed in Table 4-9²⁸.

28. Victoria in Future 2016 data tables available at: <https://www.planning.vic.gov.au/land-use-and-population-research/victoria-in-future-2016/victoria-in-future-data-tables>

Table 4-9: ED Capacity Modelling to 2036-37

Model	ED Contacts				2036-37 ED Cubicles
	2015-16	2036-37	Change	Change % p.a.	
DHHS Modelling	53,307	101,119	47,812	3.3%	78
Aspex Modelling	53,307	75,280	21,973	1.7%	58
Mid-point Modelling	53,307	89,533	36,226	2.5%	69

The current and emerging issues include:

► **Projected demand and capacity.** ED presentations are expected to increase conservatively by about 1.7% per annum even though demand over recent years has not increased overall. The actual increases are most likely to be influenced by the accessibility of SJG-B emergency services, the effectiveness of community substitution services, and changes to clinical practice of other health services in the region. The growth in ED demand is likely to mean an increase in capacity from 24 cubicles/treatment spaces to 58 treatment spaces (excluding SOU beds);

► **NEAT performance.** The NEAT performance target requires 90% of patients to be discharged within 4 hours and Figure 5 39 shows the performance for BHS against this target. In 2015-16, 67.0% of patients were discharged within four hours compared to 75.4% in 2011-12.

There has been a significant and worsening gap in NEAT performance. *Performance has declined across all categories except resuscitation.* Urgent and semi-urgent cases have declined from around 80% to 61% and 66% respectively. There is clearly an issue of NEAT performance to be considered as part of the service plan;

► **In-reach to RACS.** Tangentially related to ED is the consolidation of the in-reach program to RACS that aims to prevent the (unnecessary) transfer of aged residents who could be treated in situ rather than be transferred to ED;

► **Streaming.** BHS offers patient streaming following triage. However, the streaming of patients does not operate as effectively or as efficiently as it could due to the limitations of the physical capacity, the layout of ED, and lack of specialised rooms. Therefore, capital redevelopment is likely to be a necessary component to effective patient streaming into:

- Resuscitation and emergency;
- A separate paediatric waiting area and treatment spaces;
- A specialised mental health treatment areas;
- Primary care type (PCT) fast track treatment area;
- General cubicles; and

- Short-stay observation area;
- **Efficient patient flow.** Two important barriers to more efficient flow from ED are:
 - Bed blockers that delays admission. This is proposed to be addressed through the development of a RAMU, direct admissions to sub-acute beds, and greater availability of ambulatory diversion and substitution services such as HARP. (It is also proposed to examine the feasibility of developing specialist clinics as a diversion from ED);
 - A non-clinical supervised post-treatment waiting area, which would lead to faster cubicle turnover rather than have patients to be 'picked up' occupying cubicles; and
 - Potentially changing admission practices to provide for a predetermined level of admissions to medical or surgical beds by ED physicians to address timely assessment and admission practices. This would only operate in conjunction with strong diversion and substitution practices. It is a significant departure from the current model of care and would require agreement by all specialist craft groups;
- **Paediatric ambulatory area.** As noted in section 4.3.4, BHS has had two service model difficulties in the care of paediatric patients. The first is the less than ideal mixing of paediatric patients in ED waiting room and mixed treatment space in ED. The second is the need to transfer same day paediatric patients to the children's inpatient ward for post-procedure recovery. It is proposed that an innovative service model be examined that combines a short-stay observation for paediatrics with a day procedure recovery area to form a paediatric ambulatory unit;
- **Regional leadership role.** BHS has always had a regional referral role for emergency care. This includes BHS as the dedicated trauma centre in the region. The ED has always taken calls for secondary consultations from health services in the region and has always participated in the coordination of retrieval services. However, this has tended to be on a reactive basis and where the role has been largely overshadowed by historically the regional role has been overshadowed immediate local demand pressures. It is proposed that has BHS adopt a more proactive regional leadership role in emergency medicine through:

- Establishing information technology links with health services in the region, and with MDHS to support telehealth for emergency and urgent care;
- Support clinical governance and service quality in emergency care through the appointment of a regional Director of Clinical Governance in emergency medicine;
- Support the development of formal clinical pathways and protocols for the transfer of patients. This will be particularly important for Wimmera Health Care Group;
- Formal relationships that support the teaching and training in emergency medicine for medical and nursing staff at other health services; and
- Support staff rotations from other health services.

► **Workforce model – Rostering.** BHS ED, like almost all other EDs, generally has less experienced medical and nursing cover overnights and on weekends. As part of BHS' development as a 7-day health service, it is expected that the clinical capability cover will be more consistent to the cover in-hours and weekdays;

► **Workforce model – nurse practitioner.** Effectively utilise a NP role in ED for the fast-track PCT patient stream. This could be developed ahead of any infrastructure redevelopment; and

► **Mental Health.** Mental health services are reported to be increasingly responsive to the ED presentations, and that these issues can be addressed at monthly 'trouble-shooting' meetings. There is nevertheless, an ongoing misalignment of when mental health resources are most available (9-5) compared with the demand (5-12). Hence, there appears to be a misalignment of resource allocation and demand.

4.10 Residential aged care

BHS is the largest public residential aged care (RAC) provider in Victoria with 444 operational beds in ten facilities across five different sites in greater Ballarat.

The residential aged care industry is currently undergoing significant reconfiguration following the 'Living Longer Living Better' reform, as it aims to change the service structures to meet growing demand. In addition to the reform package, other recent developments are also likely to affect BHS aged care services in the long term, particularly with the opening of a private aged care facility in the area, which has already caused considerable changes in the dynamics of aged care services.

Current and emerging issues for BHS residential aged care includes:

- **Policy.** As previously noted, the most significant issue that will impact on RACS is the change in the regulatory and funding environment. The LLLB reforms have introduced a level of direct competition into the market that was not previously evident. This has created a more difficult operating environment for public sector RACS, particularly in

the context of higher cost structures, and infrastructure that does not meet community expectations and where capital investment does not occur in a timely manner;

► **Demand.** Growing demand for aged care services is expected to continue, broadly in line with the ageing population. There is projected to be strong growth in the older population aged 70 years and above in the catchment, from 11,500 persons in 2016 to 18,640 persons by 2031. Current operational residential places in the Ballarat LGA exceed the Commonwealth's aged care planning ratio, however based on existing supply, there will be substantial under-supply of 489 aged care places by 2031;

► **Competition.** Total occupancy of BHS aged care places has generally been above 97%, however since January 2016 it has been declining, reaching a low of 93.3% in August 2016. Total waiting list numbers have also shown a similar declining trend, thus suggesting they may have been affected by increasing competition with the opening of a private aged care service.

Taking a longer view, BHS has progressively reduced its available aged care beds, which reflects declining demand for public RACS in Ballarat. Like all other RACs services, residents are entering care when they are more dependent and that residency (average length of stay) has progressively been reducing.

Looking to the future, there is an increasing number of private and not-for-profit aged care providers establishing in greater Ballarat; a common situation across the state. This means that the future becomes less certain and continuing to do what has always been done is a recipe for extinction;

► **BHS as the default provider of residential aged care services.** Shifting social preferences, policy changes and funding models, means that RACS generally accommodates residents with higher clinical complexity/dependency. Many of the current and future residents will have challenging behaviours or other specific complex care needs that they will not always suit accommodation at private RACS facilities, that have significant discretion in admission. As such, BHS is likely to be the 'default' provider for more complex and challenging residents. This is significant from a number of perspectives including staffing, as nurse ratios are mandated for high care residents and infrastructure.; and

► **Consumer expectations.** The baby-boomer and subsequent generations will enter aged care with greater wealth, and consequently greater expectations, than previous generations. This will add additional pressure to the requirements on the quality of infrastructure and services offered in an increasingly competitive market in Ballarat.

Several areas for consideration with regards to BHS aged care include:

► **Market positioning.** There are three important elements to this issue:

- The RACS market is dynamic due to structural and

regulatory changes, increasing competition, and consumer expectations. BHS needs to re-evaluate its market position. This could involve positioning BHS RACS to target challenging residents and residents with high care needs, not only with regards to assistance with daily living, but also for residents with behavioural and complex care needs. There may be significant market potential as currently residents requiring these services are not fully captured in the regular RACS offering;

- The general RACS market is increasingly competitive in Ballarat with new private entrants with new and contemporary facilities. BHS is not well positioned in this dynamic market. In general, this means *that BHS will need to be more agile and flexible in its ability to meet changing market needs*; with regard to service offerings, workforce capability and flexibility, and infrastructure; and
- *BHS should challenge the thinking around the traditional residential models of care, buildings and partnerships to develop infrastructure and environments that meet the ageing population expectations/requirements.*

BHS needs to be clear as to its role and to proactively and innovatively position itself in the market.

▶ *Residential in Reach.* BHS would develop RIR services to all RACS providers;

▶ *Integration of services.* There is to be:

- Greater clinical and functional integration of RACS with subacute services, home care packages, GEM-in-the-Home, RIR, and TCP;
- Clearer discharge pathways across BHS and from other community providers such as Ballarat District Nursing Service, BCH, NDIA and community home care services program;

▶ *Niche services.* In positioning itself, there are potential opportunities that BHS may be able to offer niche services in addition to standard RACS services. This may include offering services for:

- Emerging client groups in aged care including catering for cultural diversity;
- Younger client cohorts including those requiring special needs arising from acquired brain injury or stroke; and
- Clients with neurodegenerative diseases, involving the development of clinical partnerships with quaternary providers such as Bethlehem Health; and

▶ Developing BHS RACS as a centre of excellence in training in aged care, dementia and care of clients with special needs that is broadly recognised across Australia. This would be undertaken in collaboration with a partner tertiary training entity and the respective medical faculties of the College.

5 Critical enablers

This section elaborates on the critical enablers that have been identified in the previous section and also responds to common issues raised in the consultation process. These include:

- ▶ Workforce development;
- ▶ Clinical governance;
- ▶ Service integration and collaboration;
- ▶ Infrastructure;
- ▶ Information communication technology;
- ▶ Teaching and research;
- ▶ Community engagement; and
- ▶ Organisational culture.

5.1 Workforce development

The capability, skill mix and engagement of the future workforce will be a defining factor in BHS' ability to address service demand and achieve its strategic objectives. Noting that one of the four pillars in the *BHS Strategic Plan 2017-2022* relates to staff and specifically identifies support, development and nurturing of staff.

The most recent data from the AIHW National Workforce Dataset (2014) provides an overview of current estimated clinical professions in selected categories in SA3 Ballarat and SA3 Grampians as both a head count and the rates per 100,000 population (Table 5-1). The data indicates that whilst SA3 Ballarat is relatively well provided for in the range of health service professionals, with either higher or equivalent rates to the Victorian rate, the Grampians SA3 is relatively poorly services.

The AIHW data also supports the perception that, historically, BHS has had a relatively stable nursing and midwifery workforce. However, consultations indicate that without some planning, there will be gaps in the nursing workforce, most notably for midwives.

The medical workforce has traditionally been more challenging with a blend of VMO and staff clinicians (medical and surgical) with some areas proving significantly more difficult to recruit to than others. There is also a perception that medical workforce planning has historically been more ad hoc. There are also several key identified clinical areas that have gaps that create risk for BHS, which need to be addressed as a matter of priority including plastics and gastroenterology.

Allied health has been a relatively stable area over the years, however, there appears to have been little proactive planning for changes in both clinical practice and changing models of care, which in turn have implications for workforce planning for allied health. This includes the capacity to embrace the shift to a 24/7 health service as espoused in the BHS Strategic Plan.

