



## SERVICE PLAN:

# WESTERN WHEATBELT HEALTH DISTRICT (2011/12 – 2021/22)

Endorsed June 2012

*Working together for a healthier **country WA***

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## ACRONYMS

|        |   |
|--------|---|
| ACAT   | Aged Care Assessment Team   |
| ABF    | Activity Based Funding  |
| ABS    | Australian Bureau of Statistics   |
| ALOS   | Average Length of Stay  |
| CAMHS  | Child and Adolescent Mental Health Service                                  |
| COAG   | Council of Australian Governments   |
| CSF    | Clinical Services Framework   |
| CSSD   | Central Sterilising Services Department                                     |
| DGPP   | Divisions of General Practice Program                                       |
| ED     | Emergency Department  |
| ENT    | Ear Nose and Throat   |
| ERP    | Estimated Resident Population   |
| ESRG   | Expanded Service Related Group  |
| FESA   | Fire and Emergency Services   |
| FTE    | Full Time Equivalents   |
| GP     | General Practitioner  |
| HACC   | Home and Community Care   |
| HCN    | Health Corporate Network  |
| HIN    | Health Information Network  |
| HWSS   | WA Health and Wellbeing Surveillance System                                 |
| ICT    | Information Communication Technology  |
| IDHS   | Integrated District Health Service  |
| KEEDAC | Kaata-Koorliny Employment and Enterprise Development Aboriginal Corporation |
| MOU    | Memorandum of Understanding   |
| MPS    | Multipurpose Service  |
| RFDS   | Royal Flying Doctor Service   |
| SEIFA  | Socio-Economic Indexes for Areas  |
| SIHI   | Southern Inland Health Initiative   |
| SWWAML | South West WA Medicare Local  |
| WGPN   | Wheatbelt General Practitioner Network                                      |
| WACHS  | WA County Health Service  |

## KEY DEFINITIONS

**Ambulatory care** is a broad term that generally refers to the planned services provided to patients who are able to 'walk in and walk out' on the same-day. Ambulatory care services can include primary health care services, day surgery and outpatients (e.g. wound care and management).

**Ambulatory health care centre** refers to a health facility where ambulatory health care services are provided in close proximity to emergency department care and overnight inpatient admissions.

**Primary care** is often used interchangeably with primary medical care as its focus is on clinical services provided predominantly by general practitioners, as well as by practice nurses, primary/community health care nurses, early childhood nurses and community pharmacists.

**Primary health care** is an aspect of ambulatory health care but is generally first level health care. The term is sometimes used interchangeably with the term primary care although primary care tends to refer to the clinical care provided by GPs. Primary health care gives priority to those most in need, maximises community and individual self-reliance and participation and involves collaboration with other sectors. It includes:

- Health promotion
- Illness prevention
- Clinical treatment and care of the sick
- Community development
- Advocacy and rehabilitation

Primary health care is provided by general practitioners, practice nurses, primary/community/child health nurses, pharmacists, dentists, allied health professionals, aged care workers, support workers and many other providers across the local, state and federal government sectors, non-government organisations and the private sector.

**Primary health care centre** generally refers to a stand-alone health facility where primary health care services are provided. It would ideally be located in close proximity to emergency department and may be collocated with inpatient, outpatients, minor wound care and diagnostic services. A primary health care centre does not include day surgery services.

**Nursing Posts** are generally located in small towns that do not have a hospital. Nursing posts are also a setting for primary health care services and visiting outpatients' services and although they do not have a functioning ED, they do provide low level emergency care and stabilisation to patients prior to transferring to a more specialised health service when required.

A full glossary is listed at the end of this service plan.

# 1 EXECUTIVE SUMMARY

This Service Plan provides the strategic direction for service delivery for the WA Country Health Service's (WACHS) Western Wheatbelt Health District (regarded as the *Western Wheatbelt*) for the next 10 years and informs the implementation plan for the State Government's \$565 million Southern Inland Health Initiative (SIHI). The Service Plan was developed via a comprehensive planning process as detailed in Appendix A.

The service planning process in the Western Wheatbelt has identified a number of opportunities to strengthen service delivery to meet the future needs of the catchment area for Northam and Moora to achieve their prescribed role delineations within Western Australian Health's *Clinical Services Framework (2010-2020) (CSF)*. It is essential that this service plan is reviewed as facility planning progresses, new policies are introduced and the needs of the community change.

## Planning context

The District includes the Australian Bureau of Statistics (ABS) Statistical Local Areas (SLAs) and associated town sites of Beverley, Cunderdin, Dalwallinu, Dowerin, Goomalling, Koorda, Moora, Northam, (Town and Shire), Toodyay, Wongan-Ballidu, Wyalkatchem and York. The Western Wheatbelt is the catchment area for the Northam Hospital, known as an Integrated District Health Service (IDHS) as well as the Moora IDHS which also has the ability to service the Coastal Wheatbelt region. There are seven Multi-Purpose Service (MPS) sites within the Western Wheatbelt and these along with the Northam and Moora Hospital are the major focus for health service reform within this Service Plan.

## Key catchment area features influencing service delivery

Research shows that health systems with strong primary health care services are more efficient; have lower rates of hospitalisation; fewer health inequalities; and better health outcomes including lower mortality, than those that do not. For this reason, the key feature of this Service Plan and SIHI is to boost primary health care services to address the following features of the catchment area.

### Rural location

Given the rural location of the Western Wheatbelt, there are opportunities to utilise Telehealth technologies and new workforce models for care provision and supervision to provide care closer to home.

### Population growth

Overall, the estimated population growth across the Western Wheatbelt is not great and therefore future demands for acute inpatient beds will remain similar to the present day.

### Ageing population

However, Western Wheatbelt has a high older population that will place added pressures on WACHS to provide primary health care services to manage chronic health conditions and co-morbidities. Demand for specialised dementia and high care aged care residential services is also likely to increase.



## Health status

Data from the WA Health and Wellbeing Surveillance System highlighted that there were a number modifiable risk factors within the Wheatbelt such as obesity and lack of physical activity that impacts on health status. There are also a significantly higher number of adults in the Wheatbelt with arthritis and asthma.

Almost nine in ten Wheatbelt residents utilised primary health care services in the past year. This provides opportunities for both health promotion and early intervention initiatives. The focus will need to be on reducing the modifiable risk factors and the range of needs of the people in the district: chronic disease, mental health, aged care, maternal, child, youth health, Aboriginal health, and dental health.

## Mortality

Mortality data for the Wheatbelt and Western Wheatbelt highlighted:

- There was no significant difference between the mortality rate (the number of deaths per 1,000 people) of all Wheatbelt residents compared with the State.
- Between 2003 and 2007, the leading cause of mortality in the Western Wheatbelt was diseases of the circulatory system, followed by neoplasms and injury and poisoning.
- Between 1998 and 2007, around two-thirds of Wheatbelt resident deaths under the age of 75 were classified as avoidable. Cancers and chronic conditions accounted for the majority of avoidable deaths including Ischaemic heart disease, lung cancer and suicide and self-inflicted injuries.

## Hospitalisations

Hospitalisation data for the Wheatbelt and Western Wheatbelt highlighted that between 2005 and 2009:

- Western Wheatbelt residents had a significantly lower hospitalisation rate when compared to all WA residents.
- The leading cause of hospitalisation of Western Wheatbelt residents was for factors influencing health status (which includes renal dialysis and chemotherapy), followed by diseases of the digestive system.
- *Diabetes and its complications* was the leading potentially preventable hospitalisation for both Aboriginal and non-Aboriginal Wheatbelt residents.

## Aboriginal people

Aboriginal people are over represented in mortality and hospitalisation statistics. This indicates the importance of providing culturally secure facilities and primary health care programs specific to the conditions and risk factors associated with Aboriginal people.

## Current WACHS Western Wheatbelt service profile

The Western Wheatbelt includes the WACHS hospital and health services highlighted in Figure 1. These operate within a networked model of integrated care whereby Northam Hospital supports the smaller hospitals and MPS sites to deliver services to

the catchment area, whilst referring patients where necessary to larger metropolitan hospitals.

Patients are referred to the most appropriately resourced and equipped health facility to meet their health care needs. The level of care provided by metropolitan, regional and district health facilities across the State are defined within the Department of Health's *WA Clinical Services Framework (2010-2020)* (2010a). This Framework also provides direction for the level of care required at Northam Hospital in the future. Small country hospitals are not included in the CSF but it is assumed that the current services at these small sites will continue and respond to the needs of the local population.

The integrated care model is supported by local General Practitioners (GPs), government and non-government services, private providers and not-for-profit agencies. This network of services provides a continuum of care for the 32,000 residents and visitors of the Western Wheatbelt.

**Figure 1: Current Western Wheatbelt network of WACHS emergency, acute and primary health services (as of February 2012)**

| Services provided                    | Multipurpose Service Sites |           |            |            |              |             |      | Northam IDHS | Moora IDHS |
|--------------------------------------|----------------------------|-----------|------------|------------|--------------|-------------|------|--------------|------------|
|                                      | Beverley                   | Cunderdin | Dalwallinu | Goomalling | Wongan Hills | Wyalkatchem | York |              |            |
| Emergency                            | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Elective Surgery                     | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✓            | ✓          |
| Acute Admissions                     | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Planned Births                       | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✓            | ✗          |
| Antenatal & Postnatal Care           | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Paediatrics                          | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✓            | ✗          |
| Mental Health (Voluntary admissions) | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Aged Care                            | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Hospice / Palliative                 | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Outpatients                          | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Oncology / Chemotherapy              | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✓            | ✗          |
| Renal Dialysis                       | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✗            | ✗          |
| Rehabilitation                       | ✗                          | ✗         | ✗          | ✗          | ✗            | ✗           | ✗    | ✓            | ✗          |
| Population Health                    | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✓            | ✓          |
| Residential Aged Care                | ✓                          | ✓         | ✓          | ✓          | ✓            | ✓           | ✓    | ✗            | ✓          |

Peth Metropolitan Hospitals

*Note: All hospitals provide some mental health inpatient service depending on degree of activity. Northam Hospital provides aged care services despite not having residential aged care capacity. Source: Myhospital.gov.au (accessed 10 October 2011). Developed by Aurora Projects.*

## Proposed strategic directions for service delivery

A review of the Government policies, local planning initiatives, State Government commitments, drivers for change and stakeholder expectations within the Western Wheatbelt has identified the following strategic directions for service delivery for the Northam Hospital, Moora Hospital and Western Wheatbelt smaller hospitals:

- Strengthen the integration of services across the continuum of care.
- Increase the self-sufficiency of surgical and mental health services within the CSF role delineation and enhance workforce capacity.
- Focus on primary health care non-inpatient care.
- Deliver care closer to home.
- Improve Aboriginal health outcomes.
- Improve aged care services.
- Attract and retain a skilled workforce.
- Strengthen partnerships with primary care, private and not-for-profit providers.
- Utilise Information and Communication Technology (ICT) advancements for better care.
- Create a safer environment for all.

The priorities include:

- Support the greater integration of services by collocating health services for ambulatory/primary health care on the one health campus including linking community based services with hospital services.
- Boost primary health care service delivery to better detect, assess and manage chronic health conditions.
- Support a sustainable and safe GP led 24/7 emergency model and roster for 12 hour onsite and 12 hour close on call. The model would include one Emergency Department (ED) Nurse Practitioner who will provide advanced emergency nursing care and support the clinical skills development and maintenance of nursing staff who are providing emergency responses across district sites and services.
- Ensure 24/7 seamless GP obstetric coverage for the Northam Hospital as a priority.
- Provide greater access to visiting specialists.
- Increase resources for the management of mental health consumers with co-morbidities.
- Implement comprehensive primary mental health services, including youth and adolescent mental health
- Improve communication between tertiary hospitals, community agencies, GPs and Western Wheatbelt hospitals needs to provide more integrated and coordinated health services.
- Provide culturally appropriate health services and facilities for the catchment area's Aboriginal population. Including continuing to seek to recruit more Aboriginal staff as Aboriginal Health Workers and across the workforce more generally.
- Undertake regional level workforce planning as a priority in order to address issues including succession planning; new workforce models to support recommended models of care; more rigorous attraction and retention strategies (e.g. staff accommodation); overcoming the ageing workforce; and the need to 'grow your own' staff (attracting young local people into the health business across all sectors).
- Safely increase planned ambulatory care surgical services and gastro-intestinal procedures (elective day surgery), ophthalmology, Ear, Nose and Throat (ENT) and

urology at Northam to promote care closer to home and reverse patient flows from the metropolitan area to the Wheatbelt in line with CSF role delineation.

- Enable telehealth and e-health to enhance all health services as per the SIHI telehealth strategy and encourage the development of staff to be 'expert telehealth users'.
- Work collaboratively with shires, the community, other health providers and community organisations to develop a plan to improve patient transport options for non-urgent inter-hospital and outpatient transfers within the District and Region and to Perth sites. The plan will consider the impact on St John Ambulance volunteers and the needs of mental health services in undertaking patient transfers.
- Develop health literacy.
- Upgrade infrastructure to contemporary standards to reduce occupational health and safety risks and support best practice models of care for rural health.

The contents of this Service Plan details how these priorities were established.

### **Translation of service requirements to service implementation and facility requirements**

The Service Plan will also assist in informing the development of future business cases for the potential redevelopment of sites and services. Funding has already been allocated through the SIHI to incentivise the attraction and retention of GPs and an emergency NP to build a sustainable 24/7 emergency model for the district. Funding is also allocated to increase primary health care services in the district and to develop Telehealth services, primarily in ED and for clinical consults.

The facility requirements are summarised in the Recommendations section of this Service Plan (Section 10). Capital funding has been allocated through the SIHI project (est. \$31.16 million) to redevelop the Northam Health Campus with the focus of integrating primary health care services and upgrading the ED, inpatient, day procedures unit, birthing suite, medical imaging, administration and site service infrastructure.

Furthermore, SIHI's Stream 3 (Primary Health Care Demonstration Program) and Stream 4 (Small Hospital and Nursing Post Refurbishment Program) have funding allocated to selected health sites across the Wheatbelt, Midwest, Goldfields, South West and Great Southern regions. The implementation for these streams of work in the Western Wheatbelt has commenced.

**Table 1: Summary of preliminary facility needs at Northam hospital**

| Services                      | Current configuration                | Future Configuration   |
|-------------------------------|--------------------------------------|--|
| <b>Ambulatory Health Care</b> |                                      | 2 x chair public dental clinic; 4 x chair renal dialysis; Maternity outpatients; Consult space for outpatients; Multipurpose consult rooms; and Population health. |
| <b>Rural Care Unit #</b>      |                                      | 5 x chair, one bed rural cancer unit.<br>A three double bedroom patient accommodation facility.  |
| <b>Acute Care Inpatient</b>   | 30 multiday beds<br>13 same-day beds | 30 multiday beds; 13 same-day beds; and upgrade existing rooms to be compliant with modern standards.  |
| <b>Emergency Department</b>   | 4 x Treatment Spaces                 | 7 x treatment spaces; interview room with dual egress; procedure room; and consult rooms to be determined.   |
| <b>Theatres</b>               | 1 theatre                            | 2 x theatres   |

*# If funding from the Commonwealth Health & Hospital's fund does not eventuate due to changing political priorities than developing cancer units at Narrogin and Northam will remain a priority.*

## 2 INTRODUCTION

This Service Plan, by the WA Country Health Service (WACHS), sets the strategic vision for the delivery of emergency, acute, primary health care and associated clinical and non-clinical services to 32,000 residents and visitors of the Western Wheatbelt Health District (the *Western Wheatbelt*).

The Service Plan will also inform the \$565 million *Royalties for Region's Southern Inland Health Initiative (SIHI) Implementation Plan* (refer to Section 3.7.1). The *Implementation Plan* will contain a number of service reforms and capital works initiatives designed to enhance the sustainability, self-sufficiency and network of health services in the WACHS Wheatbelt, Mid-West, Goldfields, Great Southern and South West regions. This includes the Northam Hospital, known as an Integrated District Health Service (IDHS); small hospitals; and associated government, non-government and private health services in the Western Wheatbelt. Moora IDHS, whilst part of the Coastal Health District, also provides services to some Western Wheatbelt residents.

The planning process undertaken to develop this Service Plan and the subsequent recommendations for service reform ensure that future service delivery to the Western Wheatbelt will:

- Align with National and State policy and plans including WA Health's *Clinical Services Framework (2010-2020)* (2010a);
- Address the demographic and health needs of the community;
- Meet the projected demand for health services;
- Strengthen primary health care services;
- Implement modern and best practice models of care;
- Utilise contemporary health technologies; and
- Be supported by contemporary healthcare facilities.

The service planning process undertaken to develop this Service Plan is detailed in Appendix A.

### 3 PLANNING CONTEXT AND STRATEGIC DIRECTIONS

#### 3.1 Overview of the Wheatbelt Health Region

The Wheatbelt extends from the coast north of Perth to the western boundary of the Goldfields and south from the Darling Scarp to the northern boundary of the Great Southern Region (see Figure 2).

The region has 45 local government areas and covers 154,862 square kilometres (Wheatbelt Development Commission, 2011).

Aptly named for its traditional industry, the Wheatbelt also has a diverse geographic profile ranging from pristine beaches to vast agricultural landscapes. The economy is based around the production fields of agriculture, fishing and mining, which are supported by the high availability of infrastructure such as water, transport and energy (Wheatbelt Development Commission, 2011).

**Figure 2: Wheatbelt region of Western Australia**



Source: [www.wheatbelthealth.org.au](http://www.wheatbelthealth.org.au)

A characteristic of the Wheatbelt is its scattered population dispersion, which has hindered the development of an identifiable regional centre and resulted in the four sub-regional centres: Merredin, Moora, Narrogin and Northam (Wheatbelt Development Commission, 2011). With its proximity to the metropolitan area, many of the bordering communities of the Wheatbelt are experiencing an influx of overflow population from the outer metro areas and those in search of a "lifestyle" change,

without sacrificing access to metropolitan facilities (Wheatbelt Development Commission, 2011).

The Wheatbelt has historically been split into three health districts, but as the population is shifting towards the north-west of the region the Western Wheatbelt health district has been divided into the Coastal and Western Wheatbelt health districts, as shown in Figure 3.

The four health districts are defined by Statistical Local Areas (SLAs) as follows:

- *Western Wheatbelt Health District:* Beverley, Cunderdin, Dalwallinu, Dowerin, Goomalling, Koorda, Moora, Northam, (Town and Shire), Tammin, Toodyay, Victoria Plains, Wongan-Ballidu, Wyalkatchem and York.
- *Coastal Wheatbelt Health District:* Chittering, Dandaragan and Gingin.
- *Eastern Wheatbelt Health District:* Bruce Rock, Corrigin, Kellerberrin, Merredin, Mount Marshal, Mukinbudin, Narembeen, Nungarin, Quairading, Trayning, Westonia and Yilgarn.
- *Southern Wheatbelt Health District:* Boddington, Brookton, Cuballing, Dumbleyung, Kondinin, Kulin, Lake Grace, Narrogin (Town and Shire), Pingelly, Wagin, Wandering, West Arthur, Wickiepin and Williams.

**Figure 3: Wheatbelt health districts**



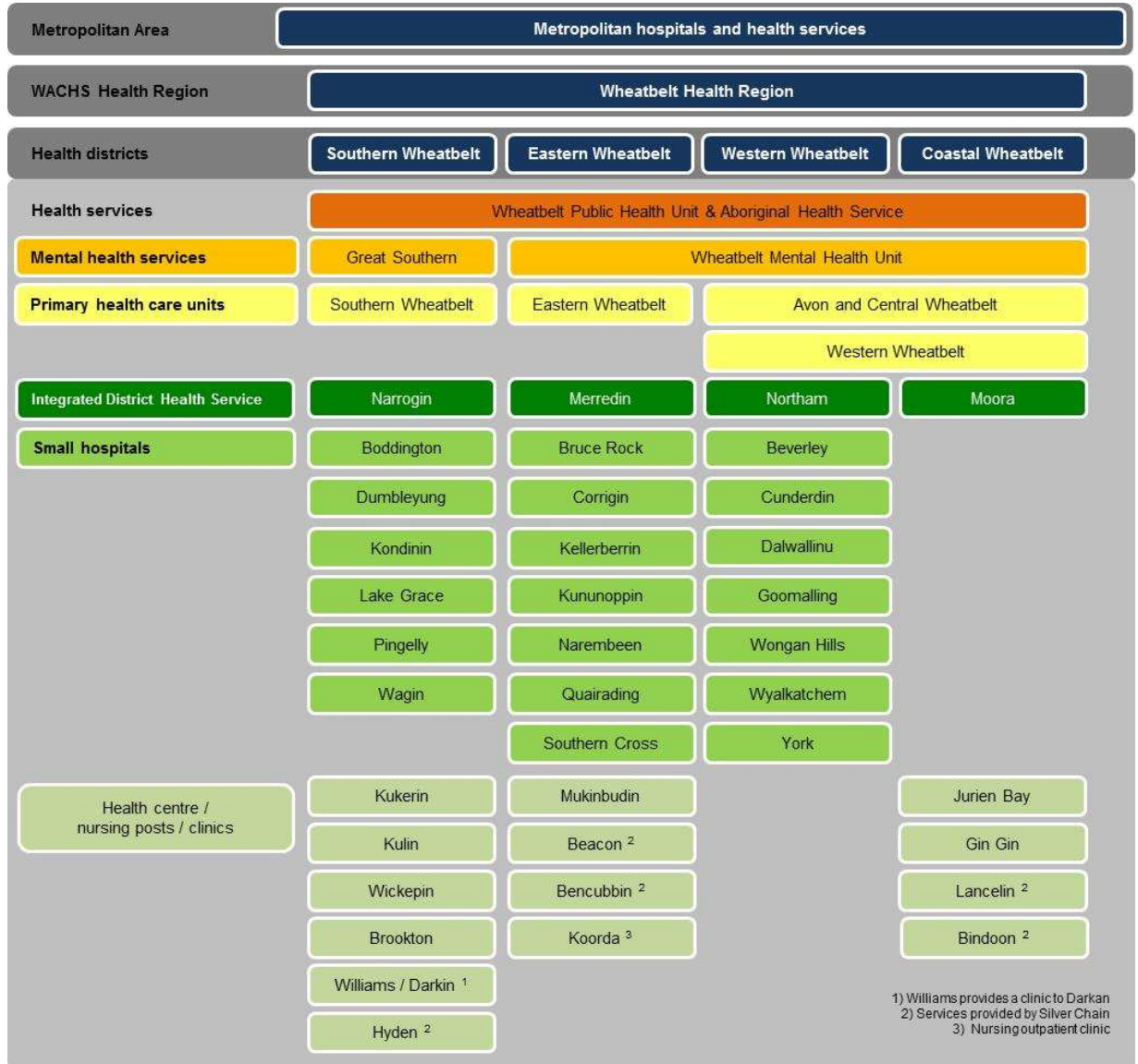
Source: DoH Epidemiology Branch, 2009a.



### 3.2 WACHS Wheatbelt current services

The operational network of WACHS hospitals and health services that residents and visitors of the Wheatbelt, including the Western Wheatbelt can access are highlighted below in Figure 4.

**Figure 4: Current operational network of WACHS hospitals, health services and nursing posts available to Wheatbelt residents**



*Note: Moora Hospital whilst listed as part of the Coastal Health District also provides services to some residents of the Western Wheatbelt particularly those living in Dalwallinu. All small hospitals in the Western Wheatbelt are classified as Multi-Purpose Service sites, including Moora Hospital.*

### 3.3 Western Wheatbelt health service profile

#### 3.3.1 Ambulatory care services

Ambulatory health care services is a broad title that generally refers to the planned services provided to patients who are able to ‘walk in and walk out’ of a health service on the same day. This includes:

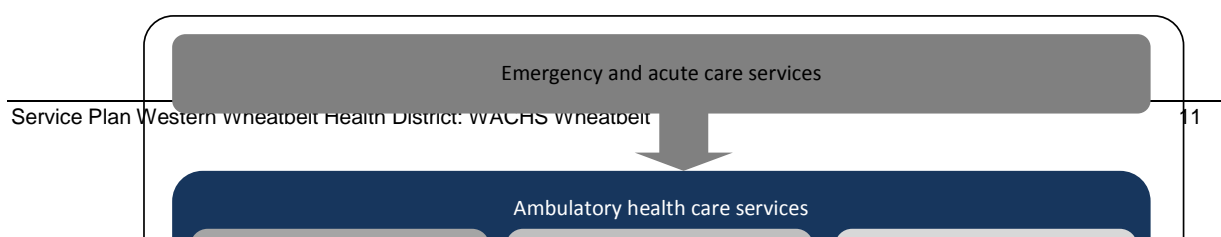
- Primary health care services which incorporates GPs, nurses, allied health professionals and other health workers, such as multicultural health workers and Aboriginal health workers, health education, promotion and community development workers. This encompasses population health (e.g. child health), community mental health, community aged care and Aboriginal health services.
- Same-day surgery and procedures
- Visiting and permanent outpatient services

Ambulatory care services are often provided adjacent to emergency and acute services as shown in Figure 5. Ambulatory care facilities are usually staffed by nurses and allied health with procedural or specialist medical input provided in a planned and structured way. Depending on resourcing and availability, community based mental health services will provide varying levels of crisis/emergency response.

In the Western Wheatbelt, the following ambulatory health care services are provided by WACHS in partnership with services described in Section 5:

- *Primary health care services* through the Wheatbelt Population Health Unit which includes the Wheatbelt Public Health Unit, Wheatbelt Aboriginal Health Service and four Wheatbelt Primary Health Services:
  - *Wheatbelt Public Health Unit* is based in Northam and provides outreach public health (including disease control, health promotion programs and project implementation) services to the entire Wheatbelt Health Region, including the Western Wheatbelt.
  - *Wheatbelt Aboriginal Health Service* is based in Northam and provides Aboriginal health services from Northam and outreach services to all towns in the district based on need. They are also responsible for the delivery of Aboriginal health promotion, social work and ‘Bringing Them Home’ counseling to the whole Wheatbelt region.
  - *Western Wheatbelt Primary Health Service* is based in Moora and provides Aboriginal health, allied health, community health nursing and health promotion services from Moora and outreach services are provided to all towns in the Moora area and Coastal Wheatbelt based on need.
  - *Avon and Central Wheatbelt Primary Health Service* is based in Northam and also provides allied health, community health nursing and health promotion services from Northam and outreach services to all towns in the district based on need.
  - *Wheatbelt Mental Health Service* provides community mental health prevention and promotion activities such as the ‘Act, Belong, Commit’ program out of Northam.
- *Outpatient services* are provided at all Western Wheatbelt hospitals. The level and type of outpatient services available depends on the availability of permanent and visiting specialists.
- *Same day surgery* is only provided at Northam and Moora Hospital.

**Figure 5: Illustration of Ambulatory Care Services**



Source: Aurora Projects

### 3.3.2 Northam Hospital profile

There is no Regional Resource Centre in the Wheatbelt Region; therefore the Northam Hospital, as the IDHS, is the major health site for residents of the Western Wheatbelt (Department of Health, 2010a). Northam Hospital:

- provides a range of inpatient, ambulatory, emergency, medical, surgical, obstetric, paediatric and mental health services to the Western Wheatbelt catchment population; and
- supports an integrated network of services at Moora Hospital and seven smaller hospital / MPS sites within the Western Wheatbelt (refer to Sections 3.3.3 and 3.3.4).

**Table 2: Northam Hospital summary profile**

| Department                                  | Features   |
|---|--|
| Emergency Department                        | 24 hour/ 7 day a week emergency services nurse-led with close on call GP support. Six treatment bays.  |
| Medical and surgical inpatient services     | 30 bed multi-day capacity and 13 same-day bed capacity.  |
| Theatres                                    | 1 x theatre and a Central Sterilising Services Department.   |
| GP clinic                                   | Located in Northam. GPs provide a service to Northam Hospital.   |
| Outpatients/Extended Care                   | Visiting specialists provide a range of outpatient services from consulting rooms within Northam Hospital.                                       |
| Aboriginal Health Service                   | Provided by Wheatbelt Aboriginal Health Service. Aboriginal health workers are part of the Primary Health teams servicing the Western Wheatbelt. |
| Western Wheatbelt Mental Health Service     | Provided by Wheatbelt Mental Health Service in Northam.  |
| Western Wheatbelt Population Health Service | Provided by Avon & Central Primary Health and Western Primary Health services.   |
| Medical imaging                             | Provide x-ray and ultrasound services.   |
| Pathology                                   | Collection and laboratory testing facilities available.  |
| Pharmacy                                    | Pharmacy services provided by Narrogin Hospital.   |

Source: WACHS Wheatbelt (September 2011)

Clinical and non-clinical support services are described in Section 6.

### 3.3.3 Moora Hospital profile

Located in Moora, Moora Hospital is a smaller IDHS which is part of the Moora - Dandaragan-Jurien MPS. It offers a range of inpatient, medical and surgical services

to residents of the Western and Coastal health districts. Moora Hospital provides a two bay, 24 hour ED and operates 23 inpatient beds in total. Of these, 10 are acute multiday and three are acute same-day beds as well as 10 high care residential aged care beds. WACHS also operates Moora Frail Aged Hostel on site which provides 10 low care beds.

### 3.3.4 Multipurpose Service (MPS) Sites

The design of the MPS program allows rural communities to pool Commonwealth and State health and aged care funds within a designated geographical area, creating opportunities to coordinate and appropriately target community health and aged care needs. Flexible aged care funding allows services to be provided either in a residential setting (usually, the hospital or a hostel) or in the community in people’s own home. The major objective of a MPS is to improve the range of health and aged care services being offered in the community, to dispense with inflexible funding arrangements, to encourage community participation in service planning, and to improve quality of care.

Northam Hospital is not an MPS site and is solely state funded, but it is the largest hospital in the Western Wheatbelt and supports and works within a network of eight other hospitals including Moora which are all MPS sites. They all provide 24 hour emergency, residential aged care and hospice care as well as provide outpatient services and inpatient admissions.

The existing and future models of care for all these emergency, acute and ambulatory care services are described in Section 6.