Additionally, adequate succession planning across the different clinical areas in both medical and allied health workforce areas has not been systematically approached from an organisational perspective and will need to be an area of focus commencing immediately.

Table 5-1: Health workforce FTE rate per 100,000 population – 2014²⁹

Profession	Ballarat SA3	Ballarat SA3	Grampians SA3	Grampians SA3	Victoria	Australia
	FTE Number	FTE Rate	FTE Number	FTE Rate	FTE Rate	FTE Rate
Dental Therapists	5.0	1.9	0	0	1.9	3.1
Dentists	53.1	51.7	17.4	29.6	51.7	54.7
Medical Practitioner - GPs	147.7	144	72	122.2	109.5	110.6
Medical Practitioner - hospital non-specialists	56.7	55.2	16.8	28.6	40.7	47.4
Medical Practitioner - specialists	189.0	184.3	19.9	33.7	133.2	132.2
Medical Practitioner - specialists-in-training	73.4	71.6	7.9	13.3	71.4	72.2
Medical radiation practitioner	93.4	91.9	15.9	26.9	46.8	45.9
Midwives	93.4	91	33.4	56.7	61.5	55.4
Nurses (Enrolled)	410.0	399.8	386.1	655.2	239.2	186.7
Nurses (Registered)	1,316.9	1,284.1	641.8	1,089.1	830.4	830.3
Nurses and Midwives	1,701.7	1,659.3	1,008.4	1,711.4	1,059.4	1,012.3
Occupational Therapists	76.1	74.2	27.2	46.1	47.8	46.6
Optometrists	15.6	15.2	11.1	18.9	16.8	16.5
Pharmacists	97.1	94.6	46.8	79.4	82	79
Physiotherapists	84.6	82.5	25	42.6	83.5	79.8
Podiatrists	26.7	26	20.1	34.1	19.2	15.3
Psychologists	127.6	124.4	14.5	24.7	81.4	75.9

5.1.1 GENERAL WORKFORCE DEVELOPMENT

The recent cultural issues that have beset BHS means that as an organisation it will need to clearly articulate its 'value proposition' to staff – current and prospective. This will need to be considered in the context of a generational change over the next 10 years. The challenges in this include:

- ▶ Providing a positive culture and a stimulating working environment where there is a strong sense of purpose, direction, teamwork and achievement;
- ▶ Attracting new staff by continuing to support student training, particularly at local institutions;
- ▶ Demonstrating that staff will develop personally and professionally by working at BHS;
- ▶ Working collaboratively with other health organisations in

the region, where appropriate, to attract people with special skills to the area, demonstrating the breadth of opportunities across public and private sectors;

- ▶ Integrating technical and management skills among middle and senior managers;
- ▶ Ensuring that there is a growth path for people wanting to advance their careers within BHS;
- ▶ Nurturing a culture that is contemporary and referencing best practice from around the world;
- ▶ Continuing the development of clinician leaders across the organisation consistent with the fostering of a positive, vibrant and high-performance work culture;
- ▶ Ensuring that systems change is supported by the development of people skills and change management

capability to maximise the effective utilisation of new (and existing) technologies;

- ▶ Having a communication strategy, both internally and to the broader community, in relation to the organisation's services, its role, its strategic direction and the importance of teaching and learning;

- ▶ Creating a strong service-oriented culture that is actively measured and managed; and

- ▶ Develop a workforce plan in order to identify areas of skill gaps and for enable smooth transition with succession plans. In particular, this plan would identify:

- Specialist nurse skill and numbers, including nurse practitioners;
- Specialist nurse proceduralist in endoscopy; and
- Support for specialist nurse drive clinics.

5.1.2 SPECIALIST MEDICAL WORKFORCE PLANS

As noted above, there are a number of gaps and 'at risk' clinical areas that have been highlighted during the consultation process that need to be strategically addressed. To date there has been an ad hoc approach to recruitment of specialist medical staff that has lacked coherence and failed to capitalise on available synergies both across the organisation and with SJG-B. It is therefore proposed that BHS develop a comprehensive *medical* recruitment and retention plan for the next ten years, including specialist medical staff/VMOs, and the medical configuration of registrars, HMOs and supervisory structures. The plan should incorporate arrangements that recognise and potentially leverage synergies with SJG-B and with other private practice arrangements within the catchment.

The plan could have the following components:

- ▶ Current and expected medical specialist gaps in the region by specialty taking succession planning into consideration;
- ▶ Medical teaching and training;
- ▶ Recruitment by BHS for 'hub' specialties that also provide services to the region on an outpost, outreach or virtual basis;
- ▶ The potential for joint appointments;
- ▶ Partnering with Barwon Health or a Melbourne health service for medical specialist disciplines that are difficult to recruit to or where a single specialist is likely to meet all regional needs;

- ▶ The impact that a referral base from Moorabool and Golden Plains might have on medical specialist needs; and

- ▶ The impact that private practice and SJG-B might have on medical specialist needs, including public-private models.

5.1.3 NURSING AND ALLIED HEALTH WORKFORCE PLANS

Considered workforce planning for nursing and allied health needs to occur at BHS to ensure capability for changing models of care in various clinical streams including residential aged care and subacute care amongst others.

The nursing and midwifery plan should cater for both general and specialised nursing recruitment and retention and target advanced practice nursing, and nurse assistants, in areas of workforce deficiency. Consideration could be given to:

- ▶ Developing nurse practitioners in endoscopy, HITH, palliative care, and possibly pharmacotherapy;
- ▶ Introducing health assistant nurses (HAN³⁰) in appropriate areas of the organisation including subacute care;

- ▶ Further developing and implementing the Montessori dementia model of nursing;

- ▶ Supporting succession for nurses with special interests; and

- ▶ Development of a regional midwifery workforce plan to support health services in the broader BHS catchment.

An allied health workforce plan needs to be developed to ensure strategic recruitment and retention at BHS. The plan needs to consider the potential for allied health professionals to have the most significant impact on improving care, integration and patient outcomes, including and reducing length of stay. These areas include consideration where allied health practitioners would engage, or extend current levels of engagement, in diversion and substitution programs including:

- ▶ For care currently delivered by medical specialists;
- ▶ Expanded role in HARP and HITH;
- ▶ Involvement in ACE assessments; and
- ▶ Examination of specific areas where allied health assistants would be clinically appropriate and economical.

29. FTE rates are based on the weekly hours worked per 100,000 population

30. Health assistants nursing was first introduced in Victoria in 2009 as pilot projects at Austin Health and Bendigo Health. Refer *Health assistants (nursing) implementation guide, December 2015* at: <https://www2.health.vic.gov.au/health-workforce/reform-and-innovation/assistant-and-support-workforces/health-assistant-nursing/health-assistant-nursing-implementation-guide>

5.2 Clinical governance and patient safety

Clinical governance and patient safety have come to the fore in Victoria following the review of quality and safety in the Victorian healthcare system. The Victorian Government's response to the findings and recommendations in the *Targeting Zero* report include, amongst other initiatives, the establishment of *Safer Care Victoria* which is charged with working with health services to monitor and improve the quality and safety of health care delivered across the Victorian health system. Additionally, the establishment of the *Victorian Clinical Council* is intended to provide clinical expertise to government in ensuring safer systems across the sector.

At the health service level, patient safety and clinical governance are imperatives that need to be addressed through, amongst other means:

- ▶ Establishing common or shared clinical governance structures;
- ▶ Joint credentialing of clinical staff;
- ▶ Developing sub-regional clinical governance appointments in maternity, anaesthetics, geriatrics and emergency medicine, amongst others; and
- ▶ Developing common clinical protocols and clinical pathways across the health services within the catchment.

Mechanisms for implementing these measures and ensuring clinician engagement and ownership include:

- ▶ Developing 'clinical councils' that support clinical governance, consistent clinical practice, patient referral and escalation protocols, and supporting medical workforce capability; and
- ▶ Establishing joint working parties for service specific initiatives where focus is needed.

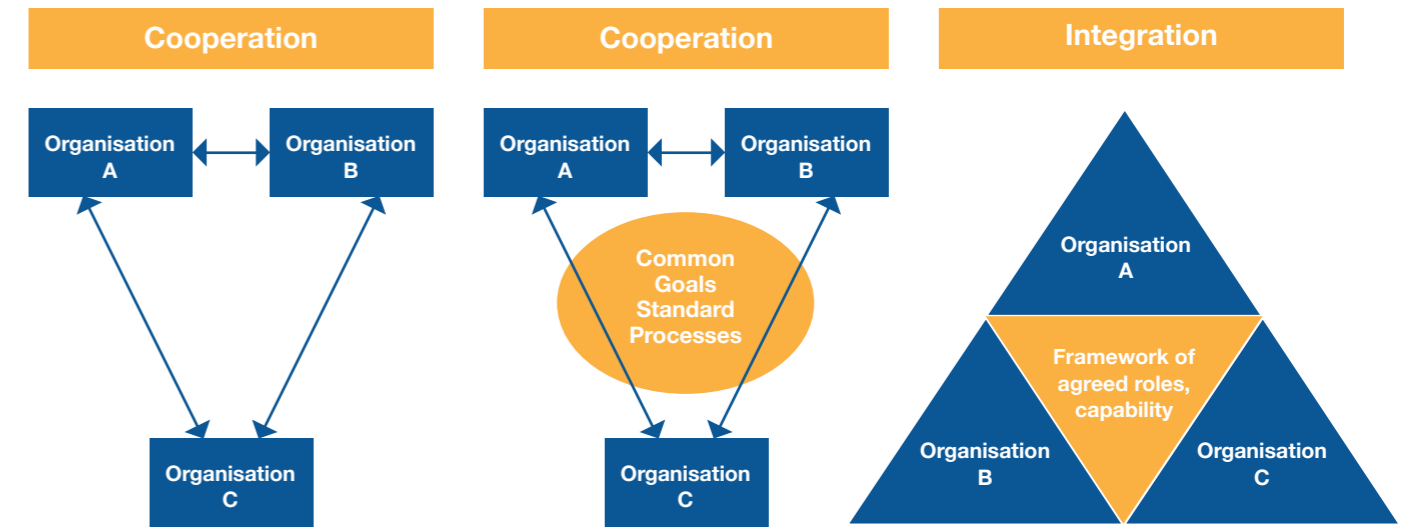
5.3 Service integration and collaboration

Recent reviews and reports have noted some of the consequences of Victoria's devolved governance model noting that the independence of these individual entities creates challenges in building collaborative and shared practices that foster service integration and improve patient outcomes. Additionally, the lack of a formal central framework for role delineation framework has meant that individual health services have determined the range and complexity of the clinical services they provide, with little regard for the broader service system.

Ironically, Victoria's devolved governance arrangements have to date created perverse incentives for fully committed service integration and collaboration. Health service providers have historically toyed with various degrees of cooperation, coordination and collaboration but have generally failed to pursue true integration due to the vested organisational interests.

The degree of strength in relationships between healthcare organisations has previously been described by various authors. The following is adapted from work by the Primary Care Research and Information Service.

Figure 5-1: Stages of integration³¹



Achieving this level of integration will require constant focus on person-centred care and promotion of collaborative service integration and partnerships between health services and including service providers in community and primary care sector.

Collaborating to achieve new ways of delivering care, which will ultimately improve access to services locally across the catchment. This level of collaboration is what is now being required of regional health services. As the regional leader, BHS must drive this ethos. Nevertheless, BHS also needs to be mindful to ensure that advancement of effective integration is not hampered by its 'organisational ego' – it must honestly collaborate with other providers to succeed in true integration.

The corollary of integration and collaboration is **partnerships**.