## 3.4 Organisational Governance

The Organisational Governance structure for the Western Wheatbelt is highlighted in Appendix B. There are four structures for the District:

- *Operational* structure for acute, emergency, clinical support, non-clinical support and associated corporate functions (managed through the Operations Manager).
- *Corporate Services* structure (managed through the Director of Corporate Services).
- *Mental Health Services* structure (managed through the Manager of WACHS Wheatbelt Mental Health).
- *Population Health* (managed through the Director of WACHS Wheatbelt Population Health) has four units covering the Western Wheatbelt:
  - Wheatbelt Public Health Unit.
  - Wheatbelt Aboriginal Health Service.
  - Avon & Central Wheatbelt Primary Health Service.
  - Western Wheatbelt Primary Health Service.

## 3.5 National, State and Local Health Policy

The strategic direction for service delivery to the Western Wheatbelt within this Service Plan considered the recommendations of National, State and local government policies as outlined in the following Table. Further background information regarding these policies can be found at <http://www.wacountry.health.wa.gov.au/index.php?id=445>

**Table 3: Major Commonwealth and State policy and strategic framework**

| Policy   | Policy implications for the Western Wheatbelt  |
|--|--|
| <b>Commonwealth Policy</b>   |  |
| <p><b>Council of Australian Governments (COAG) National Health Reform Agreement (2011) including Local Health Networks and Medicare Locals</b></p> | <p>In August 2011, all States and Territories agreed to the <i>COAG National Health Reform Agreement</i> which will deliver major reforms to the organisation, funding and delivery of health and aged care. The Agreement sets out the shared intention of the Commonwealth, State and Territory governments to work in partnership to improve health outcomes for all Australians and ensure the sustainability of the Australian health system. The reforms will achieve better access to services, improved local accountability and transparency, greater responsiveness to local communities and provide a stronger financial basis for our health system into the future.</p> <p>Local Health Networks and Medicare Locals are being established to locally manage public hospital health services and primary health care services respectively.</p> <p><a href="http://www.coag.gov.au/docs/national_health_reform_agreement.pdf">www.coag.gov.au/docs/national_health_reform_agreement.pdf</a></p> |
| <p><b>National Partnership Agreement Closing the Gap in Indigenous Health Outcomes (2009)</b></p>  | <p>Service planning enables key strategies within the <i>Western Australian Implementation Plan</i> to be achieved including strong collaboration of ambulatory care services.</p>   |
| <p><b>Rural Cancer Units</b></p>   | <p>The Commonwealth have endorsed providing \$22.091 million of infrastructure funding over three years (2010/11 – 2012/13) to WACHS to develop a multi-site rural cancer centre and patient accommodation located in four WACHS regions.</p> <p>Under this plan, by 2013/14 Northam will have a five chair, one bed chemotherapy unit plus a three double bedroom patient accommodation facility.</p> <p>Funding has also been provided to St John of God to expand their rural cancer centre in Bunbury.</p>   |
| <b>State Government Policy</b>   |  |
| <p><b>WA Health Strategic Intent 2010-2015 (2010)</b></p>  | <p>This document has a number of overarching goals for WA Health to build <i>healthier, longer and better quality lives for all Western Australians</i>. The intention of this Service Plan is to align with these overarching goals within this policy. Refer to: <a href="http://www.health.wa.gov.au/about/docs/WAHealth_Strategic_Intent_2010_2015.pdf">www.health.wa.gov.au/about/docs/WAHealth_Strategic_Intent_2010_2015.pdf</a></p>  |
| <p><b>WA Health Clinical Service Framework 2010-2020 (2010)</b></p>  | <p>This Policy stipulates that Northam and Moora Hospital provide Level 2 – 4 health services (as per pp. 24-5).</p> <p>Service planning utilises this State policy to understand the level of service delivery as an IDHS and the level of integration required with other Wheatbelt and metropolitan hospitals. Refer to: <a href="http://www.health.wa.gov.au/publications/documents/CLINICAL_SERVICES_FRAMEWORK_WEB.pdf">www.health.wa.gov.au/publications/documents/CLINICAL_SERVICES_FRAMEWORK_WEB.pdf</a></p>   |
| <p><b>WA Health, Greening Health, Building and Renovations</b></p>   | <p>Service reform provides an opportunity to maximise environmental safety and energy efficiencies which will address climate change issues and support actions to reduce WA health's environmental footprint. The full implications of this policy are available on the WA Health Intranet site. Go to: <a href="http://greeninghealth/1/31/2/building_and_renovations.pm">greeninghealth/1/31/2/building_and_renovations.pm</a></p>  |
| <p><b>WA Health Telehealth Strategic Direction (yet to be published)</b></p>   | <p>A major initiative of health service reform is to enhance Telehealth facilities in health services to enable efficiencies to be gained in providing patient assessment and care; staff training; and patient-to-practitioner communication.</p>   |
| <p><b>WA Health Network Models of Care</b></p>   | <p>Service planning offers the opportunity to create facilities</p>  |

| Policy   | Policy implications for the Western Wheatbelt  |
|--|--|
| <b>(ongoing)</b>   | that best support the delivery of modern models of care as developed by the Network. The published models of care are found at <a href="http://www.healthnetworks.health.wa.gov.au/modelsofcare">www.healthnetworks.health.wa.gov.au/modelsofcare</a>  |
| <b><i>Mental Health 2020: Making it personal and everybody's business (Strategic Policy)</i></b> | The WA Government's ten year strategic policy for mental health, <i>Mental Health 2020: Making it personal and everybody's business</i> , provides a whole of government and community approach and sets out three key directions: <ul style="list-style-type: none"> <li>• person centred supports and services;</li> <li>• connected approaches; and</li> <li>• balanced investment.</li> </ul> For more information go to: <a href="http://www.mentalhealth.wa.gov.au/Libraries/pdf_docs/Mental_Health_Commission_strategic_plan_2020.sflb.ashx">www.mentalhealth.wa.gov.au/Libraries/pdf_docs/Mental_Health_Commission_strategic_plan_2020.sflb.ashx</a> |
| <b><i>WA Health Redundancy and Disaster Planning Guidelines (2008)</i></b>                       | Northam Hospital and Moora Hospital will comply as a Group 3 facility for Redundancy and Disaster Planning as per these Guidelines: <a href="http://www.public.health.wa.gov.au/cproot/2540/2/Redudancy%20and%20Disaster%20Planning.pdf">www.public.health.wa.gov.au/cproot/2540/2/Redudancy%20and%20Disaster%20Planning.pdf</a>   |
| <b>WACHS Policy</b>  |  |
| <b><i>WACHS Strategic Plan, Revitalising Country Health Service 2009-2012 (2009)</i></b>         | Service reform enables WACHS to achieve many of the key action areas within this strategic plan for the Western Wheatbelt community. Refer to: <a href="http://www.wacountry.health.wa.gov.au/uploaddocs/booklet%20final.pdf">www.wacountry.health.wa.gov.au/uploaddocs/booklet%20final.pdf</a>  |
| <b><i>Operational Plan 2011/12 WA Country Health Service</i></b>                                 | This <i>Operational Plan</i> actions the <i>Strategic Plan</i> , providing practical direction for WACHS operations across the State.  |
| <b><i>WA Country Health Services Human Resources Strategic Directions Framework (2011)</i></b>   | Human Resources Priorities Plan for 2011/12 will be developed as an outcome of WACHS endorsing this framework. Workforce development within the Western Wheatbelt should engage in this process to improve the attraction and retention of a skilled workforce.  |
| <b><i>Aboriginal Employment Strategy 2010-2014</i></b>   | This strategy advocates for more Aboriginal people to be employed in all levels of the organisation as a strategy to make services more culturally secure.   |
| <b><i>WACHS Renal Dialysis Plan</i></b>  | This plan identifies the need for renal satellite outreach dialysis or community supported dialysis services (small satellite services) in the Wheatbelt to enable care closer to home. 4 chairs are planned for Northam.  |
| <b><i>WACHS ED Services Planning and Facility Design Principles and Benchmarks</i></b>           | Calculation of the required number of treatment bays to manage future demand is based on the benchmarks published in this document.  |

### 3.6 Local planning initiatives

The SIHI and service reform initiatives outlined in this Service Plan have evolved from the previous planning initiatives for the Wheatbelt Region as follows.

#### 3.6.1 Wheatbelt Health Memorandum of Understanding (2006)

The *Wheatbelt Health Memorandum of Understanding Group* (Health MOU group) was formed in 2006 and is a partnership between WACHS Wheatbelt, Wheatbelt General Practice Network, Avon Midland, Central and Great Eastern Country Zones and the

Wheatbelt Development Commission, that have come together to improve health service delivery in the Wheatbelt.

This partnership provides an avenue for all levels of Government to work together to address the delivery of health services in a contemporary environment.

In March 2009 the Health MOU group engaged MMT Consultancy Services to undertake the Wheatbelt Health Planning Initiative project. The project incorporated past health papers and reviews and undertook extensive consultation across the Wheatbelt community to inform future health planning for the Wheatbelt WACHS region. The final report outlined the following priorities:

- Improving health planning, coordination and the sharing of resources;
- Addressing service boundaries to improve access to services;
- Ensuring access to sustainable emergency care and transport;
- Ensuring access to a well-coordinated and affordable transport system;
- Attracting and retaining health workers and GPs;
- Ensuring access to a wide range of services for older people;
- Making better use of existing facilities;
- Increasing funding;
- Increasing support for volunteers and developing new roles for volunteers;
- Increasing access to health promotion and prevention; and
- Increasing the use of technology, particularly to reduce the need to travel to access health care.

The SIHI and this plan build and take forward the recommendations from the community consultation.

The final consultation report is available at:

[www.wheatbelt.wa.gov.au/projects/wheatbelt-health-planning](http://www.wheatbelt.wa.gov.au/projects/wheatbelt-health-planning)

### **3.6.2 Wheatbelt Clinical Services Plan (2008)**

The *WACHS - Wheatbelt Clinical Services Plan* is one of seven plans that the WACHS initiated to set strategic directions for health care services in regional WA.

The overarching strategies for service delivery, as outlined in the *WACHS – Wheatbelt Clinical Services Plan* include:

- A review of the funding for the region to recognise the population growth and dependency ratio;
- The provision of reliable medical cover and alternative models of service delivery to address workforce shortages;
- Workforce strategies to develop and implement paraprofessional support roles for acute care, community health, mental health and aged care;
- The implementation of an Ambulatory Care model to reduce inpatient demand and strengthening primary health care;
- Effective change management that focuses on integration of services and capacity building;
- Enhancing access to services through information and communications technology; and

- Increasing the capacity of the integrated district health services to become hubs for the delivery of sustainable and safe health services.

### 3.6.3 Wheatbelt Aboriginal health planning (2008 - ongoing)

The *Wheatbelt Aboriginal Community Engagement Project* identified the following key findings and recommendations:

- Community engagement findings as summarised by the Wheatbelt Aboriginal Health Team four areas:
  - Wheatbelt Aboriginal communities were most concerned with diabetes, alcohol and drug abuse, oral health, social / emotional wellbeing and vision.
  - The Aboriginal community had significant concerns with their ability to access health services and specialist appointments, as well as access to prescription medicine.
  - The majority of health services were delivered through the emergency department of rural hospitals.
  - Culturally appropriate communication and health care were an important factor in health service delivery for the Aboriginal community.
- The Wheatbelt Aboriginal Community Engagement Project identified the following recommendations:
  - Focus attention on the social and emotional wellbeing of the community, grief and loss within the family and wider community and its impact on mental health (relates to key finding #1).
  - Address alcohol and drug abuse within the Wheatbelt Aboriginal community (relates to key finding #1).
  - Ensure the community can access medical services and sensory health – vision and hearing. This includes addressing the barriers of cost and travel (relates to key finding #2).
  - Advocate and seek affordable pharmaceutical access for the community (relates to key finding #2).
  - Place priority on oral health and dental services to ensure access to these services occurs within the Wheatbelt (relates to key finding #1).
  - Address chronic diseases, particularly diabetes and kidney disease within the community (relates to key finding #1).
  - Ensure cultural security for Aboriginal people across the entire range of health services including general practice, specialist care, acute care and population health services (relates to key finding #4).
  - Address health issues which are likely to lead to presentation at hospital emergency departments, particularly injury and acute exacerbations of chronic conditions (relates to key finding #3).
  - In addition to the above priorities, common themes raised during the community consultation support the need for the following recommendations:
    - Implement programs for early year's health including parenting, early education and access to child health within the region.
    - Highlight the impacts of youth disengagement within the Aboriginal community and address the ripple effects this has on health and wellbeing.
    - Seek additional funding and coordinate cross agency programs, research and activities to address the community's concerns and issues in regards to health services and transport within the Wheatbelt for Aboriginal communities.
    - Improve the promotion of existing services to the local Aboriginal people.



- Promote to and support training for local Aboriginal people in health areas.

WACHS Wheatbelt in line with state-wide strategy was integral in developing and establishing the Wheatbelt Regional Aboriginal Health Planning Forum. As part of the preparations for the COAG funding submission, this planning forum completed an extensive community consultation of its own, with the information from the community, consumers, WACHS and other key stakeholders used to develop the Wheatbelt Aboriginal Health Plan. The *Wheatbelt Aboriginal Health Plan 2010* identified the following 12 priority health service delivery issues:

- Social and emotional wellbeing, grief and loss, mental health.
- Smoking, alcohol and drug abuse.
- Medical service access and sensory health – vision and hearing.
- Affordable pharmaceutical access.
- Oral health & dental services.
- Chronic diseases – diabetes (includes podiatry), kidney disease, asthma, cardio-vascular disease, cancer.
- Youth disengagement and associated poor sexual health.
- Early years – parenting, early education, access to child health.
- Injury, community based first aid skills.
- Aged care, respite and dementia.
- Transport and accommodation to attend medical appointments.
- Cultural security across the spectrum of health services.

These issues and recommendations highlighted in the engagement project and health plan have been captured in the recommendations of consequent State Government policies and this service plan where possible. For example, this service plan documents the need to increase the availability of renal dialysis services for the local catchment as per the *Clinical Services Framework (2010-2020)* and recommends a number of strategies to address the primary health care and mental health care concerns of the Aboriginal community. Refer to Section 6 for more information.

Ongoing service planning should continue to reference these two documents to ensure Aboriginal health services are culturally secure and meeting the needs of the local community.

### **3.6.4 Wheatbelt Emergency Services Review (2010)**

An independent review of emergency services in the Wheatbelt was completed in October 2010. The review concluded that the historical model of service delivery is not sustainable given the inconsistent medical/GP availability, variable medical and nursing competency, unclear referral and escalation pathways, and limited utilisation of new technologies and workforce models.

The review recommended that a coordinated, tiered and integrated response to emergency service delivery was required to improve emergency care to Wheatbelt residents and ensure people were referred to the most appropriate location for care. A hub and spoke model where Northam, Narrogin and Merredin hospitals have sufficient resources to provide 24/7 emergency services by competent and supported medical staff in the hub emergency department, as well as telephone medical support to peripheral sites.

Recommendations also included ensuring Wheatbelt residents are informed of where they can obtain essential medical services and that essential support services, such as pathology, radiology and telehealth are available.

This review and its recommendations are fundamental to the future model of emergency and primary health care in the region.

### 3.6.5 Wheatbelt Indigenous Services Assessment (WISA) Project

The Wheatbelt Development Commission in partnership with the Department for Indigenous Affairs completed the *Wheatbelt Indigenous Services Assessment Project* in early 2010; a mapping and gap analysis of services accessed by Aboriginal people in the Wheatbelt region of Western Australia.

While many issues and gaps were identified, the following two findings are considered key in understanding the current issues, and planning future service design and delivery:

- Services that involve Aboriginal people in the design and delivery of the service, in partnership with facilitating agencies, are achieving the greatest results. That is, more people are using the services, are satisfied with the results, and recommend the services to others.
- Aboriginal people view all services as inter-related, including with the broader community. Effective service delivery reform is most likely if this view is accepted and practically implemented. Very strong links and inter-relationships were identified between all the services, and Aboriginal people consistently stressed the importance of these inter-relationships and the role of the general community in discussions and meetings.

The Draft Report contained the following health recommendations:

- A larger regionally collaborative approach to mental and emotional wellbeing issues should be developed by agencies including: explore a regional proposal for services delivery that combines the resources and assets of each; engage with the regional Aboriginal community; and co-design and co-deliver culturally secure and effective services for specific target areas.
- The primary and general health issues and gaps of the report should be analysed and an implementation plan be developed through an extensive consultative process with the regional Aboriginal community; that reviews outcomes of recent COAG funding; includes exploration of ways to increase Aboriginal people's involvement in their health service delivery; supports additional Aboriginal health professional training and appointments; and explores the development of a regional Aboriginal health service, designed specifically for the Wheatbelt, working through the sub-regional centres.

## 3.7 Existing Federal or State Government Commitments

### 3.7.1 Southern Inland Health Initiative

The \$565 million *SIHI* project aims to work with the Commonwealth to reform and improve access to health care for all residents of the Southern Inland area of Western Australia over the next five years. This area encompasses the Wheatbelt, Midwest, South West, Great Southern and Goldfields health regions excluding the region hospitals and South West coastal areas.

This Service Plan and accompanying service planning process is a direct outcome of the SIHI announcement by State Government. The Service Plan aims to inform the SIHI Implementation Plan for the Western Wheatbelt, which will recommend the best

strategy for investing funds from the State Government's *Royalties for Region Scheme* that includes:

- \$240 million investment in health workforce and services over four years.
- \$325 million in capital works over five years.

SIHI aims to dramatically improve medical resources and 24 hour emergency coverage, while boosting primary health care service delivery via the implementation of six streams of work. The streams are highlighted below with the allocations made for the Western Wheatbelt to achieve the intention of the Stream.

**Table 4: SIHI overview and related plans for the Western Wheatbelt**

| Stream (Total Southern Inland Area)  | Allocations for Western Wheatbelt to achieve the Stream  |
|--|--|
| <p><b>1. District Medical Workforce Investment Program</b> (\$182.9 million) to significantly improve medical resources and 24 hour emergency response across the districts.</p>   | <p><i>Allocation of recurrent funding available through SIHI to achieve the intentions of Stream 1 in the Western Wheatbelt.</i></p>   |
| <p><b>2. District Hospital and Health Services Investment Program</b> (\$147.4 million) to provide major upgrades at Northam, Narrogin, Merredin, Katanning, Manjimup (Warren Hospital) and Collie.</p> <p>Recurrent funding of \$26 million will also be provided under this program to boost primary health and ambulatory care services across each district.</p> | <p><i>Allocation of \$31.16M (capital funding) towards construction of a new Integrated Primary Health Centre and construction of a new Renal Unit as part of the new Integrated Primary Health Centre. Funding also allocated for upgrades to engineering and site services, ED refurbishment, inpatient areas refurbishment, upgrades to birthing suite and day procedure unit, medical imaging refurbishment, minor upgrade to non-clinical support areas and administration area refurbishment. Recurrent funding allocated to boost primary health care services.</i></p> |
| <p><b>3. Primary Health Care Demonstration Program</b> (\$43.4 million) will provide communities with the opportunity to re-examine how health services are delivered in their districts. Funding will be made available to boost primary and ambulatory health services for communities that opt in.</p>  | <p><i>Opportunity available for small hospitals to be converted to primary health care centres with adjacent Emergency Department (removing the inpatient functions).</i></p> <p><i>Scope of work for Western Wheatbelt to be determined.</i></p>  |
| <p><b>4. Small Hospital and Nursing Post Refurbishment Program</b> (\$108.8 million) will provide a capital works program for small hospitals and nursing posts to be refurbished or, if required, rebuilt to enable delivery of health care services that will match the needs of their communities.</p>  | <p><i>Scope of work for Western Wheatbelt to be determined.</i></p>  |
| <p><b>5. Telehealth Investment</b> (\$36.5 million) will introduce innovative "e-technology" and increased use of telehealth technology across the region, including equipment upgrades.</p>   | <p><i>Allocation of funding for procurement of equipment and FTE to enhance technology for patient care, staff supervision, training and consultation. Includes procurement of wireless practitioner carts and fixed Telehealth units in Emergency Departments.</i></p>  |
| <p><b>6. Residential Aged Care and Dementia Investment Program</b> (\$20 million) will provide incentive for private providers to expand options for residential aged care and dementia care across the Southern Inland area.</p>  | <p><i>Scope of work for Western Wheatbelt to be determined.</i></p>  |

### 3.7.2 SuperTowns

SuperTowns is a *Royalties for Regions* initiative to encourage regional communities in the southern half of the State to plan and prepare for the future so they can take advantage of opportunities created by WA's population growth. Northam has been selected as a SuperTown based on their potential for population growth; economic

expansion and diversification; strong local governance capabilities; and their potential to generate net benefits to WA.

The Northam Growth Plan, endorsed by the Shire in 2012, will set Northam on a journey designed to transform it from a small service centre to a significant regional town. Economic growth is the key to population growth in Northam and the Growth Plan embraces the need to diversify the economic base from which we start. The Growth Plan is the one key document that provides the necessary foundation for Northam to achieve the goal of becoming a significant Regional Centre in Western Australia.

It provides a sustainable Growth Plan to guide Northam on its journey from a town with a permanent population of over 7,000 people through to a town in excess of 20,000 people and its regional role in a sub region of 50,000 residents. The five key themes of the Growth Plan are Economy, Community, Environment, Public Realm & Built Environment and Infrastructure & Resources. The Growth Plan includes an implementation plan showing what should be delivered, where and in what sequence.

In mid-2012, the State Government announced that almost \$5 million will be used to plan and potentially purchase land for the first stage of a world-class Avon Health and Emergency Services precinct in proximity to the existing regional hospital site.

### **3.8 Strategic directions for service delivery in the Western Wheatbelt**

A review of government policies, local planning initiatives and the demography and health need of the Wheatbelt and Western Wheatbelt has identified the following strategic directions for service delivery for the Northam Hospital, Moora Hospital and Western Wheatbelt smaller hospitals:

- Strengthen the integration of services across the continuum of care.
- Increase the self-sufficiency of surgical and mental health services within the CSF role delineation and enhance workforce capacity.
- Focus on primary health care non-inpatient care.
- Deliver care closer to home.
- Improve Aboriginal health outcomes.
- Improve aged care services.
- Attract and retain a skilled workforce.
- Strengthen partnerships with primary care, private and not-for-profit providers.
- Utilise Information and Communication Technology (ICT) advancements for better care.
- Create a safer environment for all.

### **3.9 Key drivers for change**

The catchment population, current and projected activity data, and qualitative information have been analysed along with information gained from a series of consultative workshops with service providers and external stakeholders. This analysis has identified current service strengths within the Western Wheatbelt as well as a series of specific issues which are driving the development of future models of care and service reform priorities for WACHS Western Wheatbelt which inform the

recommendations presented in Section 6.0. The strengths and issues are presented below, along with the key priorities identified by stakeholders and service providers.

## Current service strengths

- Excellent knowledge of local issues impacting on health service delivery.
- High empathy for the pressures some teams experience in delivering primary health and emergency services.
- Willingness to look at how to deliver services more efficiently in an integrated way across the district and the continuum of care.
- Committed, experienced and passionate management and staff.
- Good teamwork evident within all areas.
- Good level of co-operation between GPs and ED resulting in good overall waiting times in all hospitals across the Western Wheatbelt. Despite some locations being over 1- hour from ED, patient outcomes are comparable to Perth residents that live 10 minutes from a hospital.
- WACHS primary health care services strong on holistic approaches to care.
- Great opportunities to further integrate primary health care services.
- Mental Health Service provides a good standard of care for non-acute patients.
- Telehealth and e-health technology generally was seen as a key enabler to the ongoing enhancement of all health services. Telehealth was seen as a way to increase access and support for training and professional supervision.
- Primary care provides a number of 'lifestyle programs' with and for the community.
- High immunisation rates for children.
- COAG Closing the Gap funding for Aboriginal health utilised well.
- The Wheatbelt Aboriginal Health Services provides services to the Western Wheatbelt.
- Digital Medical Imaging is being implemented across Western Wheatbelt sites.
- Kitchen services provide Meals on Wheels and meals to Northam Hospital and all the smaller hospitals.

## Identified service issues – Western Wheatbelt

### Primary health care

#### **Maternal and child health:**

- The results of the Australian Early Childhood Development Index, 2009 showed that there was a significantly larger proportion of young children in Northam that were developmentally vulnerable when compared to the whole of Australia.
- Need for more social and emotional wellbeing support for children and young people, particularly in light of Australian Early Childhood Development Index scores.
- Limited services for young Aboriginal mums.
- Need for enhanced child development, audiology, and paediatrician services in the Western Wheatbelt.
- Gap in infant mental health services.

#### **Aged care and chronic disease:**

- There is a high prevalence of lifestyle behaviours reported by Wheatbelt residents that indicate the population is at greater risk of chronic disease. This is supported by data that shows a high proportion of avoidable deaths and potentially preventable hospitalizations of Wheatbelt residents relate to chronic diseases.
- Recognition that the emerging demographic (high proportion of elderly, youth and Aboriginal people) means that there is a need for community based primary health care specific strategies such as post-acute care, transitional and hospital in the home for these population cohorts to help prevent admissions to hospital or to reduce the length of stay in hospital.
- More resources are needed to enable more timely aged care assessments in the hospitals and the community.
- Care across the continuum is needed to address antecedents of chronic disease including obesity, poor dietary patterns, low physical activity and poor health literacy.
- Prevention and disease management services are fragmented, provided by GPs, Silver Chain and Population Health. Role clarification and coordination of these programs would prevent duplication and boost health education and illness prevention activities.
- No alternative care and respite services for the community and carers. More local community supported accommodation and respite services are needed for aged care and disability services.
- Family members need more support when they are the carers. There are currently huge gaps in working with families.
- Limited uptake of Home and Community Care (HACC) Services and aged care services by Aboriginal families. Greater flexibility in HACC services is needed.
- No non-government Aboriginal Community Controlled Health Organisation (ACCHO) providing GP services in the Wheatbelt region.
- There is a lack of Aboriginal people accessing cancer and palliative care services.

***Health promotion, allied health and oral health:***

- More diabetes education services are needed.
- There is limited access to adult public dental health services.
- High rate of teenage pregnancy.
- Lack of referrals from ED to the Aboriginal Social and Emotional Wellbeing program despite statistics showing high level of reporting to ED.
- Develop health literacy.
- Implement comprehensive primary mental health services

### **Mental health / alcohol and drugs:**

- There is inadequate investment in mental health preventative programs, including youth and adolescent mental health.
- Managing complex co-morbid patients who present with both alcohol and other drug issues and mental illness is growing and an area of unmet need in primary health care service delivery.
- Gaps in youth and adolescent health related services to address mental health, drugs and alcohol and high youth suicide rate.
- Gaps in Men's Health – especially targeting family violence, drugs and alcohol, mental health, family functioning and general health and wellbeing.
- Limited services to address the mental health needs of Aboriginal people.

### **Outpatient issues**

- Geriatrician visits are often underutilised.
- Lack of access to public health specialists in Northam. For example there is only a private paediatrician available. There are ear health programs implemented at school, but there is no follow up with Ear Nose and Throat (ENT) specialists.
- Accommodation for Aboriginal people attending specialist appointments and/or hospital appointments in Northam or the metropolitan area is an issue.

### **Emergency department issues**

- The ED is often used as a primary health care service by the community due to the limited number of GPs and other primary health care services such as, drug and alcohol services, mental health, community health, dental and other community based care.
- The WACHS policy stating patients must be reviewed by a medical officer within 24-hours results in patients being transferred to Northam from the smaller hospital sites on the weekends when there are no GPs in smaller communities. This is placing pressure on all hospitals.
- Gaps in the ED roster for medical coverage and a shortage of GP's in the smaller hospital sites, limits the availability of medical support at times.
- Through SIHI, there will be 24-hour seven day per week coverage by GPs at Northam ED with 12 hour on site and 12 hour close on call support (within 10 minutes). This may increase the number of primary care presentations to the ED.
- After hours mental health service support to ED is limited.
- The location of the Yongah Hill Immigration Detention Centre in Northam may result in increased activity for Northam Hospital ED and inpatient services where clients are transferred for the management of serious and life-threatening issues.
- Service coordination issues with respect to emergency patient transport via RFDS or St. John Ambulance.

### **Inpatient service issues**

- The Yongah Hill Immigration Detention Centre, accommodating 600 single adult men, will be located in the Shire of Northam. *International Health and Medical Services* will provide health care services to the facility, however, emergency assessments, inpatient care and clinical support services such as imaging or pathology will be directed to Northam Hospital in the first instance.
- Demand on acute inpatient beds at Northam may increase due to limited medical coverage at the smaller hospitals.



- Limited acute bed capacity and no private aged care providers.
- Limited capacity for mental health inpatient care in non-authorised beds.
- There is an increasing level of need for sub-acute care.
- No sub-acute rehabilitation program and limited capacity to manage rehabilitation needs of inpatients and support discharge planning.
- The number of specialty consultations undertaken via videoconferencing, such as endocrinology, could be increased if there was a greater uptake by specialists and tertiary hospitals.
- Gaps in visiting specialists - anecdotally the planning sessions identified that ophthalmology is in high demand and oncology provides a monthly clinic that is always in demand. Other areas for demand would be a paediatric diabetes clinic, a private paediatric clinic, respiratory and pain specialists, orthopaedics, psychiatry, psychogeriatrician, ENT specialist, General Physician, Gerontologist and Gynaecologist.
- Renal dialysis is an area of rapid growth and high hospitalisations due to the ageing population, the increased use of hypertension medication, the increase in diabetes and the high Aboriginal population. Currently there are no renal services offered in the Wheatbelt despite renal services being one of the major reasons of hospitalisation (refer to Section 4.2.7). Patients requiring renal services are referred to services in Perth.
- In line with the CSF there are currently no designated chemotherapy chairs/places at Northam Hospital despite demand for this service. A five chair, one bed rural cancer unit which provides chemotherapy is planned for Northam Hospital in line with Northam's increased role delineation for Medical Oncology from a Level 2 service to a Level 3 service as per the WACHS Cancer Plan.
- There is a need to establish the Cancer and Palliative Care Network Model of Care for WA locally.
- There are no visiting palliative care specialists to the Western Wheatbelt.
- Northam Hospital has capacity to accommodate an increasing range of surgeries and also increase surgery time, such as general surgery, gastroenterology, ophthalmology, ENT, orthopaedics, gynaecology and plastics.
- There is only one GP anaesthetist available in the Western Wheatbelt.
- There is one visiting ophthalmologist, but there are enough referrals to accommodate another to visiting service monthly.
- ENT ceased visiting due to insufficient referrals although data demonstrates that there is a clear need for ENT services.
- No ENT surgery in Northam, patients must travel to Perth.
- There is no dedicated day surgery area. The hospital will require refurbishment to improve service utilisation and provide a waiting area.
- Identified issues and challenges
- Do not have 24-hour coverage for GP obstetrician and GP Anaesthetist.
- No visiting obstetric services.
- Only one GP obstetrician in Northam.
- No access to STORK, the electronic birth notification database.
- Midwifery and child health nurse shortages.
- Demand for paediatric care is highly episodic and seasonal.
- There are no paediatric dental services or surgical services.
- There is limited access to paediatric services.