The increased focus on quality and patient safety which has resulted from the findings in *Targeting Zero* has also provided impetus for both the department and health services to be more attentive to the benefits of *strengthening partnerships, networks and referral pathways*. The spotlight on safety and quality has also highlighted the importance of formalised arrangements for improved integration and collaboration.

Collaborating to achieve new ways of delivering care will ultimately improve local access to services across the catchment. Partnerships can deliver a more connected

service system that provides improved access and continuity of care. Effective coordination of service delivery can enhance the quality of services to the consumer, as well as offer benefits to service providers, including more efficient use of resources, enhanced skills, and improved working relationships.

It is proposed that BHS lead the development of partnerships around a **'systems stewardship'** approach that would include service system design and development in relation to:

- ▶ Regional clinical councils (across different clinical streams);
- ▶ Regional credentialing and clinical governance systems;
- ▶ Regional clinical appointments;
- ▶ Regional workforce planning; and
- ▶ Regional recruitment, and workforce training, development, and mentoring.

31. PHCRIS, *Initiatives to integrate primary and acute health care, including ambulatory care services*, March 2011

5.4 Physical infrastructure

A principle of the service plan is to enhance local access to services, where this is safe to do so and the care provided aligns with the role of the Ballarat Health Services. Achieving strategic service objectives is dependent on having critical infrastructure in place. The following sections provide projected capacity estimates for:

- ▶ Acute and subacute services;
- ▶ Emergency department services;
- ▶ Procedural services; and
- ▶ Ambulatory services.

5.4.1 ACUTE AND SUBACUTE CAPACITY

The bed capacity requirements for BHS are summarised in Table 5-2. The projections indicate an increase of 18 same day beds, from 50 to 68 beds and an increase of 165 multi-day beds, from 245 beds to 410 beds.

It is apparent that there is a discrepancy between the number of physical beds in 2015-16 and the number of modelled beds in 2015-16. The latter is based on VAED activity data and benchmarks for bed occupancy. Typically, multi-day medical and surgical benchmark occupancy rates are 85%. BHS multi-day medical and surgical wards operated at occupancy rates in excess of 90% in 2015/16 and to a large extent this will account for the discrepancy between physical and modelled bed estimates. In addition, other reasons for the discrepancy include the use of nominal 'surgical' beds by medical patients and differences in the level of availability of beds over the course of a year.

Table 5-2: Projected bed requirements, BHS, 2015-16 to 2036-37

Care Type	Stay Type	PHYSICAL BEDS 2015-16	MODELLED BEDS 2015-16	BASELINE BEDS 2036-37	PROJECTED BEDS 2036-37
Acute	Same day	50	38	67	68
	Multi-day	180	196	287	294
	Total	230	233	353	362
Subacute	Multi-day	65	74	113	116
Total	Same day	50	38	67	68
	Multi-day	245	270	399	410
	Total	295	307	466	477

Bed Numbers have been rounded to the nearest whole.

The detailed bed projections for BHS are outlined in Table 5-3. They indicate that for BHS, capacity development is a major strategic focus. For acute beds, there is a projected increase of 132 beds, from 230 to 362 beds.

The service type with the largest projected increase in demand is medical multi-day beds, with a projected increase of 91 beds from 52 to 143 beds.

Total procedural/surgical capacity is projected to increase by just six beds from 86 to 92 beds. The combined increase in demand for same day surgical and endoscopy capacity is five beds, from 14 to 19 beds. Multi-day surgical capacity is projected to increase marginally, by one bed. However, utilisation of surgical beds under this CSP would not be encumbered by the current use of surgical beds for medical patients, which provides for a significant real increase in surgery capacity.

Table 5-3: Projected bed requirements, BHS, 2015-16 to 2036-37

CLINICAL STREAM	WARD/UNIT	PHYSICAL BEDS 2015-16	MODELLED BEDS 2015-16	BASELINE PROJECTED BEDS 2036-37	PROJECTED BEDS 2036-37
Acute medical	Medical - multi-day	52	91	139	143
	Medical - ICU	9	10	16	16
	Medical - same-day	14	7	12	13
	Chemotherapy - same-day	10	9	16	16
	Dialysis	12	11	20	20
	SSU	8	4	8	8
	Sub-total		105	132	211
Acute surgical/ procedural	Surgical - multi-day	72	50	70	73
	Surgical - same-day	14	6	10	10
	Endoscopy - same-day	0	5	9	9
	Sub-total	86	60	89	92
Acute women's and children's	Maternity	16	19	23	23
	Paediatrics	16	10	14	14
	SCN	7	12	16	16
	Sub-total	39	41	53	53
Subacute	Subacute - palliative care	11	11	15	15
	Subacute - rehab	30	32	52	54
	Subacute - GEM	24	30	46	47
	Sub-total	65	74	113	116
Total		295	307	466	477

Bed Numbers have been rounded to the nearest whole.

5.4.2 EMERGENCY DEPARTMENT CAPACITY

Emergency department projected future demand for ED services at BHS is expected to yield an increase of ED cubicles, from 24 in 2015-16 to 78 in 2036-37. The more conservative Aspex modelling detailed previously suggests an increase in cubicles from the current 24 to 58 by 2036-37; an increase of 34 treatment spaces. More significant, however, is that the current physical capacity of 24 cubicles is 17 cubicles below the modelled capacity in 2015-16 based on planning benchmarks

Table 5-4: Projected ED cubicle capacity, BHS, 2015-16 to 2036-37

SERVICE TYPE	PHYSICAL CUBICLES 2015-16	MODELLED CUBICLES 2015-16	MODELLED CUBICLES 2036-37	CHANGE FROM 2015-16 PHYSICAL TO 2036-37
DHHS Benchmark	24	41	78	47
Aspex Modelling	24	41	58	27

5.4.3 PROCEDURAL CAPACITY

Total procedural capacity at BHS comprises six general operating theatres, one general procedure room and one endoscopy suite. In addition, there is a single CCL (with a second CCL currently under construction).

The **baseline projections for surgical cases** indicate future requirement of 5.7 theatres by 2036-37. Same day demand would increase from one to three procedure rooms, and there would be an increase from one to two endoscopy suites. Therefore, baseline projections provide for three additional procedure rooms.

Notwithstanding these modelled projections, section 4.5.2 identifies issues that suggest that the benchmarks may under-estimate need. This includes infrastructure factors that need to be addressed over the coming years. This would translate to provision of 12 procedure rooms, comprising:

- ▶ Eight (8) general theatres. This means two additional general theatres. One would be a dedicated emergency theatre, with the second general theatre providing operational flexibility between the types and complexity of procedures;
- ▶ Two (2) general low complexity procedure rooms. The baseline projection for a third day procedure room is substituted for the additional more flexible general theatre noted above; and
- ▶ Two (2) endoscopy suites, which is one additional suite consistent with demand projections.

This represents a 50% increase compared with current capacity.

Table 5-5: Operating theatre capacity, per health service, 2015-16 to 2036-37

OTHER FUNCTIONAL UNITS	SERVICE TYPE	PHYSICAL 2014-15	MODELLED 2014-15	BASELINE 2036-37	PROJECTED 2036-37*
Operating theatres	Multi-day	6.0	3.5	5.7	6.9 [+1.0]
	Same-day	2.0	1.7	2.8	2.9 [-1.0]
	Sub-total	8.0	5.2	8.5	9.8
Endoscopy suite	Same-day		0.7	1.3	1.3
Procedural Total		8.0	5.9	9.8	11.1
Catheter Laboratory		1.0	0.4	0.5	0.6

The operating theatre analysis makes no provision for operational requirements for non-cardiac vascular CCL activity. *The 2036-37 projected capacity is based on benchmarks for a Level 5 health service.

The catheter laboratory is considered separately. Demand for interventional cardiology services is projected to be able to be met through the existing single CCL. With some additional CCL activity from non-cardiac vascular activity, a single

CCL would be more effectively utilised than the current projections indicate. However, there appears to be no case for a second CCL, particularly with a refurbished CCL suite at SJG-B.

5.4.4 AMBULATORY AND OTHER COMMUNITY SERVICES

Current and projected demand for BHS' ambulatory services is summarised in Table 5-6. HIP services are projected to increase by 15,425 contacts from 40,070 in 2015-16 to 55,495 in 2031-32, a per annum increase of 2.2%. Outpatient services, including MBS clinics that operate under a 100% donation model, are projected to increase by 39,377 contacts from 86,106 in 2015-16 to 125,483 in 2031-32, a per annum increase of 2.5%.

Table 5-6: HARP and Outpatient contacts, BHS, 2015-16 to 2031-32

SERVICE TYPE	2015-16	2031-32	CHANGE	CHANGE % P.A.
HIP - HARP	7,292	10,151	2,859	2.2%
HIP - PAC	8,773	12,446	3,673	2.4%
HIP - RIR	1,274	2,079	805	3.3%
HIP - SACS rehab	15,517	20,895	5,378	2.0%
HIP - Specialist clinics	7,214	9,925	2,711	2.1%
HIP – sub-total	40,070	55,495	15,425	2.2%
Acute Outpatients	86,106	125,483	39,377	2.5%
Total	126,176	180,978	54,802	2.4%

The projected increase in modelled capacity associated with ambulatory services is summarised in Table 5-7. (Modelled capacity is calculated as the product of the volume of clinic-based ambulatory services and the activity. Services delivered off-campus, such as RIR and PAC, are excluded from the calculation of capacity requirements for ambulatory services.) It can be seen that there is a projected increase of 3 cubicles for HIP services from 2015-16 to 2031-32 and an increase of 12 outpatient cubicles over the projection period.

Table 5-7: HARP and Outpatient Consultation Rooms, BHS, 2015-16 to 2031-32

SERVICE TYPE	2015-16	2031-32	CHANGE	CHANGE % P.A.
Health Improvement Programs	9	13	3	2.1%
Acute Outpatients	26	38	12	2.5%
Total	36	51	15	2.4%

To maximise the operational efficiency and develop a more integrated ambulatory service, the preferred service model would be a collocated ambulatory care centre for acute,

subacute, and primary and community health services. There would be two exceptions to this, maternity and paediatrics, which are separately dealt with in sections 4.3.1 and 4.3.4 .

5.5 Information communication technology

The role of ICT in health (eHealth) has been an important part of the progressive development of health services over the last decade or more. The ageing population and increasing numbers of chronic diseases which creates challenges for the system to efficiently provide for the care needs of an ever-increasing cohort. eHealth technologies allow a mutually beneficial collaboration and involvement of patients and medical professionals in the prevention and treatment of chronic diseases amongst other health services. eHealth technologies also empower patients to take more responsibility for their own health and quality of life, and they lead to improved efficiency in the health sector. Overall, ICT can be used to ensure better health care outcomes. In effect, clever use of ICT can evolve basic patient portals from simple tools that allow access to medical tests and records to more sophisticated means for engaging with patients through messaging and personalised tools for self-management amongst other things.

BHS has been a leader in technology within the region with the implementation of BOSSnet in 2009 and the 2013 deployment of Rhapsody Integration Engine as its new platform of connectivity between clinical, patient and administrative applications including pathology, admissions, discharge and transfer information. Nevertheless, the overall effectiveness and efficiency of technology usage within BHS appears to be sporadic. Indeed, some parts of the organisation report poor access to basic ICT infrastructure including email.

Furthermore, nearly a decade since the implementation of BOSSnet there has been significant further evolution of healthcare technology and it is evident that BOSSnet, although successful, may have run its course. BHS is now at a watershed of needing to seriously contemplate the next phase in electronic medical records (EMR).