- The community identified that there is an increasing level of need for sub-acute services to meet the demand especially for people with a drug and alcohol issues and/or mental illness.
- There is an increasing level of patients, including young people, with mental health, drug and alcohol, co-morbidities and other psycho-social issues.
- There is no supported accommodation for people with a mental illness in the Western Wheatbelt. Supported accommodation across the age spectrum is required.

### *Residential aged care issues*

- Limited access to retirement village accommodation, respite beds, high care and dementia specific residential accommodation in the Western Wheatbelt. York has the only private retirement facility and is not too far from Northam to be able to provide support for aged care residents awaiting placement.
- There are no secure aged care dementia beds in the entire Wheatbelt.
- Activities to prevent functional decline are needed especially if there are delays in older people going home.
- There is limited access to specialised therapeutic programs for the residential aged care residents in smaller MPS sites.
- Many MPS sites would not meet the Commonwealth Aged Care Standards for care or facilities.
- The proportion of people aged over 65 is increasing and there is significant growth in Toodyay where there is no aged care residential service or small hospital.

### *Clinical support service issues*

- Additional demands may be placed on clinical support services if SIHI increases medical activity in the emergency departments. This is an issue particularly for after hours and weekend rostering.
- There is a requirement for a fulltime Medical Imaging Technician (MIT) at Moora Hospital. Currently, Moora Hospital does not have a Medical Imaging Technician and only has x-ray operators who are limited to chests and extremities. Patients are required to travel for all other x-rays.
- Communication between imaging sites is limited.
- A large amount of administration duties are placed on senior imaging/clinical staff.
- There is no medical imaging in theatre at Northam.
- The Clinical Pharmacist vacancy is causing Moora to operate on a pharmacy imprest system.
- No Pharmacist in Northam.
- Mental health services are not funded for drug budget.
- Non PBS drugs are not funded by services as some metro services are.
- The EDs do not have cabling to provide for at point of care pathology testing.
- Demand for pathology services at Northam may increase due to the opening of a new detention centre facility. There is not enough staff to cope with increased demands.
- There is no Cert III in CSSD Technician course in Western Australia.
- Only one Steris processing machine is available to sterilise the endoscopes at Northam. A minimum of two is required.
- There are mechanical breakdown issues.

- There is an increasing rate of multi-resistant infections and zoonotic diseases (HIV, bird and animal diseases)
- The current regional infection control position is not formalised, leading to lack of recognition and low profile for infection control.
- There is no backfill provided for infection control.
- Smaller hospitals find it difficult to keep focus on infection control. There is no designated role in the smaller sites and there is limited formalised regional and district support.
- Current facilities generally are not designed for clinical telehealth service delivery in the ambulatory or acute care venues.
- A change management approach is required to manage the reform of service provision for service users, consumers and staff.
- There is limited bandwidth availability at some small regional health services.

### *Non-clinical support services*

- Whilst demand for linen services from acute services is reducing in the small hospital sites, residential aged care has high occupancy rates.
  - Any centralization, reconfiguration or consolidation of laundry services for all Western Wheatbelt hospitals will need to:
    - Ensure that transport costs are not greater than moving the service to a single site.
    - Ensure that there are appropriate long-term storage facilities for clean and dirty linen.
    - Address the potential reduction of onsite staff at smaller facilities.
- Control around ordering with the Health Corporate Network could be improved.
- Storage in the Northam Hospital Supply Department is becoming a problem with increased service provision at Northam and to other sites.
- A Category 6 bandwidth is required for ITC services which will not be possible without the role out of the National Broadband Network (NBN).
- Gaps have been identified in learning and development in terms of identifying suitable registered training organisations; accessing general IT training for Department of Health systems; and releasing and back-filling staff to attend training.
- There is a need to standardise WACHS education programs.
- The lack of a single integrated electronic record was seen as a significant barrier to developing improved operational models of care across the region and the district.
- ICT not always supportive of e-health technologies.
- Need for wireless technology across all the hospital sites.
- Corporate and ICT regional models are not resourcing the Western Wheatbelt efficiently or effectively (e.g. additional human resource and occupational health and safety support is required in the Western Wheatbelt).
- Office capacity for non-clinical support staff is limited and does not support functions. This can pose a risk to staff health and safety.

### *Workforce issues*

- Workforce shortages limit the provision of primary health care service delivery.
- The needs of emergency, acute patients and residential aged care residents are very different and the staffing profiles do not reflect this given the standard 2 x 2 x 2 rosters.

- There is a lack of regional positions to support staff in areas such as Infection Control and Workforce Learning and Development.
- Corporate and ICT regional models are not resourcing the Western Wheatbelt efficiently or effectively.
- There have been challenges for several years in filling vacant allied health positions across the Western Wheatbelt, resulting in periods of times when some types of allied health services are not provided. This impacts on the provision of inpatient and community allied health programs.
- Low acute activity at smaller MPS sites can reduce opportunities to build skills and sustain services (e.g. medical imaging).
- Back-filling for leave, travel and training is problematic for service sustainability.
- The standard of housing and incentives limits workforce attraction.
- There are fragmented learning and development resources and limited access to a range of professional supervision.
- Limited access to child care for staff.

#### *Patient transfers / transport issues*

- Challenges exist with patient transport between sites, both emergency and non-urgent. The Narrogin volunteer patient travel model is one that could be examined for replication across the region. Mental health patient transfers were particularly highlighted as a concern as they take hospital, police and ambulance staff out of the district for extended periods of time, thereby reducing the service capacity of the district.
- Limited access to transport reduces presentations to health services locally, regionally and to the metropolitan area.

#### *Facility issues that constrain service delivery*

- Although newly refurbished, the current building for Community Mental Health in Northam is too small and located off site, in the town of Northam.
- Western Wheatbelt Primary Health is providing primary health care services from a facility in Moora that does not meet contemporary standards. There is inadequate space to accommodate practitioners, no storage space, no dual egress, inadequate access to video conferencing and lack of security
- According to activity projections, there is a need to increase the number of ED treatment bays at Northam Hospital to meet demand in the future.
- Consult spaces and multipurpose rooms with dual egress, duress and telehealth capability are required at all Western Wheatbelt hospitals to manage patients who present to ED and whose behaviour places them and staff at risk of harm.
- The design of hospitals does not support young Aboriginal mothers and families in birthing in a culturally appropriate way.
- Northam Hospital was built without taking into consideration ICT requirements and requires an upgrade. Bandwidth will also need to increase at some sites to cope with growing demand for ICT services.
- Limited theatre capacity at Northam Hospital. Northam has only one theatre and will require a second theatre to meet CSF emergency surgery requirements.
- Security upgrades are required across the sites.

## Key priorities identified by providers and stakeholders

Key strategies (in no particular order) identified at workshops that were most common amongst groups included:

- Establish a 'one stop shop' for all ambulatory type health services at Northam as a way of integrating operations and assisting the patient to navigate the continuum of care, particularly for those patients presenting with multiple co-morbidities.
- Introduce innovative, outreach focused models of care that improve access to services for groups who have difficulties accessing acute and primary health care services (e.g. rural and remote communities; elderly; young mothers; Aboriginal communities and those living with a disability).
- Enhance Aboriginal health initiatives (consistent with 'Closing the Gap' and other local priorities) and build the capacity of Aboriginal health initiatives by attracting and retaining positions and leadership roles for Aboriginal people.
- Working with the WACHS SIHI, utilise Telehealth and other technologies to increase the level of training and education opportunities available for staff. In addition Telehealth and other technologies will be employed to improve patient care via access to specialists.
- There was recognition that the community based Mental Health Service provides a good standard of care, but that there is an increasing level of need and unmet demand especially for people requiring inpatient and sub-acute services and specific services to meet the needs of young people, new mothers, those with alcohol and drug problems and the aged. Enhancing the capacity to better support non-authorized inpatient admissions at Northam Hospital to enhance mental health self sufficiency of the district and a mental health sub-acute facility were viewed as priorities that would support care closer to home.
- Current challenge with patient transport for both emergency and non-urgent care with poor public transport options and the inability to access Patient Assisted Travel Scheme (PATS) funding, suggest the need to explore a health service delivered patient transport service across the region.
- Provide staff assisted renal dialysis in Northam through a four-chair satellite outreach service as per the WACHS Renal Dialysis Plan.
- Provide a five chair, one bed rural cancer unit which provides chemotherapy plus a three double bedroom patient accommodation facility as per the WACHS Cancer Plan.
- Develop a two-chair public dental service in Northam.
- Opportunities to safely increase planned ambulatory care surgical services (elective day surgery) at Northam was supported by clinicians as a key strategy to promote care closer to home and reverse patient flows back from the metropolitan area to the Wheatbelt. Using the SIHI project to increase the number of visiting specialists/proceduralists was seen as a key strategy.
- The need for integrated electronic medical records was raised in all clinical user group workshops and also by administration/clerical staff. The lack of a single integrated electronic record was seen as a significant barrier to developing improved operational models of care across the region and the district.
- There is a need to strengthen communication networks between the community and between health care providers. The community is not always aware of various programs available and therefore not fully utilising them. Communication between health care providers could also be improved to reduce duplication and inefficiencies in service provision and to ensure patients are referred to the most appropriate service provider.
- There is a need for district level workforce planning to occur to support the implementation of this Service Plan as a priority in order to address issues including succession planning, the need for more rigorous attraction and retention strategies, the ageing workforce, and the need to 'grow your own' staff (attracting young local people into the health business across all sectors).

- There was recognition of the need to have a region wide workforce plan that addresses issues such as attraction and recruitment strategies, staff accommodation issues, professional supervision, staff training (mandatory and clinical) and Occupational Health and Safety.
- The need to consider how to improve staff access to a range of accommodation was seen as a major contributor to the attraction and retention of staff. There was recognition of the pending changes and likely improvement as the new Government Regional Officers Housing (GROH) process is operationalised for longer term staff and providing offsite housing. It was identified that there remains a need to provide self-contained motel style accommodation for all health service transient staff, short term contracts, locums and students on site.

### 3.10 Priorities for service reform

The proposed service reform priorities for the Western Wheatbelt health services are:

- Support the greater integration of services by collocating health services for ambulatory/primary health care on the one health campus including linking community based services with hospital services.
- Boost primary health care service delivery to better detect, assess and manage chronic health conditions.
- Support a sustainable and safe GP led 24/7 emergency model and roster for 12 hour onsite and 12 hour close on call. The model would include one Emergency Department (ED) Nurse Practitioner who will provide advanced emergency nursing care and support the clinical skills development and maintenance of nursing staff who are providing emergency responses across district sites and services.
- Ensure 24/7 seamless GP obstetric coverage for the Northam Hospital as a priority.
- Provide greater access to visiting specialists.
- Increase resources for the management of mental health consumers with co-morbidities.
- Implement comprehensive primary mental health services, including youth and adolescent mental health
- Improve communication between tertiary hospitals, community agencies, GPs and Western Wheatbelt hospitals needs to provide more integrated and coordinated health services.
- Provide culturally appropriate health services and facilities for the catchment area's Aboriginal population. Including continuing to seek to recruit more Aboriginal staff as Aboriginal Health Workers and across the workforce more generally.
- Undertake regional level workforce planning as a priority in order to address issues including succession planning; new workforce models to support recommended models of care; more rigorous attraction and retention strategies (e.g. staff accommodation); overcoming the ageing workforce; and the need to 'grow your own' staff (attracting young local people into the health business across all sectors).
- Safely increase planned ambulatory care surgical services and gastro-intestinal procedures (elective day surgery), ophthalmology, Ear, Nose and Throat (ENT) and urology at Northam to promote care closer to home and reverse patient flows from the metropolitan area to the Wheatbelt in line with CSF role delineation.
- Enable telehealth and e-health to enhance all health services as per the SIHI telehealth strategy and encourage the development of staff to be 'expert telehealth users'.
- Work collaboratively with shires, the community, other health providers and community organisations to develop a plan to improve patient transport options for non-urgent inter-hospital and outpatient transfers within the District and Region and to Perth sites. The

plan will consider the impact on St John Ambulance volunteers and the needs of mental health services in undertaking patient transfers.

- Develop health literacy.
- Upgrade infrastructure to contemporary standards to reduce occupational health and safety risks and support best practice models of care for rural health.

## 4 DEMOGRAPHY AND HEALTH NEEDS

The future models of care delivered in the Wheatbelt will need to be responsive to the needs of the local catchment area and the social and economic realities within which services operate, including the availability of the resident or visiting workforce. This section provides an overview of the catchment area of the region, along with a description of the health status, demography and other factors that influence the health status of local residents. This information on the population's health needs informs the types and locations of services required in the Wheatbelt over the next 10 to 20 years.

### 4.1 Demography

The demography of the Western Wheatbelt and the broader Wheatbelt health region will influence the type of services and the models of care delivered to residents and visitors. This section highlights the population growth, gender, age distribution and cultural diversity of the Western Wheatbelt that will need to be considered in determining the future Wheatbelt and Western Wheatbelt models of care, types and location of services.

#### 4.1.1 Population and population growth

The Australian Bureau of Statistics (ABS, 2010) Estimated Resident Population (ERP) of the Wheatbelt region grew by 4.9% over the last five years, to 77,227 in 2010. This increase was markedly less than the 13.7% for the State.

The ABS population projections (2010b)<sup>1</sup> estimate the region's population to increase by 14,000 (17.5%), from 80,166 in 2011 to 94,225 in 2021, as shown in the Table below. This level of growth is slightly lower than the expected 20.3% growth of the State for the same time period.

The Western Wheatbelt is expected to have strong growth of 19.6% between 2011 and 2021. This growth is around 2% per year.

**Table 5: Western Wheatbelt: 2010 ERP and 2011 to 2021 population projections**

| Area              | 2010 ERP      | Projections   |               |               | Growth (2011-2021) | Average annual growth |
|-------------------|---------------|---------------|---------------|---------------|--------------------|-----------------------|
|                   |               | 2011          | 2016          | 2021          |                    |                       |
| Western Wheatbelt | 32,248        | 34,466        | 37,882        | 41,223        | 19.6%              | 1.8%                  |
| <b>Wheatbelt</b>  | <b>77,227</b> | <b>80,166</b> | <b>87,080</b> | <b>94,225</b> | <b>17.5%</b>       | <b>1.6%</b>           |

Source: ABS 2010 ERP and ABS Series B+ projections

NOTE: There is a noticeable difference between the 2010 ERP and 2011 projections for the Western Wheatbelt (7%).

<sup>1</sup> WA Health has endorsed the use of the ABS series B+ population projections rebased to the 2009 Estimated Resident Population. The projections by Statistical Local Area (SLA) are obtained by applying the distribution of Department of Planning and Infrastructure population projections by SLA, 5-year age group and sex to the ABS population projections.



### Implications for service planning:

Over the last five years (2005 to 2010) the population of the Wheatbelt region has grown at a slower pace than the population of the State (5% compared with 14%). In the future population growth in the Wheatbelt and Western Wheatbelt is anticipated to be less than the State.

#### 4.1.2 Gender distribution

The 2010 ERP shows there were slightly more males than females in the Western Wheatbelt (52% compared with 48%) and this gender imbalance is projected to remain in the future, as shown in Table 6.

**Table 6: Western Wheatbelt: 2010 ERP and 2011 to 2021 population projections, by gender**

| Area              | Gender        | 2010 ERP      | Projections   |               |               | Growth (2011-2021) | Average annual growth |
|-------------------|---------------|---------------|---------------|---------------|---------------|--------------------|-----------------------|
|                   |               |               | 2011          | 2016          | 2021          |                    |                       |
| Western Wheatbelt | Female        | 15,494        | 16,541        | 18,213        | 19,833        | 19.9%              | 1.8%                  |
|                   | Male          | 16,754        | 17,925        | 19,669        | 21,389        | 19.3%              | 1.8%                  |
| Wheatbelt         | <b>Female</b> | <b>36,949</b> | <b>38,254</b> | <b>41,621</b> | <b>45,117</b> | <b>17.9%</b>       | <b>1.7%</b>           |
|                   | <b>Male</b>   | <b>40,278</b> | <b>41,912</b> | <b>45,459</b> | <b>49,109</b> | <b>17.2%</b>       | <b>1.6%</b>           |

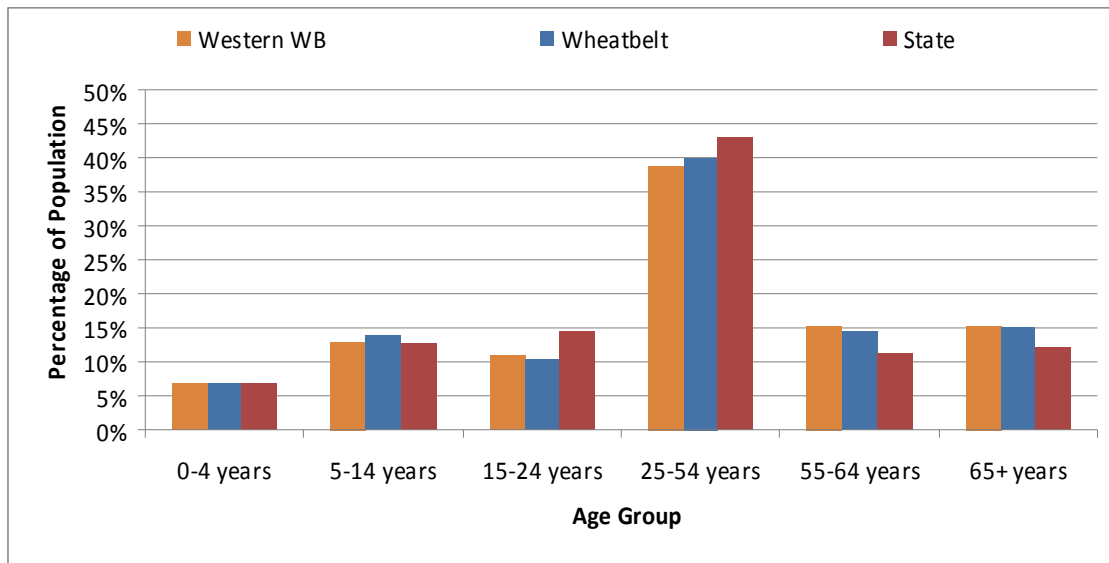
Source: ABS 2010 ERP and ABS Series B+ projections

#### 4.1.3 Age distribution

In the 2010 ERP (ABS, 2011) the Wheatbelt region had an older age distribution compared with the State, as shown in the next Figure. In the Western Wheatbelt 15% of the population are aged 65 years and over, compared with 12% in the State.

According to the 2010 ERP the dependency ratio of the Western Wheatbelt was greater than that of the State (0.54 compared with 0.46) and is anticipated to increase to 0.60 in 2021 (Department of Health 2010b). The dependency ratio is a ratio of those typically not in the labour force to those in the labour force and is calculated by dividing the number of people under 15 or over 64 years of age by the number of people aged 15 to 64 years.

**Figure 6: Western Wheatbelt: Age distributions compared to the Wheatbelt and State (2010 ERP)**



Source: ABS 2010 ERP.

The proportion of residents who are aged 70 years and over is anticipated to increase from 9.5% in 2011 to 12.0% in 2021 (ABS, 2011) reflecting an increasing longevity. With this increase there will be an additional 1,694 older adults aged 70 years and over between 2011 and 2021, as shown in Table 7.

**Table 7: Western Wheatbelt older adult 2010 ERP and 2011 to 2021 population projections**

| Area              | Age              | 2010 ERP     | Projections  |              |               | Growth (2011-2021) | Average annual growth |
|-------------------|------------------|--------------|--------------|--------------|---------------|--------------------|-----------------------|
|                   |                  |              | 2011         | 2016         | 2021          |                    |                       |
| Western Wheatbelt | 70-84 yrs        | 2,621        | 2,704        | 3,276        | 4,135         | 52.9%              | 4.3%                  |
|                   | 85 yrs+          | 542          | 555          | 716          | 818           | 47.4%              | 4.0%                  |
|                   | <b>Total</b>     | <b>3,163</b> | <b>3,259</b> | <b>3,992</b> | <b>4,953</b>  | <b>52.0%</b>       | <b>4.3%</b>           |
| Wheatbelt         | <b>70-84 yrs</b> | <b>6,397</b> | <b>6,477</b> | <b>7,798</b> | <b>9,806</b>  | <b>51.4%</b>       | <b>4.2%</b>           |
|                   | <b>85 yrs+</b>   | <b>1,303</b> | <b>1,275</b> | <b>1,622</b> | <b>1,930</b>  | <b>51.3%</b>       | <b>4.2%</b>           |
|                   | <b>Total</b>     | <b>7,700</b> | <b>7,752</b> | <b>9,420</b> | <b>11,736</b> | <b>51.4%</b>       | <b>4.2%</b>           |

Source: ABS 2010 ERP and ABS Series B+ projections

NOTE: In some instances the 2010 ERP is already greater than the 2011 projection.

**Implications for service planning:** The ageing population will place added pressures on health services to manage health conditions commonly seen in older adults and indicates an increasing need for community, primary health (chronic conditions) and residential aged care services.

With the Western Wheatbelt’s older population the residential aged care and dementia investment program of the SIHI will be particularly important for providing the residential aged care and dementia services that will be required in the region in the future.

## 4.1.4 Cultural diversity

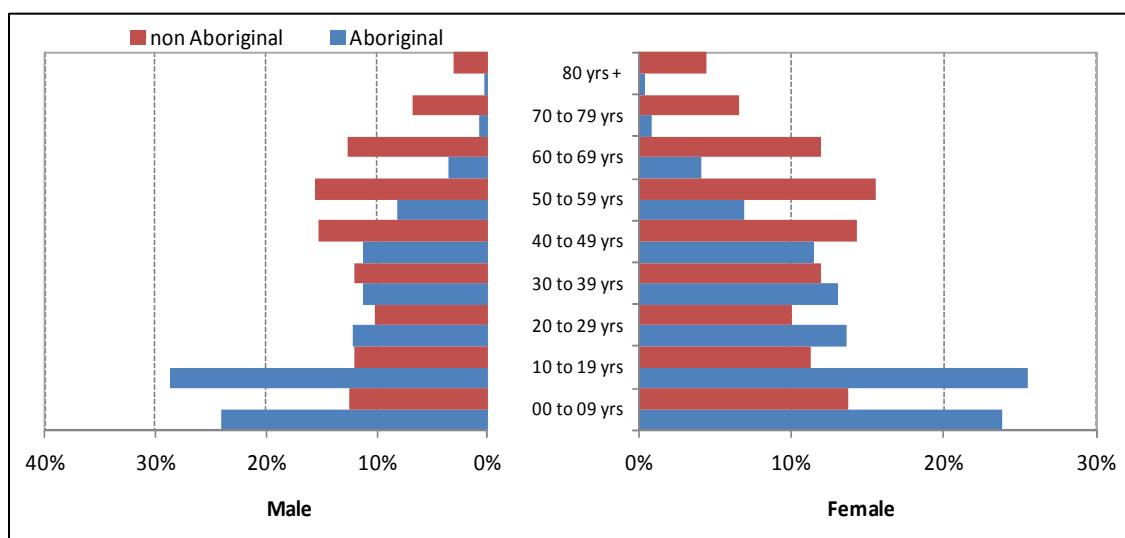
### Aboriginal people

In the 2006 Census 4% of Wheatbelt residents (3,062) and 5% of Western Wheatbelt residents identified themselves as being Aboriginal or Torres Strait Islander (ABS, 2006a), which was slightly higher than the State (3.0%).

According to the ABS (2006a), the SLA with the greatest proportion identifying as Aboriginal or Torres Strait Islander was Moora (11%), while Wyalkatchem had the lowest proportion (1%).

The Aboriginal Wheatbelt population has a slightly greater proportion of females than the non-Aboriginal population (50.6% compared with 47.7%) and a much younger age structure, as shown in the next figure.

**Figure 7: Wheatbelt region by Aboriginality, 2010**



Source: Estimated by the Epidemiology Branch, Public Health Division, Department of Health.

### Ethnicity

In the 2006 Census, 13% of the Wheatbelt residents and 11% of Western Wheatbelt residents reported being born overseas (ABS, 2006a). This proportion was less than half that of the State (27%). Half (49%) the Wheatbelt residents born overseas were born in the United Kingdom.

#### Implications for service planning:

The Aboriginal population of the Western Wheatbelt has a much younger age structure than the non-Aboriginal population. Nearly half the Aboriginal population is aged under 20 compared with a quarter for the non-Aboriginal population. This differing age structure will need to be taken into account in the planning of primary health services and programs.

## 4.2 Health status and health service needs

### 4.2.1 Determinants of Health

There are many factors that influence a person's health, including genetics, lifestyle and environmental and social factors. These factors may have a positive or a negative impact (Joyce and Daly, 2010). The following section describes the current health status of the region and summarises the factors (or determinants of health) that will influence the health status of residents now and into the future:

- Level of disadvantage experienced in the community (according to the Socio-Economic Indexes for Areas)
- Level of remoteness experience by the area (according to the Accessibility Remoteness Index of Australia)
- Lifestyle behaviours

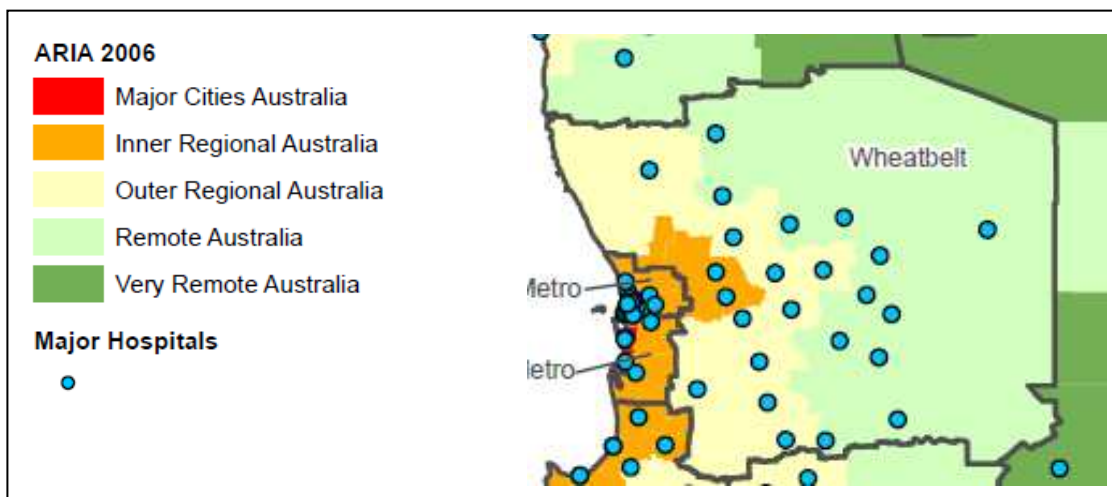
The factors highlighted influence the demand for health services and should be considered when designing the future models of care for the Western Wheatbelt.

### 4.2.2 Remoteness

Remoteness is measured by the Accessibility Remoteness Index of Australia (ARIA), where areas classified as remote have very restricted accessibility of goods, services and opportunities for social interaction (Department of Health and Ageing, 2001).

Based on the 2006 ARIA the Wheatbelt has areas classified as inner regional, outer regional and remote, as shown in the next figure.

**Figure 8: ARIA classification of the Wheatbelt**



Source: Department of Health, Epidemiology Branch

The distances and approximate vehicle travel time between Perth and major Wheatbelt towns are shown in Table 8.

**Table 8: Distance and approximate travel time from Perth**

| Town       | Hrs: mins | Kilometres |
|------------|-----------|------------|
| Jurien Bay | 2:30      | 270        |
| Merredin   | 3:55      | 271        |
| Moora      | 2:00      | 172        |
| Narrogin   | 2:50      | 199        |
| Northam    | 1:45      | 97         |

Source: Tourism Western Australia (n.d.)

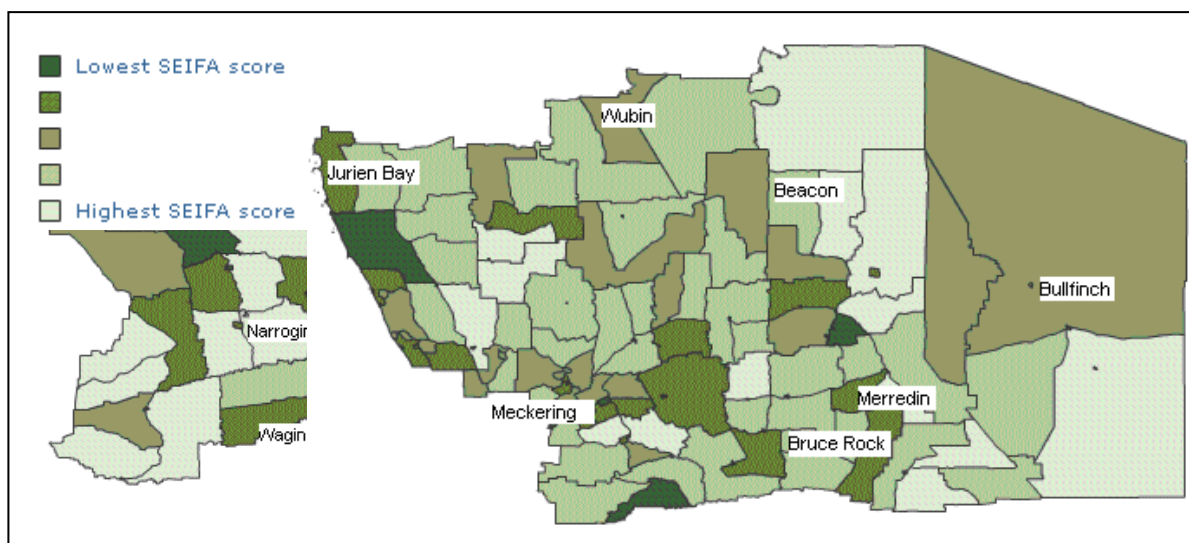
### 4.2.3 Socio-Economic Disadvantage

Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage scores are calculated by the ABS from responses to the Census. They look at 17 different measures which include things like levels of education, income, rent, Aboriginality and more. The indexes do not take into account accumulated wealth, infrastructure of areas or differences in cost of living between areas. It has been shown that more disadvantaged areas have higher proportions of reported ill health or risk factors for ill health.