Additionally, BHS needs to better utilise its decision support system to inform business development in a variety of clinical areas including benchmarking against comparable health services.

The next decade will see further development and continued convergence of technologies and access due to significantly improved network capacity, creating new opportunities to develop services and to change service models in ways that have not previously been possible nor feasible.

The focus for ICT at BHS for the next five to ten years needs to include the following:

- ▶ *Internal connectivity between units.* The intention is to invest in integrated information systems that improve the patient experience, and improve productivity and business systems including:

- An enhanced data warehouse capability; and
- Electronic real-time bed management system;
 - ▶ *Remote location patient connectivity;*
 - ▶ *Transfer of clinical information* to better integrate care. This includes data sharing that enables information to transcend organisational boundaries, including with community and primary health care organisations, to support improved clinical decision-making, organisation of care and outcome measures that focus on the individual rather than an episode of care; and

- ▶ *Internal management support systems* that capture activity data, resources and patient outcomes, in order to have the necessary 'evidence-base' to demonstrate effectiveness.

Given the general consensus across the health industry of the importance of effective and efficient ICT as a significant enabler of change, it will be important that BHS actively pursue a range of ICT solutions including:

- ▶ *Real time remote monitoring* of patients in their homes and at supporting those patients at other health services as a major adjunct to the model of care revolution delivering health care;

- ▶ Continuing to work as a partner in the Grampians Rural Health Alliance to support and lead the regional approach through the BOSSnet and any successive regional system that operationalises the department's *Digitising Health strategy*³²;

- ▶ Further sharing of patient records between health service providers including primary care providers, with appropriate protocols and security encryption in place;

- ▶ Enabling the timely referral and 'booking' for patient appointments between health services providers on discharge or transfer of patients from BHS, including GPs;

- ▶ Simple discharge summaries for GPs;

- ▶ Developing and extending the ICT that enhances the level of clinical training at BHS such as high quality 'tele-presence' technology and an extensive network to enable virtual teaching and training to be undertaken from almost any setting;

- ▶ Effective management and use of social and new media as part of a generational change in the approach to communication with the community; and

- ▶ Increased transparency in relation to BHS services and its performance in meeting the needs of the community and the quality of services provided. This includes a new performance reporting framework based on a 'balanced scorecard' approach.

5.6 Teaching, training and research

An important factor in the success of future delivery of health services in regional Victoria and for the recruitment strategy of senior specialists is the development and 'embedding' of teaching and research into regional health services.

Victoria's Health and Medical Research Strategy 2016–2020 underscores the importance of integrating research, education and healthcare. Indeed, a stated objective of the Strategy is to encourage integration between, universities, health services and medical research institutes amongst others to improve patient care and health outcomes.

Given its current role as a key placement for medical, nursing and allied health students and graduates and its existing affiliations with universities and teaching institutions, BHS is well placed to become a leader in teaching, training and research in regional Australia. Indeed, as the largest provider of public sector aged care it is ideally positioned to provide the focal point for dementia and gerontic research, including translational research.

Clinical Transition Services

- ▶ Further develop the *concept, structures and partnerships* that would:

- Consolidate higher level clinical training for undergraduate and post-graduate nursing, allied health and medical students. This includes senior registrar training in specific clinical disciplines;
- Develop a nurse practitioner program;
- Extend the training available for clinical nurse specialists in a number of areas (possibly including infection control, stomal therapy and/or wound management); and
- Develop advanced practice allied health positions in specified programs and clinics.

- ▶ Consolidate and progress career pathways across clinical and corporate professions – including pathways for special targeted groups such as the local Aboriginal population and those living with disability.

Staff Training & Development Services

- ▶ Develop (with necessary partners) the infrastructure and ICT that will enhance clinical training and skills development. This will include expanding the use of 'tele-presence' technology to enable virtual teaching and training to be undertaken from almost any setting;

- ▶ Develop an emerging leaders program;

- ▶ Support workforce redesign initiatives through:

- Consolidation and growth of *inter-professional learning*; and
- Implementation/development of scope of practice competency and capability frameworks that are contemporary, flexible, and evidence-based;

- ▶ Support sustainable education services through integration of these functions with local and regional health services; and

- ▶ Review the role and impact of nurse educators that can demonstrate quality outcomes in students.

Practice Development Services

- ▶ Support implementation of best practice by:

- Developing clinical leadership skills and attributes that transform the context and culture of care;
- Developing education and training programs that both build capacity in leadership to manage change (and staff resilience); and
- Embedding and strengthening accountability through the best practice in clinical learning environments framework.

Research is currently not cohesively undertaken at BHS. This needs to change be addressed as a matter of priority if research is to be used as a value-proposition for engaging and recruitment of staff and for building the reputation of BHS as a centre of excellence.

Research at BHS is now a more realistic opportunity with the partnership with Deakin University and BHS' active membership of the Western Alliance. The next step is to develop the capability to proactively drive research opportunities, and funding.

32. DHHS, *Digitising health – How information and communication technology will enable person-centred health and wellbeing within Victoria* (August 2016)

5.7 Community engagement

There is now a breadth of evidence to support the benefits of engaging the community in health service delivery. It is recognised that some of the benefits that accrue include greater consumer understanding of health issues and local priorities, improved *consumer and community* satisfaction, greater community ownership and investment, a sense of greater accountability for public funds together with a more responsive health service that provides better quality services.

BHS' *Strategic Plan 2017-2022* has committed to partnering with its community and pledging, amongst other things, to:

- ▶ Collaboratively develop new 'connected care' service models through:
 - Partnering with other public and private health care providers; and
 - Embracing 'connection to the community' through a broader human service paradigm, recognising that there is a strong link between social determinants and health;
- ▶ Involve consumers and volunteers in governance frameworks; and
- ▶ Provide clear and consistent leadership across the organisation and region to best achieve integrated and seamless care by engaging with the community regarding health development and health system improvement.

The recent past has, to an extent, strained the relationship between BHS and its community which must now be actively rebuilt.

Over the next several years, BHS must consolidate/strengthen partnerships with:

- ▶ The **broader community** to increase awareness of and greater affinity. This needs to occur through:
 - Engaging the Community Advisory Committee in discussions relating to the service profile, models of care, and issues that directly impact on patient access;
 - Engaging the community directly through the effective use of surveys/questionnaires, speaking engagements by senior executives and clinicians, media and other means; and
 - Fostering and empowering employees to act as advocates.

5.8 Organisational culture

Organisational culture is a critical enabler for success and can be described as:

A system of shared assumptions, values and beliefs, which governs how people behave in organizations. These shared values have a strong influence on the people in the organization and dictate how they dress, act, and perform their jobs.

In many businesses, organisational culture is seen as a key competitive differentiator including for branding, staff recruitment and building partnerships. The importance of organisational culture is starkly evident in environments such as professional sports clubs where the brand can be tarnished based on perceptions of organisational culture.

Strong organizational cultures enable and nurture the new behaviours, actions and investments required to navigate the many changes affecting the healthcare industry, particularly the transition to value-based care. But driving cultural improvement is not easy, and it does not happen overnight.

BHS has entered a new phase in its organisational structure which must in turn actively drive a new and better organisational culture if it is to succeed in attracting and retaining the best workforce, develop and grow effective partnerships and build credibility and support within its constituency, both internally and in the community.

BHS is beginning to shift organisational behaviours towards the development of a more positive, inclusive and cohesive organisational culture. The next step is to demonstrate cultural change through:

- ▶ Introduction of systemic, evidence-based approaches to organisational wide issues (desist with ad hoc and seat of the pants approaches to decision planning and decision making). Make certain that the right technical and other non-clinical skill sets are in place to ensure effective processes, systems and communication;
- ▶ Improving teamwork, engagement and communication to improve both patient outcomes and staff satisfaction;
- ▶ Providing strong leadership and vision. Leadership needs to be demonstrated across the organisation from the executive through to all levels of clinical and non-clinical management;
- ▶ Increasing ownership, accountability and trust across the organisation. Ensure that staff trust, and feel trusted; value and feel valued; inform and feel informed and engage and feel engaged. Good technical skills and systems need to be complemented by staff who are motivated to make a positive difference to each patient's experience;
- ▶ Measuring and demonstrating success by creating a vision and striving to achieve it with shared objectives and milestones that are acknowledged and celebrated; and

- ▶ Nurturing a culture that is contemporary and references best practice from around the world – where *'near enough is just not good enough'*.

6 Goals and strategies

This section summarises the main goals and related strategies in Sections 3, 4 and 5 above.

The goals and strategies are provided to support BHS in service development for its primary, secondary and tertiary the catchments. It is expected that these goals and strategies would form the basis of an implementation plan.

Goals	Strategies
Strategic positioning	
1. Regional leadership	1.1. Further develop BHS' regional leadership role in health care through: <ul style="list-style-type: none"> 1.1.1. Supporting other health services within the catchment through provision of a regional clinical governance approach; 1.1.2. Supporting regional service delineation by establishing appropriate clinical referrals, care pathways, secondary consultations that facilitates continuous clinical improvement across the catchment; 1.1.3. Development of a regional partnership plan; 1.1.4. Auspicing the development of clinical networks; and 1.1.5. Empowering and engaging consumers and carers. 1.2. Develop regional leadership by collaboratively developing new 'connected care' service models through: <ul style="list-style-type: none"> 1.2.1. Collaborative partnering with other providers; and 1.2.2. Broadening the service paradigm to include human services and social determinants of health.
2. Looking East	2.1. BHS play a role to support the delivery of sub-specialty services to the Bacchus Marsh district to reduce pressure on Western Health through referrals provided to BHS and services being delivered from BHS; and 2.2. Development of formal clinical relationships to become the major provider of general sub-specialty services to Moorabool Shire service providers.
3. Seven-day service	3.1. Progressively increase clinical and clinical support capability to provide a consistent clinical care 7 days per week, 24 hours per day.
4. Service re-design and patient focussed care	4.1. Progressively transform models of care, commencing with core services, to enhance patient access, experience, and outcomes – specifically: <ul style="list-style-type: none"> 4.1.1. Acute outpatients; 4.1.2. HITH; 4.1.3. Emergency department; 4.1.4. Elective surgery; 4.1.5. Subacute inpatient services; 4.1.6. Patient discharge; 4.1.7. Community-based services - duplication and gaps; and 4.1.8. Research, amongst others; and 4.2. Refocus services from historic practice and 'templates' to service models that recognise the patient perspective. 4.3. Undertake a pilot project that demonstrates increased 'patient value' for one or more different patient cohorts.
5. Self-sufficiency	5.1. Identify and take strategic action to address specialty areas that currently have lower than acceptable self-sufficiency, particularly key surgical specialties (refer 4.2.2)