The mean SEIFA score for Australia is 1,000. Scores below 1,000 indicate areas of relative disadvantage, whereas scores above 1,000 shows areas of relative advantage. The ABS (2008) SEIFA reveals that Western Wheatbelt SLA scores ranged from 923 in Northam Town to 1,030 in Victoria Plains. Only three of the 15 SLAs in the Western Wheatbelt had a score greater than 1000.

An indication of the distribution can be seen in the next figure.

**Figure 9: SEIFA classification of the Wheatbelt**



Source: Australian Early Development Index website

### Implications for service planning:

The SEIFA Index of Relative Socio-Economic Disadvantage shows that there are areas within the Western Wheatbelt with differing levels of disadvantage. Services and programs will need to be flexible to respond to the needs of these disadvantaged communities.

#### 4.2.4 Australian Early Childhood Development Index

The Australian Early Development Index (AEDI) measures how young children are developing when they first enter full time school. A teacher completes a checklist for each child and the scores of all children across Australia are ranked in each of the five areas, or domains, of early childhood development. Children ranked in the bottom 10% are classed as “developmentally vulnerable”, those in the top 75% are classed as “on track” and those in between are classed as “at risk”.

Across Australia one in four children (24%) were developmentally vulnerable on one or more domain/s of the AEDI and 12% were developmentally vulnerable on two or more domains. The results for Western Wheatbelt communities are shown below in the next table.

**Table 9: Proportion of children vulnerable on one or more domain, 2009**

| Community        | Number children surveyed   | % Developmentally vulnerable on one or more domains | % Developmentally vulnerable on two or more domains |
|------------------|----------------------------|---|---|
| Moora            | 30 (30% ATSI)              | 47%   | 32%   |
| York             | 40 (<3 ATSI)               | 15%   | 9%  |
| Northam          | 119                        | 40%   | 23%   |
| Wonga-Ballidu    | 30 (<3 ATSI)               | 29%   | 21%   |
| Toodyay          | 43 (<3 ATSI)               | 53%   | 33%   |
| Cunderdin        | 17 (<3 ATSI)               | 29%   | 18%   |
| <b>Australia</b> | <b>261,203 (4.8% ATSI)</b> | <b>24%</b>  | <b>12%</b>  |

*Data Source: Australian Early Development Index*

#### 4.2.5 Local risks and climate

Northam, due to its rural location; proximity to major highways; and role delineation as the major IDHS for the Western Wheatbelt, is at a higher risk of receiving high trauma cases from motor vehicle and farming accidents.

The Western Wheatbelt due to its proximity to the Perth has a similar climate to the metropolitan area and therefore health services should also be responsive to extreme conditions such as storms and flooding and natural disasters like fire.

### Implications for service planning:

Northam IDHS will need to maintain effective emergency management plans for receiving, stabilising and transferring patients to tertiary hospitals in the future and be responsive to climate risks such as storms, flooding and fires.

#### 4.2.6 Self-reported risk factors

Lifestyle behaviours are particularly important because of their relationship with chronic conditions that are considered to be preventable (Joyce and Daly, 2010). Prevention and management of these modifiable risk factors can therefore have a substantial effect on these preventable chronic conditions. The next table shows the relationship between these modifiable risk factors and the National Health Priority Areas.

**Table 10: Chronic conditions and related modifiable risk factors**

| Chronic disease/<br>condition | Behavioural risk factors |                     |                 |                    | Biomedical risk factors |                     |                        |
|-------------------------------|--------------------------|---------------------|-----------------|--------------------|-------------------------|---------------------|------------------------|
|                               | Poor diet                | Physical inactivity | Tobacco smoking | Excess alcohol use | Excess weight           | High blood pressure | High blood cholesterol |
| Coronary heart disease        | ✓                        | ✓                   | ✓               | ✓                  | ✓                       | ✓                   | ✓                      |
| Cerebrovascular disease       | ✓                        | ✓                   | ✓               | ✓                  | ✓                       | ✓                   | ✓                      |
| Lung cancer                   |                          |                     | ✓               |                    |                         |                     |                        |
| Colorectal cancer             | ✓                        | ✓                   |                 | ✓                  | ✓                       |                     |                        |
| Depression                    |                          |                     |                 | ✓                  | ✓                       |                     |                        |
| Diabetes                      | ✓                        | ✓                   |                 |                    | ✓                       |                     |                        |
| Asthma                        |                          |                     | ✓               |                    | ✓                       |                     |                        |
| COPD <sup>(a)</sup>           |                          |                     | ✓               |                    |                         |                     |                        |
| Chronic kidney disease        | ✓                        |                     | ✓               |                    | ✓                       | ✓                   |                        |
| Oral diseases                 | ✓                        |                     | ✓               | ✓                  |                         |                     |                        |
| Osteoarthritis                |                          | ✓                   |                 |                    | ✓                       |                     |                        |
| Osteoporosis                  | ✓                        | ✓                   | ✓               | ✓                  |                         |                     |                        |

(a) Chronic obstructive pulmonary disease  
Source: AIHW 2002a.

Source: Australian Institute of Health and Wellbeing (2006). Reproduced from AIHW's *Chronic diseases and associated risk factors in Australia*.

Risk factor information is usually collected by population based surveys, such as the WA Health and Wellbeing Surveillance System (HWSS). The data is not available for districts – only the broader health region. From this system, the Epidemiology Branch and Cooperative Research Centre for Spatial Information (2009) reported that in 2010 adults aged 16 years and over in the Wheatbelt region reported the following:

- More than four in five adults (83.2%) did not eat the recommended daily five serves of vegetables.
- Nearly half (47.0%) the adults did not eat the recommended daily two serves of fruit.
- Nearly half the adults (47.5%) who drank alcohol drank at risk for long-term harm.
- Half the adults (49.7%) did not do sufficient physical activity.
- One in five adults (18.3%) reported having high blood pressure.
- One in four adults (23.6%) reported having high cholesterol.

- One in three adults (33.6%) reported height and weight measurements that classified them as obese. This prevalence was significantly higher than the State (26.5%).

While many of the lifestyle behaviours of Wheatbelt residents may not be significantly higher than the State the prevalence is still important because these behaviours are modifiable risk factors for chronic conditions.

Lifestyle risk factor information is not available for Aboriginal Wheatbelt residents. At the national level Aboriginal people have been found to be twice as likely as non-Aboriginal people to be a current smoker (45% compared with 20%). Nearly a third (31%) of Aboriginal people has never smoked compared to half of non-Aboriginal people (52%). Furthermore, twice as many Aboriginal people report poor self-assessed health and report higher levels of psychological stress as non-Aboriginal people (ABS, 2006b).

#### **Implications for service planning:**

The modifiable risk factors and self-reported chronic conditions should continue to be monitored and used as a guide for developing and sustaining public health programs and interventions within the Wheatbelt region.

Wheatbelt residents were more likely to report height and weight measurements that classified them as obese compared with the State (one in three adults). They also reported high levels of blood pressure and insufficient physical activity. These behaviours are of particular interest as excess body weight, physical inactivity and high blood pressure are linked with several chronic conditions, including coronary heart disease and some cancers. The increasing trend of obesity in the State may suggest an increase in these chronic conditions in the future.

While specific information regarding the Wheatbelt Aboriginal population is not available, nationally Aboriginal people are more likely to smoke and to have poorer health than non-Aboriginal people. This demonstrates a need for culturally appropriate and targeted programs and services.

## **4.2.7 Health Status, all Wheatbelt residents**

### **Self-reported chronic conditions**

Chronic conditions refer to long-term conditions that last for six months or more (Joyce, S and Daly, A. 2010). Not all chronic conditions result in hospitalisations and so hospital data does not give the full picture. This type of information is usually collected by population based surveys, such as the WA HWSS.

According to the Epidemiology Branch and Cooperative Research Centre for Spatial Information (2009a), the most prevalent chronic conditions for adults in the Wheatbelt in 2010 were:

- One in four adults (26%) had arthritis. This prevalence was significantly higher than the State (20%).



- One in seven adults (15%) had asthma. This prevalence was significantly higher than the State (9%).
- More than one in ten adults (12%) had a current mental health problem.

Nationally, Aboriginal people report a higher prevalence of most chronic conditions compared with non-Aboriginal people. For example, at a national level, after adjusting for age, Aboriginal people were 1.6 times more likely to report asthma, and three times more likely to report diabetes (ABS, 2006b). As the HWSS may not be representative of the Aboriginal population, national levels of chronic disease among the Aboriginal population must be considered.

### Self-reported service utilisation

The Epidemiology Branch and Cooperative Research Centre for Spatial Information (2009) reported in 2010 there were no significant differences in the reported health service utilisation in the last year of Wheatbelt residents compared to the State. In 2010:

- More than eight in ten Wheatbelt adults (85.7%) reported having used a primary health care service.
- Half the Wheatbelt adults (51.3%) reported having used a dental health care service.
- One in three adults (28.8%) reported having used a hospital based health care service.
- One in twenty adults (5.0%) reported having used a mental health care service (e.g. a psychiatrist, psychologist or counsellor).

#### Implications for service planning:

As the majority of Wheatbelt residents use primary health care this presents an opportunity for chronic conditions and modifiable risk factors to be assessed. While 12% of Wheatbelt adults reported having being a current mental health problem, only 5% reported having used mental health services in the past year. This indicates the importance of:

- Implementing health promotion programs, population health level interventions, awareness raising and de-stigmatising initiatives and intervention at the time of assessment to improve access to mental health services.
- Enhancing the continuum care, service integration and coordinated care planning between emergency, inpatient and primary health care services within the acute and community sector to enable more effective assessment, management and follow-up as patients transition from acute care to the community (and vice versa) particularly for chronic disease management and mental health care.

## Mortality

Mortality is an important indicator of the health of the population. Aboriginal people have a significantly lower life expectancy compared with their non-Aboriginal counterparts, with the gap at the national level estimated to be 11.5 years for males and 9.7 years for females (ABS, 2006b).

Between 2003 and 2007 more than 400 Wheatbelt residents died each year. After removing the impact of the different age structures in the populations there was no significant difference between the mortality rate (the number of deaths per 1,000 people) of all Wheatbelt residents compared with the State (Epidemiology Branch and Cooperative Research Centre for Spatial Information 2009).

The leading cause of mortality is shown in Table 11. Between 2003 and 2007 the leading cause of death of Western Wheatbelt residents was diseases of the circulatory system, followed by neoplasms and injury and poisoning. The leading causes of death were similar to all Western Australian residents (Epidemiology Branch and Cooperative Research Centre for Spatial Information, 2009).

**Table 11: Western Wheatbelt residents: Leading cause of mortality (2003- 2007)**

| Rank | Category                           | No. | % of total | State Rank |
|------|------------------------------------|-----|------------|------------|
| 1    | Circulatory diseases               | 338 | 35%        | 1          |
| 2    | Neoplasms                          | 301 | 31%        | 2          |
| 3    | Injury and poisoning               | 94  | 10%        | 4          |
| 4    | Respiratory diseases               | 68  | 7%         | 3          |
| 5    | Endocrine and nutritional diseases | 41  | 4%         | 6          |

Source: ABS Mortality Data

From 1998 to 2007, Wheatbelt, Great Southern and South West Aboriginal residents had a significantly higher mortality rate for cardiovascular disease compared with the State Aboriginal population (Carlose, Crouchley, Dawson, Draper, Hocking, Newton and Somerford, 2009). Aboriginal residents in the Wheatbelt, Great Southern and South West Aboriginal people had a significantly higher mortality rate for diabetes, cardiovascular disease, respiratory disease, injury and poisoning, alcohol-related conditions and tobacco-related conditions compared with non-Aboriginal residents of the same area (Hocking, Draper, Somerford, Xiao, and Weeramanthri, 2010).

## Avoidable mortality

Each year people die from diseases that have medical interventions and/or effective public health programs. These deaths are referred to as avoidable mortality and are classified into three categories related to the type of intervention according to Hocking, Draper, Somerford, Xiao, and Weeramanthri (2010). Primary intervention includes deaths that could potentially have been avoided via effective public health measures. Secondary intervention includes deaths that could potentially have been avoided by early intervention through primary health care services or early detection through screening. Tertiary intervention includes deaths that could potentially have been avoided using medical or surgical techniques.

Between 1998 and 2007 around two-thirds of Wheatbelt resident deaths under the age of 75 were classified as avoidable, as shown in the next table. Cancers and chronic conditions accounted for the majority of avoidable deaths. Ischaemic heart disease was responsible for one in four avoidable deaths (24%), followed by lung cancer (13%) and suicide and self-inflicted injuries (7%).

**Table 12: Wheatbelt residents: Leading causes of avoidable mortality, aged 0-74 years (1998-2007)**

| Rank | Condition                           | No. | % of total |
|------|-------------------------------------|-----|------------|
| 1    | Ischaemic heart disease             | 296 | 24%        |
| 2    | Lung cancer                         | 159 | 13%        |
| 3    | Suicide and self-inflicted injuries | 88  | 7%         |
| 4    | Colorectal cancer                   | 83  | 7%         |
| 5    | Cerebrovascular diseases            | 64  | 5%         |

Source: ABS Mortality Data

The use of primary interventions could potentially have avoided more than half (54%) the avoidable deaths, while 24% could have potentially been avoided through the use of secondary interventions, such as primary health care services or early detection through screening. One-fifth of the avoidable deaths could potentially have been avoided through the use of tertiary interventions, such as medical or surgical techniques.

Between 1998 and 2007 Aboriginal Wheatbelt residents had a greater proportion of deaths classified as avoidable compared with non-Aboriginal Wheatbelt residents (75% compared with 63%). As shown in Table 13, ischaemic heart disease and diabetes accounted for a greater proportion of Aboriginal than non-Aboriginal deaths.