Goals	Strategies
6. Aged Care	6.1. BHS provide for an Acute Care for the Elderly (ACE) program with a Rapid Assessment Medical Unit as its centrepiece; and 6.2. Position itself as a leader in residential aged care within the state through development of new service models, exploring delivery of niche services to high need client cohorts and developing expertise in specialised care for the elderly that can be disseminated more broadly to enhance research and training to create a reputation to attract a committed workforce.
7. Chronic Illness	7.1. BHS develop a framework for the delivery of chronic diseases that provides the common basis on which chronic disease services can be jointly planned and implemented and roles delineated.
Internal Medicine – Acute Care for the Elderly	
8. Establish an ACE program	8.1. Develop patient-centric model of care at BHS that has a specific focus on ACE patients based on a RAMU model, that breaks down physical and clinical barriers and include: <ul style="list-style-type: none"> 8.1.1. Clear criteria for early patient selection; 8.1.2. Designated clinical leadership; 8.1.3. A MDT approach with consistent general physician input and/or geriatrician assessment; 8.1.4. Joint nurse and allied health assessments; 8.1.5. Shared-care pathways with GPs and/or specialist physicians; 8.1.6. Pharmacy assessment/review; and 8.1.7. Clinical and non-clinical (electronic) discharge plan.
Internal Medicine – Cancer Services	
9. Support continued growth of cancer services	9.1. Support the GICS Strategy for chemotherapy services through improved coordination and standardised mechanisms to ensure consistent models of care; 9.2. Maintain partnership with a quaternary health service in relation to radiotherapy services; 9.3. Increase outreach services at other regional health services including expansion of services at Horsham; 9.4. Enhance collegiate approaches between medical oncology, radiotherapy and surgical oncology; 9.5. Develop integrated and collaborative community palliative care models that improves timely access, quality care and patient choice; 9.6. Explore innovative service models including for chemotherapy in the home; 9.7. Consolidate BHS' self-sufficiency; 9.8. Support the future provision of chemotherapy in Maryborough; and 9.9. Build a specialist medical and nursing oncology workforce at Ballarat.
Internal Medicine – Clinical Cardiology and Coronary Care	
10. Strengthen cardiology and coronary care	10.1. Strengthen cardiology services to provide a stronger sub-specialty for the region over the next five years including continued access to publicly accessible ambulatory cardiology diagnostic services in Ballarat and Horsham; 10.2. Develop consistent clinical pathways and protocols for discharge; 10.3. Establish formal collaborative links with all referring health services and clinicians in relation to interventional cardiology and a relationship with a metropolitan cardiology service for quaternary level clinical support; 10.4. Improve substitution and diversion strategies; and 10.5. Combine administration for clinical and interventional cardiology.
Internal Medicine – Clinical Cardiology and Coronary Care	
11. Integrate and extend endocrinology services	11.1. Better integrate endocrinology service with diabetes services across BHS acute service and primary/community settings; and 11.2. Develop workforce including diabetes nurse educators and allied health team to work with endocrinologist to provide a multidisciplinary approach to address secondary prevention of diabetes.

Goals	Strategies
Internal Medicine – Gastroenterology	
12. Priority development of gastroenterology	<p>12.1. Strengthen gastroenterology service to address current shortfall and meet projected demand;</p> <p>12.2. Develop nurse endoscopy to meet some of the expected growth in demand;</p> <p>12.3. Provide outreach endoscopy to reduce pressure on BHS theatre sessions; and</p> <p>12.4. In the event that local recruitment proves inadequate, investigate partnership model with Barwon Health to develop a critical mass of gastroenterologists to meet demand across both population centres.</p>
Internal Medicine – General Medicine	
13. Improve patient flow for core service	<p>13.1. Strengthen BHS specialist advisory service role to clinically support other health services within the region;</p> <p>13.2. Develop visiting/outreach or virtual physician specialists at other sites within the region;</p> <p>13.3. Improve patient flow management through formalising agreed clinical pathways and protocols including:</p> <ul style="list-style-type: none"> 13.3.1. Timely flow of clinical information between ED/SSOU to the wards; 13.3.2. Development of a RAMU service for complex elderly medical admissions; 13.3.3. Adopting specific admission policy and clinical protocols for ACSC including for HARP and HITH patients; 13.3.4. Implementing a more comprehensive clinical handover; 13.3.5. Consolidation of medical patients by clinical types to reduce times for ward rounds; 13.3.6. Improve clinical capability at QEC to manage more acute conditions; 13.3.7. Introduce Criteria-Led Admission and Discharge across all acute medical disciplines; and <p>13.4. Development of an operational model to utilise general medical specialists more efficiently.</p>
Internal Medicine – Neurology	
14. Develop an acute stroke unit and integrate patient flow	<p>14.1. Development of an 24/7 Acute Stroke Unit;</p> <p>14.2. Improve neurology clinic services to provide a better patient experience (also see Section 4.8.1);</p> <p>14.3. Maintain close clinical relationships with quaternary stroke services in Melbourne and the Victorian Stroke Telemedicine program;</p> <p>14.4. Develop a specialist sub-acute stroke program; and</p> <p>14.5. Enhance integration and patient flow between ED, sub-acute, SACS for stroke patients and pathways to primary care.</p>
Internal Medicine – Renal Medicine	
15. Enhance models of care by service setting	<p>15.1. Develop a strategy to meet the projected increase in demand and the consequential increase for dialysis chairs;</p> <p>15.2. Consolidate appropriate models of care by service setting including:</p> <ul style="list-style-type: none"> 15.2.1. Enhancing use of home dialysis; 15.2.2. Provision of community satellite dialysis services; and 15.2.3. Introduction of nocturnal dialysis; <p>15.3. Develop a hub relationship with Melbourne Health to extend specialist consultations via telehealth for individual patients as required;</p> <p>15.4. Collaborate with Ballarat Community Health on prevention and early intervention strategies relating to renal disease; and</p> <p>15.5. Examine strategies and timing for recruitment of an additional (third) renal physician to meet both local and regional outreach demand.</p>

Goals	Strategies
Internal Medicine – Respiratory Medicine	
16. Improve clinical pathways and strengthen substitution and diversion	<p>16.1. Improve clinical pathways and protocols for discharged patient, and protocols for referring outpatients back to primary health practitioners;</p> <p>16.2. Implement substitution and diversion strategies for chronic respiratory conditions such as lung function clinics; and</p> <p>16.3. Improve clinical pathways and effective referral networks to specialised SACS programs.</p>
General Surgery	
17. Increase market share	<p>17.1. Progressively develop capacity and capability to service the projected growth in demand for general surgery services including planning for additional theatres and bed capacity;</p> <p>17.2. Further develop general surgery including provision of outreach to other health services;</p> <p>17.3. Grow the general surgical workforce to cater for growth and outreach noted in the above points;</p> <p>17.4. Improve patient flow management through institution of agreed clinical pathways and protocols, including:</p> <ul style="list-style-type: none"> 17.4.1. Timely internal flow of clinical information; 17.4.2. Specific admission policy and protocols; 17.4.3. Comprehensive clinical handover; 17.4.4. Development of Criteria-Led Admission and Discharge; and <p>17.5. Establish a single point of contact within BHS, “a clearing house” relating to all complex discharges requiring subsequent patient referral or coordination with community bases services, aged care or other health services.</p>
Sub-Specialty Surgery	
18. Strategic development of sub-specialty surgery	<p>Breast Surgery</p> <p>18.1. Develop structures that result in closer and more collaborative clinical decisions between breast surgeons, radiotherapy and medical oncology.</p> <p>ENT</p> <p>18.2. Develop hub-spoke delivery models for ENT to support regional demand; and</p> <p>18.3. Examine establishment of an ambulatory paediatric unit to cater for post-operative day procedures.</p> <p>Gynaecology</p> <p>18.4. Develop hub-spoke delivery models for gynaecology to support regional demand together with outreach clinics;</p> <p>18.5. Explore opportunities for joint appointments across health services; and</p> <p>18.6. Examine opportunities to extend oncological gynaecology.</p> <p>Neurosurgery</p> <p>18.7. Examine the viability and clinical capability of developing spinal neurosurgery as a sub-speciality.</p> <p>Ophthalmology</p> <p>18.8. Further extend the visiting specialist and sessional appointment service model for ophthalmology at Ararat to other hospitals within the region.</p> <p>Orthopaedics</p> <p>18.9. Grow orthopaedics capacity and capability at BHS including introduction of hub-spoke model through visiting surgeons at other hospitals including Bacchus Marsh, Ararat and Maryborough;</p> <p>18.10. Develop formal and consistent clinical pathways for emergency orthopaedic cases;</p> <p>18.11. Progressively increase the medical workforce to address the current low self-sufficiency in orthopaedics;</p> <p>18.12. Develop community-based diversion and substitution programs to reduce admissions;</p> <p>18.13. Provide a dedicated emergency theatre that can be available for emergency orthopaedic cases, general surgery and obstetrics; and</p> <p>18.14. Explore opportunities for internal bundled payments for episodic care. (see 4.1)</p> <p>Plastic Surgery</p> <p>18.15. Address the current gap in plastic surgery.</p>

Goals	Strategies
	<p>Urology</p> <p>18.16. Examine urology as a clinical specialty to form part of the strategic direction to better support the specialist health needs of Moorabool and Golden Plains Shires; and</p> <p>18.17. Address waiting lists for urology outpatient clinics.</p> <p>Vascular surgery</p> <p>18.18. Consider the potential for increasing the market share for vascular surgery within a general surgeon framework including as an outreach service model for the region.</p>
Women's & Children's – Women's Health	
19. Spectrum of services	<p>19.1. Develop preventative strategies for women's health including improving health literacy and proactive action on preventing and identifying domestic violence issues; and</p> <p>19.2. Improving access to reproductive health and family planning services and prevention and treatment of STIs.</p>
Women's & Children's - Maternity	
20. Regionally responsive maternity services	<p>20.1. Further develop BHS regional role in maternity through:</p> <ul style="list-style-type: none"> 20.1.1. Protocols for births at small health services; 20.1.2. Supporting GPs to continue undertaking uncomplicated births; 20.1.3. Providing training for student midwives from other health services; <p>20.2. Review factors influencing service quality in relation to the relatively high rates of</p> <p>20.3. Develop a parenting service for mothers under 20 years, indigenous women and young fathers;</p> <p>20.4. Progressively develop the ambulatory service model to increase opportunities for multidisciplinary team involvement and greater off-site delivery of services;</p> <p>20.5. Examine potential for developing/expanding nurse-led clinics; and</p> <p>20.6. Actively support the Ballarat Community Health "Sleep and Settling" service.</p>
Women's & Children's - Paediatrics	
21. Excellence in paediatric care	<p>21.1. Examine future redevelopment of ED to design a segmented children's area including a separate waiting area, triage and processing system for children;</p> <p>21.2. Development of an Ambulatory Paediatric Unit that combines short-stay paediatric area proximate to ED and same day surgery area;</p> <p>21.3. Progressively implement a specialist outreach service into the surrounding regional areas as an identified significant gap;</p> <p>21.4. Develop a community paediatric service with sub-specialities addressing at risk children including refugees, early on-set diabetes, neonatal services, behaviour management, drug and alcohol services amongst others; and</p> <p>21.5. Enhance the Victorian Paediatric Rehabilitation Service to minimise travel to Melbourne.</p>
Hospital-in-the-Home	
22. Revitalise HITH services	<p>22.1. Develop HITH services beyond traditional range of services to include chemotherapy and cardiology services amongst others;</p> <p>22.2. Ensure that a revitalised HITH service includes:</p> <ul style="list-style-type: none"> 22.2.1. Active senior medical management and medical specialist liaison; 22.2.2. Close connectivity between HITH, ED and acute wards supported by clinical protocols and referral pathways; 22.2.3. Active patient management of HITH patients; 22.2.4. Investment in technology for HITH to ensure real time interaction including hand-held devices; 22.2.5. Extending HITH hours more consistent with a 7-day service; and 22.2.6. Improving nurse workforce capacity and capability to manage acute conditions in a community/home setting.

Goals	Strategies
Clinical Support - Anaesthetics	
23. Future-proofing a cornerstone of surgical activity	<p>23.1. Ongoing development of the anaesthetic workforce through recruitment, effective training and retention will be required and should include:</p> <ul style="list-style-type: none"> 23.1.1. Maintaining the current hybrid model of staff and VMO anaesthetists; and 23.1.2. Further extend the anaesthetist registrar training program in anticipation of meeting increased demand for theatres and ambulatory services; <p>23.2. Enhance the pain management service to meet increasing and current unmet demand;</p> <p>23.3. Establish a region-wide development of clinical governance for anaesthetics.</p>
Clinical Support – Peri-Operative Services	
24. Address capacity and operational efficiencies	<p>24.1. Undertake detailed analysis of variations in utilisation across theatres at BHS including:</p> <ul style="list-style-type: none"> 24.1.1. Delays between operating sessions; 24.1.2. Punctuality and other practices that delay session start times; 24.1.3. Delays in transferring patients to and from theatres; 24.1.4. Adequacy of infrastructure, "fit for purpose" assessment; <p>24.2. Institute a dedicated emergency theatre to address ALOS for patients awaiting surgery and improve operational efficiency by reducing cancellation of elective surgery.</p>
Clinical Support – ICU/CCU	
25. Enhance regional leadership for ICU/CCU service	<p>25.1. Enhance the ICU/CCU capacity within the region by strengthening/developing cooperative relationship with St John of God Ballarat and Wimmera Health Care Group;</p> <p>25.2. Establish clinical links to better service the region including:</p> <ul style="list-style-type: none"> 25.2.1. Formal clinical links across the three health services; 25.2.2. Better use of telehealth; 25.2.3. Provision of secondary consultations and advice; 25.2.4. Staff rotations between sites. <p>25.3. Consider training and development approaches to address the current financial disincentives to nurses pursuing critical care training;</p> <p>25.4. Examine viability of establishing four additional telemetry beds on acute wards to link with the ICU telemetry system.</p>
Clinical Support – Allied Health	
26. Effective allied health service pivotal to driving service system change	<p>26.1. Develop a plan to identify high priority areas for additional allied health resource to have the greatest impact on patient care in a 7-day service system;</p> <p>26.2. Review operational management of allied health with the view to reduce overhead costs associated with non-clinical time of heads of units;</p> <p>26.3. Consider areas for introduction of advanced scope of practice to expand the role of senior allied health practitioners to:</p> <ul style="list-style-type: none"> 26.3.1. Improve care integration and patient outcomes and though substituting of care currently delivered by medical specialists.; 26.3.2. Develop an evaluation framework that assesses the relative impact of allied health services on patient outcomes and patient flow; 26.3.3. Ensure involvement of the appropriate allied health professional in the patient episode of care from the outset, particularly as part of the RAMU team; <p>26.4. Examine feasibility of developing a comprehensive Grampians Region allied health strategy together with other providers, that includes local training, recruitment and outreach and mentoring and professional development opportunities.</p>
Clinical Support - Pharmacy	
27. Pharmacy as a 7-day service	<p>27.1. Progressively shift pharmacy to ensure 7-day coverage commensurate with the progressive move to a 7-day consistent service at BHS;</p> <p>27.2. Examine the feasibility of satellite support to other hospitals through:</p> <ul style="list-style-type: none"> 27.2.1. Contracting with other health services in the region to provide their pharmacy functions; and/or 27.2.2. Supporting and supplementing other health services existing clinical pharmacy service; and/or

Goals	Strategies
	<p>27.2.3. Supporting a regional locum service at smaller hospitals, as part of a regional leadership role.</p> <p>27.3. Examining the feasibility of developing the role of a 'community liaison pharmacist' that could support residential aged care, pharmacotherapy programs, and GPs with medication reviews;</p> <p>27.4. Examining the feasibility and undertake a business case for the roll-out of electronic prescribing;</p> <p>27.5. Facilitate improvements to patient flow through working with clinical units to improve timely notification of discharge requests.</p>
Clinical Support – Medical Imaging	
28. An integral service to 7-day service	<p>28.1. Examine the feasibility of developing BHS MI services as an 'agency hub' for the digital capture, transfer, storage and retrieval of medical images for other hospitals in the region to support their respective medical imaging services;</p> <p>28.2. Actively engage in workforce development/recruitment to position BHS MI to grow to an active 7-day service;</p> <p>28.3. Undertake a feasibility study for the expansion of BHS as a MI service at other health services in the region; and</p> <p>28.4. As part of the master planning process, examine more optimal physical positioning of the medical imaging service.</p>
Clinical Support – Bariatric Services	
29. A regional model for bariatric services	<p>29.1. BHS adopt a leadership role in developing a collaborative regional model for bariatric services that includes:</p> <p>29.1.1. An audit of bariatric equipment and aids requirements;</p> <p>29.1.2. Development of a plan relating to clinical referrals and pathways between BHS and other health services;</p> <p>29.1.3. Requirements for bariatric equipment and aids; and</p> <p>29.1.4. Workforce skill requirements and training.</p> <p>29.2. Identify the extent and type of bariatric surgery suitable to be undertaken at BHS.</p>
Sub-acute inpatient services	
30. Improve the subacute service model	<p>Subacute inpatient service</p> <p>30.1. Change the model of care to more appropriately deliver effective subacute care for more complex patients by:</p> <p>30.1.1. Siting subacute acute beds on the acute campus for more complex subacute patients</p> <p>30.1.2. Integrating subacute beds with RAMU on the acute site;</p> <p>30.1.3. Enhancing subacute to operate a high clinical capability on a 7-days basis;</p> <p>30.1.4. Develop a more responsive GEM service to better complement HITH and HARP for ED patients who would benefit from a GEM model of care;</p> <p>30.1.5. Progressively develop care pathways for many common conditions of GEM patients;</p> <p>30.1.6. Develop medical specialist models that provide sufficient clinical coverage; and</p> <p>30.1.7. Enhancing medical and nursing competencies at the QEC to enable management of a wider range of patients.</p> <p>30.2. Strengthen patient flows by:</p> <p>30.2.1. Developing specific patient pathways and protocols for the main conditions progressing to sub-acute care and through real-time monitoring of key decision points;</p> <p>30.2.2. Improving timeliness of GEM and rehabilitation assessments in acute and ED beds; and</p> <p>30.2.3. Continued growth of transition care;</p> <p>30.3. Focus on further development of the workforce to empower staff to operate more independently across a range of settings and utilising staff more effectively by augmenting with nursing and allied health assistants;</p> <p>30.4. Examine the viability of specialised MBS clinics in pain management, geriatrics at other health services within the catchment; and</p>

Goals	Strategies
	<p>30.5. As the provider of the most complex sub-acute service in the region, ensure that BHS performs the role of centre of expertise and support for the region as a whole.</p> <p>GEM specific services</p> <p>30.6. Reassess the service model to provide a more integrated service suited to a regional sub-acute referral centre, which is supported by a workforce that is facilitated to enhance technical nursing skills and has access to timely medical support on a 24/7 basis;</p> <p>30.7. Consolidate gains in ALOS efficiencies that have been achieved in the last six months;</p> <p>30.8. Strengthen linkages with ambulatory programs and home-based GEM programs;</p> <p>30.9. Integrate GEM with the RAMU model to maximise patient outcomes and patient flow; and</p> <p>30.10. Support other providers of GEM services in the region, consistent with the expectations of a Level 4 GEM service.</p> <p>Rehabilitation services</p> <p>30.11. Continue active participation as an accredited training site for AFRM trainees;</p> <p>30.12. Enhance the skill sets and competencies of rehabilitation ward staff to better manage more complex rehabilitation patients;</p> <p>30.13. Enhance the team approach to care;</p> <p>30.14. Develop a rehabilitation program within the acute setting to minimise delays in access to subacute care;</p> <p>30.15. Develop a more responsive and flexible rehabilitation-in-the-home program;</p> <p>30.16. Progressively develop care pathways for conditions from acute to primary care;</p> <p>30.17. Examine opportunities for BHS to develop its neurological rehabilitation with respect to specialist areas including ABI, MS amongst others with potential collaborations with specialist services such as Calvary Health Care Bethlehem and the Florey Institute of Neuroscience and Mental Health, amongst others.</p> <p>Palliative care</p> <p>30.18. Ensure a continued focus on the integration between inpatient palliative care at BHS and community-based palliative care delivered by Ballarat Hospice to ensure best care outcomes;</p> <p>30.19. Ensure timely referral of services to palliative care from medical specialists, GPs and community health services;</p> <p>30.20. Examine options for increasing respite opportunities – residential and community; and</p> <p>30.21. Develop and consolidate specialist palliative care in Grampians Region.</p>
Ambulatory Services - Outpatients	
31. Outpatient clinic redesign	<p>31.1. Undertake a comprehensive redesign project that includes:</p> <p>31.1.1. Retaining a central process for accepting referrals;</p> <p>31.1.2. Establishing triage and booking systems that are owned by each clinical stream;</p> <p>31.1.3. Eliminating inefficient practices such as the double handling of bookings beyond six weeks;</p> <p>31.1.4. Reconsider the value of clinical nurses assigned to clinics;</p> <p>31.1.5. Establish internal performance benchmarks in relation to key measures as determined through co-design;</p> <p>31.1.6. Develop clinical guidelines for each specialty;</p> <p>31.1.7. Introduce standard booking templates for each specialty, not each clinician;</p> <p>31.1.8. Develop formal processes for diversion and substitution for inappropriate referrals; and</p> <p>31.1.9. Consolidate the management of all outpatients.</p>
Ambulatory Services – Health Independence Programs	
32. Enhanced HIP and SACS services	<p>32.1. Undertake a review of the HIP service models to assess effectiveness of referral process, transparency of access criteria and excessive nature of current waiting times;</p> <p>32.2. As part of the review, move progressively to a 7-day service model; and</p> <p>32.3. Examine means to increase workforce capability for both nursing and allied health to manage higher acuity/complexity of clients.</p>

Goals	Strategies
Ambulatory Services – Community-based primary care & chronic disease services	
33. The pivotal role of community-based health services	<p>33.1. BHS adopt a leadership role in developing coordinated services between the various providers consistent with a CDM framework;</p> <p>33.2. The BHS Master Planning process examine the feasibility of collocating all ambulatory and community-based services;</p> <p>33.3. BHS develop a clearing house concept for discharge planning for complex care patients;</p> <p>33.4. Enhance the specialised nurse and allied health capability in the to support community-based programs including as the basis to further develop the HITH, GITH, RITH diversion and substitution clinics.</p>
Ambulatory Services – Illness prevention	
34. Develop a health promotion agenda appropriate for BHS role	34.1. Identify key areas appropriate to BHS’s role for health promotion. Specifically targeting concepts relating to illness secondary prevention with chronic disease; oral health, complex care and specific specialist clinics amongst other (refer 4.8.5)
Ambulatory Services – Dental services	
35. Maintain BHS position as best dental service	<p>35.1. Maintain BHS dental service as an innovative and efficient public dental service including encouraging local workforce training opportunities and efficiencies;</p> <p>35.2. Work further to improve access and reduce waiting times; and</p> <p>35.3. Maintain and extend the teaching role with Latrobe Dental School.</p>
Ambulatory Services – Centre Against Sexual Assault	
36. Enhance and integrate CASA services	<p>36.1. Look to locate CASA in a more appropriate location;</p> <p>36.2. Recognise and respond to the increasing overlap of traditional CASA services with current domestic violence issues and move to provide a more integrated model of service; and</p> <p>36.3. As part of the increasing focus on family violence issues, consider development of a sexual abusive behaviour treatment service for younger males aged 15-18 years.</p>
Ambulatory Services – Alcohol and other drugs	
37. Collaborative approach to improve access to AOD services	<p>37.1. BHS to work collaboratively with other providers to address gaps in AOD services including:</p> <p>37.1.1. Specialist addiction medicine capability in the region;</p> <p>37.1.2. Access to a residential community AOD rehabilitation facility;</p> <p>37.1.3. Establish dual diagnosis clinics;</p> <p>37.1.4. Streamline pathways to accessing AOD services;</p> <p>37.1.5. Integrate AOD programs with BADOC; and</p> <p>37.1.6. Support programs that provide intensive, short duration therapies.</p>
Ambulatory Services – National Disability Insurance Scheme	
38. BHS engagement with NDIS	38.1. Examine opportunities for BHS to become a major provider of core disability services within the market including provision of peripheral, brokered services.
Emergency Department	
39. Improve service access and enhance the patient experience of ED	<p>39.1. NEAT targets are for all categories with the exception of resuscitation have slipped well below target requirements and must be addressed as a matter of priority;</p> <p>39.2. As part of the process for addressing NEAT targets, ED treatment space capacity must be increased significantly - projected to be grown from the current 24 spaces to 58 spaces (excluding SOU beds);</p> <p>39.3. Improve in-reach service to RACS to prevent unnecessary transfer of aged residents that can be treated in-situ rather than transferred to ED;</p> <p>39.4. Ensure the capital redevelopment of ED better recognises the need for effective streaming for:</p> <p>39.4.1. Resuscitation and emergency;</p> <p>39.4.2. Separated paediatric waiting area and treatment space;</p> <p>39.4.3. A specialised mental health treatment area;</p> <p>39.4.4. Primary care type fast track treatment area;</p>

Goals	Strategies
	<p>39.4.5. General cubicles; and</p> <p>39.4.6. Short-stay observation area;</p> <p>39.5. Improve the model of care across acute through the enhanced and timely use of diversion and substitution strategies, including:</p> <p>39.5.1. Establish a RAMU-like service for acute complex elderly patients;</p> <p>39.5.2. HARP and HITH with 7-day availability;</p> <p>39.5.3. Direct admissions to sub-acute beds based on clear protocols;</p> <p>39.5.4. Access to a responsive clinical mental health service;</p> <p>39.5.5. Continue to have a flexible use of the SSU;</p> <p>39.5.6. Establishment of a dedicated paediatric ambulatory area;</p> <p>39.6. BHS adopt a more proactive regional leadership role in emergency medicine through:</p> <p>39.6.1. Enhanced use of ICT linkages with other health services in the region;</p> <p>39.6.2. Support clinical governance and service quality in emergency care through the appointment of a regional Director of Clinical Governance in Emergency Medicine;</p> <p>39.6.3. Facilitate development of formal clinical pathways and protocols for the transfer of patients from other health services;</p> <p>39.6.4. Build formal relationships that support the teaching and training in emergency medicine for medical and nursing staff at other health services; and</p> <p>39.6.5. Support staff rotations from other health services;</p> <p>39.7. Build clinical capability in ED to support BHS transitioning to more consistent clinical capability across 24 hours and 7-days;</p> <p>39.8. Effectively utilise a NP role in ED for the fast-track PCT patient stream; and</p> <p>39.9. Ensure better alignment and responsiveness from mental health to ED.</p>
Residential Aged Care	
40. Aggressively position residential aged care	<p>40.1. Re-evaluate market position to address increasing competition and consumer expectations and target more challenging and higher care need residents;</p> <p>40.2. Develop residential in reach (RIR) to all cater for all RACS providers;</p> <p>40.3. Undertake the business case for niche services in addition to regular RACS services which could cater for:</p> <p>40.3.1. Emerging client groups in aged care including culturally diverse clients;</p> <p>40.3.2. Younger client cohorts including those requiring special needs arising from acquired brain injury or stroke; and</p> <p>40.3.3. Clients with neurodegenerative diseases, involving the development of clinical partnerships with quaternary providers;</p> <p>40.4. In collaboration with a partner in tertiary training and respective medical faculties, developing BHS RACS as a centre of excellence in training in aged care, dementia and care of clients with specialised needs.</p>
Workforce Development	
41. Articulate a value proposition for staff and build a resilient workforce	<p>41.1. Create a strong service-oriented culture that is actively measured and managed;</p> <p>41.2. Develop clinician leaders across the organisation consistent with the fostering of a positive, vibrant and high-performance work culture;</p> <p>41.3. Ensure systems change is supported by the development of people skills and change management capability to maximise the effective utilisation of new (and existing) technologies;</p> <p>41.4. Ensure that there is a growth path for people wanting to advance their careers within BHS;</p> <p>41.5. Develop a workforce plan to identify areas of skill gaps and enable smooth transition with succession planning;</p> <p>41.6. Develop a comprehensive medical recruitment and retention plan for the next ten years, including specialist medical staff/VMOs, and the medical configuration of registrars, HMOs and supervisory structures.</p> <p>41.7. Develop a nursing and midwifery plan that caters for both general and specialised nursing recruitment and retention and targets advanced practice nursing, and nurse assistants, in areas of workforce deficiency;</p> <p>41.8. Develop an allied health workforce plan to ensure strategic recruitment and retention at BHS which focuses on the potential of allied health staff to influence improving integration of care and patient outcomes.</p>

Goals	Strategies
Clinical Governance and Patient Safety	
42. Eliminating avoidable harm and strengthening quality of care	<p>42.1. Strengthen system-wide clinical governance and patient safety by ensuring clinician engagement and ownership through:</p> <p>42.1.1. Developing 'clinical councils' that support clinical governance, consistent clinical practice, patient referral and escalation protocols, and supporting medical workforce capability; and</p> <p>42.1.2. Establishing joint working parties for service specific initiatives;</p> <p>42.1.3. Establishing common/shared clinical governance structures;</p> <p>42.1.4. Establish joint credentialing of clinical staff; and</p> <p>42.1.5. Develop sub-regional clinical governance appointments in maternity, anaesthetics, geriatrics and emergency medicine, amongst others.</p>
Service Integration and Collaboration	
43. Collaborate to achieve new ways of delivering care	<p>43.1. Develop a more internally integrated service system and improve the seamless care for patients including development of a 'clearing house' for all complex discharges which are passed across to a central clearing house to link discharged patients into services.</p>
Physical Infrastructure	
44. Develop capital infrastructure to meet future service demand	<p>44.1. Increase acute and sub-acute service capacity, including growing:</p> <p>44.1.1. Same-day acute beds from 50 to 68;</p> <p>44.1.2. Multi-stay acute beds from 230 to 362;</p> <p>44.1.3. Same-day sub-acute beds from 50 to 68;</p> <p>44.1.4. Multi-stay sub-acute beds from 245 to 410.</p> <p>44.2. Procedural/surgical bed capacity to be increased from 86 to 92 beds;</p> <p>44.3. Increase same day surgical and endoscopy capacity from 14 to 19 beds;</p> <p>44.4. Increase ED capacity from the current 24 cubicles to 58 cubicles;</p> <p>44.5. Provide for increased procedural capacity that includes 8 general theatres, 2 general low complexity procedure rooms and 2 endoscopy suites by 3036-37;</p> <p>44.6. Consider development of a collocated ambulatory care centre for acute, subacute and primary & community health services with increased capacity from 36 to 51 consultation rooms. (Excluding maternity and paediatrics)</p>
Community Engagement	
45. Strengthen community engagement and partnerships	<p>45.1. Engage the Community Advisory Committee in discussions relating to the service profile, models of care, and issues that directly impact on patient access;</p> <p>45.2. Engage the community directly through the effective use of surveys/questionnaires, speaking engagements by senior executives and clinicians, media and other means; and</p> <p>45.3. Foster and empower employees to act as advocates.</p>
Organisational Culture	
46. Organisational culture as a key to competitive differentiation	<p>46.1. Demonstrate cultural change through:</p> <p>46.1.1. Adoption of evidence-based approaches to organisational wide issues;</p> <p>46.1.2. Improving teamwork, engagement and communication to improve both patient outcomes and staff satisfaction;</p> <p>46.1.3. Providing strong leadership and vision;</p> <p>46.1.4. Increasing ownership, accountability and trust across the organisation and measuring and demonstrating success through shared vision and striving to achieve it as a team; and</p> <p>46.1.5. Nurturing a culture that is contemporary and references best practice from around the world.</p>

Appendix 1 Planning process

A1.1 Broader planning process

The Service Plan is part of a body of analysis that is setting the future directions of BHS, including:

- ▶ The Ballarat Health Services *Strategic Plan – 2017 to 2022*;
- ▶ The Ballarat Health Services *Service Plan – 2017 to 2027*; and
- ▶ The Ballarat Health Services *Master Plan (to be developed)*.

A1.2 Service plan

1.1.1 Project Management

The project was overseen by a project Reference Group that included representation from the executive of BHS and representatives from DHHS. Membership included:

- ▶ Mr Dale Fraser, CEO BHS (Chair);
- ▶ Mr Ben Kelly, Executive Director, Acute Operations;
- ▶ Ms Jodie Cranham, Executive Director, Aged Operations;
- ▶ Mr Russell Hardy, Director Corporate Services;
- ▶ Ms Dianne Passalick, Project Manager, Infrastructure, Planning & Delivery, DHHS;
- ▶ Ms Jenny Tunbridge, Manager, Performance, Quality and Governance, Grampians Region, Rural Health; and
- ▶ Mr David Kaye, Manager, Rural Health - North & West, Commissioning, Performance & Regulation.

A1.1.2 Methodology

The methodology for the Service Plan, provided schematically in Figure A1-1, included an environmental analysis to ensure that the main external drivers that were likely to impact on the Service Plan were known and understood and included analysis of the policy context, industry trends likely to impact on BHS, demographic analysis of the wider catchment including socio-economic and health status together with a service profile analysis that examined the current service delivery role played by BHS to the wider catchment. This work was complemented with demand through to 2036/37 by each specialty and analysed for the relevant acute and subacute services, from both the catchment basis and for BHS.

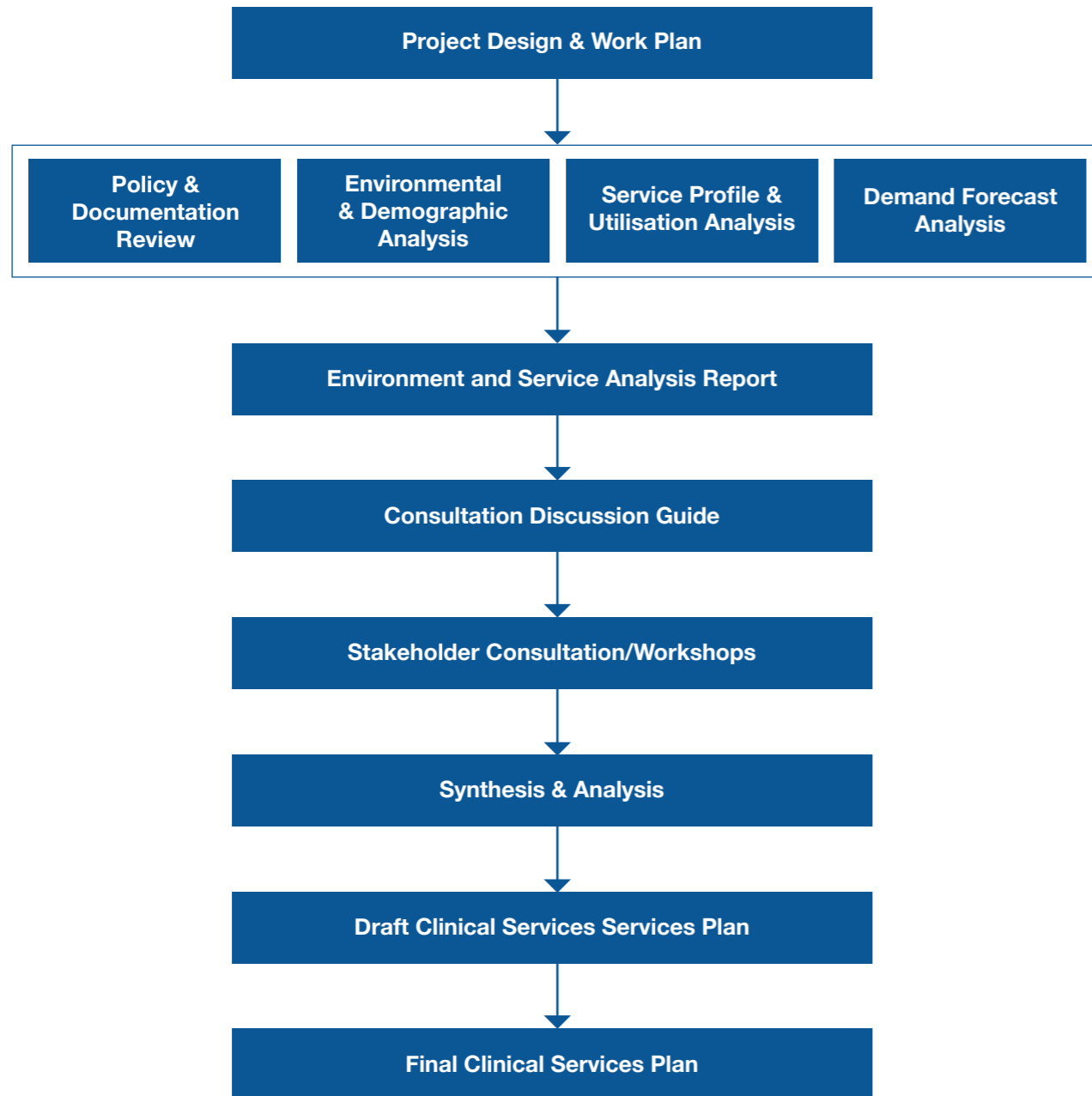
The information gleaned from the above stages was used to inform development of a consultation paper for the extensive consultations undertaken to inform development of this service plan. The extent of consultations is provided in Appendix 2.

Following consultation, the information gathered both qualitatively and quantitatively from the above stages was synthesised to:

- ▶ Identify/clarify service system planning issues relating to expected role (delineation) and service capability;
- ▶ Identify service gaps, and how these gaps can be addressed, or services augmented consistent with role based on forecast demand. This would lead to considerations around self-sufficiency/market share for BHS and the broader catchment;
- ▶ Consider service development needs for each clinical stream;
- ▶ Service synergies and referral patterns between providers in the catchment as well as with external providers in the sub-region, region and Melbourne. The main objective is to ensure improved service integration;
- ▶ Residential aged care service provision;
- ▶ Advice in relation to appropriate changes to the current service model;
- ▶ Current and emerging issues by clinical stream;
- ▶ Priority clinical areas for service development;
- ▶ Critical mass and service capability issues with reference to service capability frameworks where these are relevant;
- ▶ Workforce development;
- ▶ Opportunities for service development/enhancement; and
- ▶ Identifying the **key enablers** that will be required to support the service gaps and changes to the service model.

The final stage of this process involved drafting the Service Plan that ensures consistency with the BHS Strategic Plan, dovetails with the policy context including the *Design, Services and Infrastructure Plan for rural and regional Victoria*, identifies current and emerging issues in all clinical streams (except mental health), outlines overarching service models that take into consideration service integration and identifies key enablers.

Figure A1-1: Project Methodology



Appendix 2 Consultations

LIST OF CONSULTATIONS BY TYPE	
Medical Consultations	Medical Consultations
A/Chief Medical Officer	Manager Subacute Ambulatory Care Services
Gastroenterology	Director of Nursing – Queen Elizabeth Centre
ENT	Nurse Unit manager -Outpatients
Emergency Department x5	Directors of Nursing - Residential Aged Care x 3
Maternity – O&G	Hospital in the Home Manager
Neurology	Statewide Equipment Program (SWEP)
BAROC x2	Nurse Unit Manager - Inpatient Rehabilitation
Renal	Nurse Unit Manager – Geriatric Evaluation & Management
Intensive Care x2	Director, Radiography & Diagnostic
Infectious Diseases	Deputy Director, Radiology
Urologist	Assistant Manager of Engineering and Biotechnology
CMO	Decision Support Manager (Activity Costing)
Anaesthesia	Director of Pharmacy
Geriatric Medicine	Aboriginal Liaison Officer
Endocrinology	Manager Dental
Surgical Services	Manager - CASA
Internal Medicine/ Gen Med/ Respiratory	Manager - Community Programs, HIP
Subacute	Information Technology x 4
Oncology	Nurse Unit Manager - Gandarra (Palliative Care)
Pain Management	Manager, Education and Training
Interventional Cardiology	Director, Medical Education and Research
Orthopaedics	Clinical & Research Governance Officer
Executives	Nurse Unit Manager - Cardiovascular Suite
Executive Director - Aged Operations	Nurse Unit Manager - Operating Suite
Executive Director - Resources & Planning	Allied Health Manager - Psychology
Chief Nurse & Midwifery Officer	Allied Health Manager - Social Work
Executive Director - Acute Operations	Allied Health Manager - Physiotherapy
Executive Director - Primary & Community Care	Allied Health Manager - Prosthetics and Orthotics

LIST OF CONSULTATIONS BY TYPE	
Medical Consultations	Medical Consultations
Executive Director - People & Culture	Allied Health Manager - Speech Pathology
Chief Executive	Clinical Physiotherapist
External Stakeholders	Clinical Occupational Therapy
Executive Officer Ballarat Hospice Care	DON - Perioperative & Patient Flow
Uniting Care Ballarat	DON - Acute Inpatient
Primary Health Network x2	DON - Women and Children
St John of God – Ballarat x3	DON -Surgical Access
Manager Dorevitch Pathology	Senior Clinical Physiotherapist (Extended Scope of Practice)
Ballarat Community Health Services x4	Ballarat and District Aboriginal Cooperative x2
Ballarat District Nursing	Ambulance Victoria
Community Advisory Committee x3	Ballarat City Council
Universities	Deakin University
Australian Catholic University x2	Health Services
Maryborough District Health	Wimmera Health Care Group
Hepburn Health Service x2	Djerriwarrh Health Service
East Grampians Health Service	Stawell Regional Health
Ballan Health Inc.	Wimmera Health Care Group
Department of Health & Human Services	Regional Office x3
Rural Health x2	Cancer
Maternity x2	Statewide Planning x2
Aged Care x2	Subacute

Appendix 3 Adapted Wagner Model

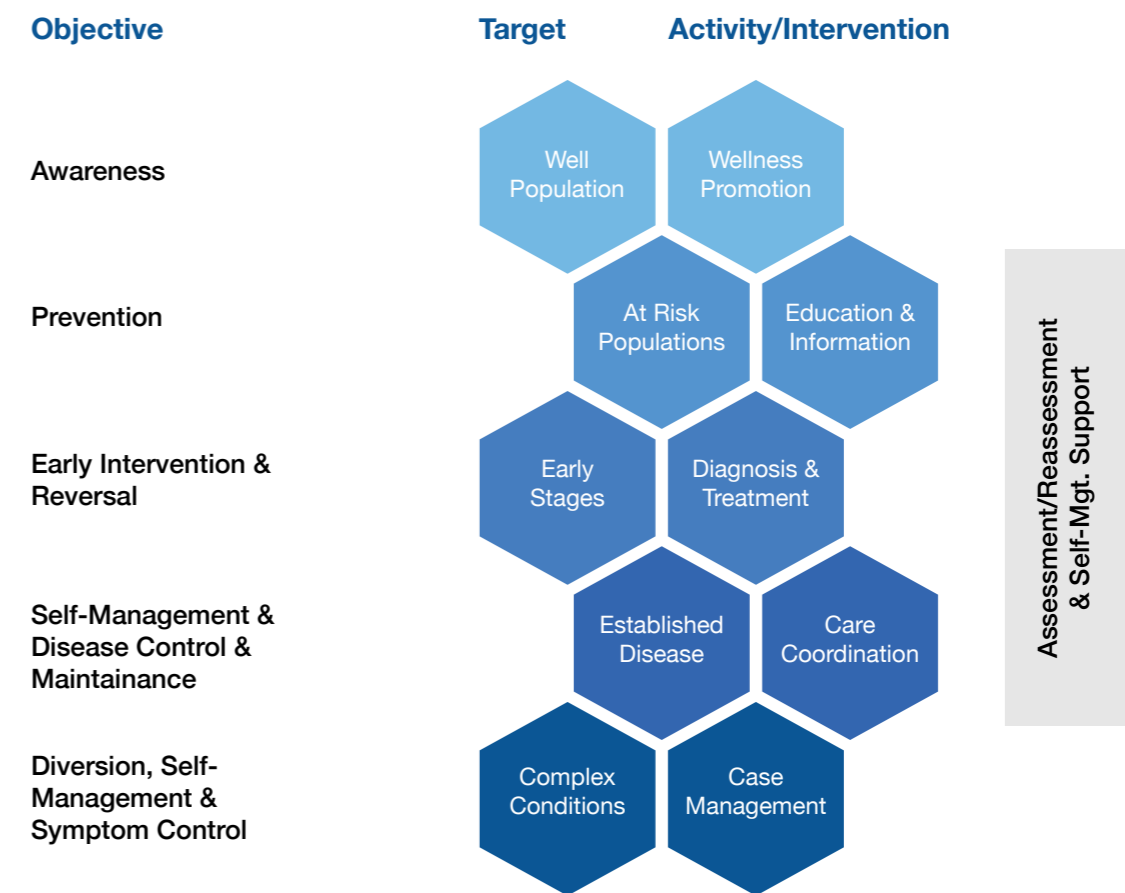
The Wagner Chronic Care model identifies the essential elements of a health care agency or system that encourages high quality chronic disease care. The elements are interdependent components, building upon one another.

The model is a population-based approach that creates practical, supportive, evidence-based interactions between an informed, activated patient and a prepared, proactive clinical team.

The specific elements identified by the Wagner Model are: the community; the health system; self-management support; delivery system design; decision support, and clinical information systems.

The model has been adapted by Aspex Consulting to focus on objectives across the continuum of care and intervention points for chronic disease management, starting from primary prevention through to disease management in the most chronic and complex cohort.

Figure A36-1: Chronic Disease Management Framework



LEVEL OF INTERVENTION	OBJECTIVE	TARGET	ACTIVITY/INTERVENTION
Primary Prevention	Awareness	Whole of population	Population based wellness promotion
Secondary Prevention	Prevention	Targeted at-risk population	Advice, education and information for at-risk populations with early signs and symptoms
Early intervention and focus on self-management ³³	Early Intervention & Reversal	Individual at early stages of disease	Diagnosis and treatment of individuals in the early stages of disease
Self-management support with some care coordination needs to prevent avoidable hospitalisations	Self-management & Disease Control and Maintenance	Individual at established stage of disease able to be managed in the community setting	Care coordination for people with established disease to ensure seamless care.
Risk of frequent hospitalisation Self-management support and significant care coordination needs	Diversion, Self-Management & Symptom Control	Individual with complex disease predominantly managed in an acute care setting	Case management and Health Independence Programs that target people with complex issues resulting from their disease. Case management is required for patients requiring multi-disciplinary management with particularly complex and chronic care needs, or frequent users of the ED.

33. Self-management includes utilisation of education about specific chronic conditions, treatment options, linking with peers and group programs and accessing social and psychological supports