**Table 13: Wheatbelt residents: Leading causes of avoidable mortality, by Aboriginality, aged 0-74 years (1998-2007)**

| Condition                           | No. | % of total |
|-------------------------------------|-----|------------|
| <b>Aboriginal</b>                   |     |            |
| Ischaemic heart disease             | 32  | 31%        |
| Diabetes                            | 11  | 11%        |
| Cerebrovascular diseases            | 10  | 10%        |
| Alcohol related disease             | 9   | 9%         |
| Suicide and self-inflicted injuries | 7   | 7%         |
| <b>Non-Aboriginal</b>               |     |            |
| Ischaemic heart disease             | 254 | 24%        |
| Lung cancer                         | 146 | 14%        |
| Suicide and self-inflicted injuries | 80  | 7%         |
| Colorectal cancer                   | 78  | 7%         |
| Cerebrovascular diseases            | 53  | 5%         |

Source: ABS Mortality Data

**Implications for service planning:**

More than half the deaths of Wheatbelt residents under the age of 75 could potentially be avoided through the use of primary health programs.

Circulatory diseases were the leading cause of mortality for Wheatbelt residents, with Ischaemic heart disease the leading cause of avoidable mortality. This highlights that many of these deaths could potentially be avoided with the use of health programs. In particular, Wheatbelt residents report being significantly less physically active and a significantly higher prevalence of obesity compared with the State. These are both modifiable risk factors for ischaemic heart disease. With the increasing trend of obesity seen across the State, heart disease may also be likely to increase in the future, suggesting the need for primary health services targeted at this condition and its risk factors.

Injury and poisoning was also a leading cause of mortality for Wheatbelt residents with suicide and self inflicted injuries one of the leading causes of avoidable mortality for both Aboriginal and non-Aboriginal residents. Again, this suggests the need for primary health services targeted at creating resilience within the community and identifying people at risk of self-harm.

The primary health care streams of the SIHI will be integral to reducing avoidable deaths of Wheatbelt residents.

**Hospitalisations**

Hospitalisations are an indicator of relatively severe conditions in the community and assist in targeting primary care resources to prevent hospitalisations. Wheatbelt residents may be admitted to a hospital in the region, or may choose to attend a hospital in the metropolitan area, as a public or private patient.

Between 2005 and 2009 Wheatbelt residents had a significantly lower hospitalisation rate than that of the State (Epidemiology Branch and Cooperative Research Centre for Spatial Information, 2009).

The leading categories of hospitalisation are shown in the next table. Between 2005 and 2009 the leading category of hospitalisation of Wheatbelt residents was for factors influencing health status (which includes renal dialysis and chemotherapy), followed by diseases of the digestive system. The leading causes of hospitalisation were similar to those of the State.

**Table 14: Leading categories of hospitalisations of Western Wheatbelt residents, 2005 to 2009**

| Rank | Category                          | No.   | % of total | State Rank |
|------|-----------------------------------|-------|------------|------------|
| 1    | Factors influencing health status | 9,679 | 18%        | 1          |
| 2    | Digestive diseases                | 6,229 | 11%        | 2          |
| 3    | Neoplasms                         | 4,506 | 8%         | 3          |
| 4    | Injury and poisoning              | 4,471 | 8%         | 5          |
| 5    | Musculoskeletal diseases          | 4,281 | 8%         | 4          |

Source: WA Hospital Morbidity Data System

Aboriginal Wheatbelt residents had a significantly lower hospitalisation rate when compared with all Aboriginal WA residents. However, their hospitalisation rate was twice that of the non-Aboriginal Wheatbelt residents (Epidemiology Branch and Cooperative Research Centre for Spatial Information, 2011).

Between 2005 and 2009 the leading causes of hospitalisation differed markedly between Aboriginal and non-Aboriginal Wheatbelt residents, as shown in Table 15. Injury and poisoning, and mental and behavioural disorders accounted for a greater proportion of hospitalisations of Aboriginal compared to non-Aboriginal Wheatbelt residents. Injury and poisoning is one of the leading causes of hospitalisation for both Aboriginal and non-Aboriginal residents and is also one of the leading causes of mortality.

**Table 15: Leading category of hospitalisations by Aboriginality, 2005 to 2009**

| Wheatbelt Rank        | Category                          | No.    | % of total |
|-----------------------|-----------------------------------|--------|------------|
| <b>Aboriginal</b>     |                                   |        |            |
| 1                     | Factors influencing health status | 1,739  | 23%        |
| 2                     | Injury and poisoning              | 808    | 10%        |
| 3                     | Respiratory diseases              | 807    | 10%        |
| 4                     | Pregnancy and childbirth          | 764    | 10%        |
| 5                     | Mental disorders                  | 639    | 8%         |
| <b>Non-Aboriginal</b> |                                   |        |            |
| 1                     | Factors influencing health status | 20,567 | 24%        |
| 2                     | Digestive diseases                | 13,832 | 14%        |
| 3                     | Musculoskeletal diseases          | 10,039 | 7%         |
| 4                     | Injury and poisoning              | 10,013 | 7%         |
| 5                     | Neoplasms                         | 9,352  | 5%         |

Source: WA Hospital Morbidity Data System.

## Potentially preventable hospitalisations

Many hospitalisations result from conditions where hospitalisations could potentially be prevented by the use of preventive care and early disease management. These hospitalisations are known as *potentially preventable hospitalisations* and are grouped into three major categories acute, chronic and vaccine preventable. Public health measures have the greatest influence on vaccine preventable and chronic conditions.

Between 2005 and 2009, potentially preventable hospitalisations accounted for 10% of hospitalisations of Wheatbelt residents, a similar proportion to that of the State (Epidemiology Branch and Cooperative Research Centre for Spatial Information 2009). Of these, vaccine preventable conditions accounted for 3%, acute preventable accounted for 42% and chronic conditions accounted for 55% of potentially preventable hospitalisations in the Wheatbelt (Epidemiology Branch and Cooperative Research Centre for Spatial Information, 2009). As shown in the following Table, diabetes and its complications was the leading potentially preventable hospitalisations, accounting for more than one in four hospitalisations.

**Table 16: Leading potentially preventable hospitalisations, Wheatbelt residents, 2005 to 2009**

| Category                             | No.   | % of total |
|--------------------------------------|-------|------------|
| Diabetes complications               | 3,588 | 28%        |
| Dental conditions                    | 1,321 | 11%        |
| Chronic obstructive disorders        | 1,095 | 9%         |
| Ear Nose and Throat (ENT) infections | 1,054 | 8%         |
| Congestive cardiac failure           | 938   | 7%         |

Source: WA Hospital Morbidity Data System.

Between 2005 and 2009 potentially preventable hospitalisations accounted for a greater proportion of hospitalisations of Aboriginal Wheatbelt residents compared with non-Aboriginal Wheatbelt residents (21% compared with 9%) (Epidemiology Branch and Cooperative Research Centre for Spatial Information, 2009).

Chronic conditions accounted for 59% of the Aboriginal potentially preventable hospitalisations. While diabetes and its complications was the leading potentially preventable hospitalisations for both Aboriginal and non-Aboriginal Wheatbelt residents, it accounted for a greater proportion of hospitalisations of Aboriginal residents, as shown in the next table (Epidemiology Branch and Cooperative Research Centre for Spatial Information 2009).

**Table 17: Leading potentially preventable hospitalisations by Aboriginality, Wheatbelt residents, 2005 to 2009**

| Category                      | No.   | % of total |
|-------------------------------|-------|------------|
| <b>Aboriginal</b>             |       |            |
| Diabetes complications        | 643   | 41%        |
| Convulsions and epilepsy      | 228   | 14%        |
| Asthma                        | 143   | 9%         |
| ENT infections                | 133   | 8%         |
| Dental conditions             | 86    | 6%         |
| Pyelonephritis                | 86    | 6%         |
| <b>Non-Aboriginal</b>         |       |            |
| Diabetes complications        | 2,945 | 27%        |
| Dental conditions             | 1,235 | 11%        |
| Chronic obstructive disorders | 1,024 | 9%         |
| ENT infections                | 921   | 8%         |
| Congestive cardiac failure    | 880   | 8%         |

Source: WA Hospital Morbidity Data System.

### Implications for service planning:

Western Wheatbelt residents had a significantly lower hospitalisation rate compared with the State.

The leading cause of hospitalisation of Western Wheatbelt residents is for factors influencing health status, which includes renal dialysis and chemotherapy. Currently there are no renal dialysis services available within the Western Wheatbelt, but will be in the future with the introduction of renal chairs in Northam. This will be particularly important for Western Wheatbelt residents as it will enable them to receive care closer to home.

One in ten hospitalisations of all Wheatbelt residents and one in five hospitalisations of Aboriginal Wheatbelt residents could potentially be avoided through the use of preventative care and early disease management. The SIHI will move the focus from providing inpatient hospital services to the delivery of primary care, including the prevention and detection of chronic conditions, such as diabetes related conditions and dental conditions, which accounted for the greatest proportion of potentially preventable hospitalisations.

Aboriginal Wheatbelt residents have a greater need for health care services compared with their non-Aboriginal counterparts. Future services planning needs to ensure culturally appropriate services for the Aboriginal residents are incorporated in this planning.

## 5 HEALTH PARTNERS

The following services support WACHS to deliver services to the Western Wheatbelt to provide a continuum of care from primary health care to acute and emergency services in the regional and metropolitan area.

### Summary: Western Wheatbelt Health District Health Partners

#### State Government

Department of Child Protection

Department for Communities

Department of Education

Disability Services Commission (DSC)

District Health Advisory Council

Fire and Emergency Services (FESA)

Mental Health Commission

PathWest

Patient Assisted Travel Scheme (PATS)

Regional Development and Lands (RDL)

Rural Link

Wheatbelt Development Commission

WA Dental Health Services

WA Police

Wheatbelt Memorandum of Understanding Group

WoundsWest

#### Private Providers

Independent GPs

Private allied health providers

Private dentists

Community Pharmacy

Visiting Specialists

#### Non-government and other agencies

GP Network

Holyoake

KEEDAC

Local government agencies

Relationships Australia

Royal Flying Doctors Service (RFDS)

Rural Clinical School

Silver Chain

St John Ambulance (SJA)

#### Commonwealth Government

Centrelink

Home and Community Care (HACC)

Medical Specialist Outreach Assistance Program (MSOAP)

Wheatbelt Aboriginal Health Service

Residential Aged Care



## 5.1 State Government

### Department of Child Protection

Department of Child Protection focuses on working with children and families assessed as 'at risk'. WACHS has working relationships Department of Child Protection to assess and monitor the health needs of 'at risk' children in the community.

### Department for Communities

The Department for Communities informs the development of social policy, advocating on behalf of Western Australian children, parents and their families, young people, seniors, women, carers, volunteers and non-government organisations. Department for Communities is also responsible for the delivery of programs and services to support and strengthen WA's diverse communities. This includes administering WA's child care regulatory framework and, through the Child Care Licensing and Standards Unit, managing the licensing and compliance of some 1 500 child care services throughout WA.

DFC also offers the *Best Start* program for Aboriginal families in Moora and Narrogin, which provide activities for children aged 0 to 5 years old, and their families "to enhance the children's social, educational, cultural and physical development." This includes mentoring, support and role modelling by mothers with older children. The main program aims are

- improved transition to school environment;
- improved child health;
- increased confidence by parents in parenting role;
- families better linked to community services; and
- increased opportunity for children to learn through play.

### Disability Services Commission

Disability Services Commission work with people with disabilities and their families to access support in the community, access funding, and work across the community in collaboration with other agencies in the community.

### District Health Advisory Council (DHAC)

DHACs have been established by the State Government to give country people a say in how their health services are delivered and provide the opportunity for continuously improving consumer and community participation at the local, district and State levels. The Council consists of a group of people - health consumers, carers, community members and service providers who actively seek to improve service planning, access, safety and quality.

The composition of Advisory Councils intends to reflect a cross-section of community health interests. Health service providers and agency representatives should comprise no more than 30 per cent of the total number of members.

## WA Mental Health Commission

The WA Mental Health Commission was established in March 2010 with responsibility for policy, planning and the purchasing of mental health services in Western Australia. The Commission's functions include:

- development and provision of mental health policy and advice to the government;
- leading the implementation of the Mental Health Strategic Policy;
- articulating key outcomes and determining the range of mental health services required for defined areas and populations across the state;
- specifying activity levels, standards of care and determining resourcing required;
- identifying appropriate service providers and benchmarks and establishing associated contracting arrangements with both government and non-government sectors;
- providing grants, transfers and service contract arrangements;
- ongoing performance monitoring and evaluation of key mental health programs in WA;
- ensuring effective accountability and governance systems are in place; and
- promoting social inclusion, public awareness and understanding of matters relating to the wellbeing of people with mental illness to address stigma and discrimination.

## PathWest

PathWest provide collection and testing services as per Section 6.6.

## Patient's Assisted Travel Scheme (PATS)

The PATS provides an important role in linking specialist treatment to country Western Australians. The PATS provides assistance to people in the country who are required to travel more than 100 km (one way) to obtain the nearest available medical specialist treatment not available locally, via telehealth or from a visiting service.

## Regional Development and Lands, Royalties for Regions

Regional Development and Lands is responsible for initiatives such as SIHI and SuperTowns (refer to Section 3.7.2) and enable opportunities to develop partnerships with State, Local, Commonwealth and non-government agencies and private providers in the Wheatbelt Region.

## RuralLink

RuralLink provides a specialist after-hours mental health telephone service for the rural communities and health services of WA.

## WA Police and Fire and Emergency Services (FESA)

WA Police and FESA work together with WACHS and St John Ambulance to coordinate emergency management responses for the Western Wheatbelt. This is largely coordinated through the Local Emergency Management Committee.

WA Police also provide patient escorts as required by the Mental Health Act for acute mental health patients requiring admission to metropolitan health facilities.

## WA Dental Health Services

Providing visiting dental health services to school aged children in the Western Wheatbelt.

## Wheatbelt Health Memorandum of Understanding Group

The membership and purpose of this group is detailed in Section 3.6.1.

## WoundsWest

WoundsWest is an innovative project that aims to improve wound prevention and management throughout Western Australia. The project implemented in partnership between WA Health, Silver Chain and Curtin University.

## 5.2 Local government

The Western Wheatbelt includes the Shire of Beverley, Shire of Cunderdin, Shire of Dowerin, Shire of Goomalling, Shire of Koorda, Shire of Northam, Shire of Quairading, Shire of Tammin, Shire of Toodyay, Shire of Wyalkatchem and Shire of York.

Local governments provide a number of health and community services that support the health and wellbeing of their communities. These include environmental health, immunisation services, accommodation for child health clinics, aged care and accommodation, community care, recreational and sporting venues and welfare services. In some cases local governments will provide financial, accommodation, vehicles and other incentives to attract GPs to the district.

Recently, the Shire of Wyalkatchem appointed consultants to facilitate community consultation and develop a *Community Health Plan* that reflects the health aspirations of the community and their preferred future service delivery and to develop an Aged Care Plan for the Shire.

## 5.3 Commonwealth Government

### GP Super Clinics

Under National Health Reform, the Australian Government is working towards shifting health care services from hospital facilities to primary care settings. GP Super Clinics are medical facilities that support general practitioners, nurses, visiting medical specialists and allied health professionals to work together, generally in a single location, to deliver better health care to local communities.

In the GP Super Clinic setting, patients are cared for by health practitioners working together in a multidisciplinary team and those people with long-term complex, chronic health problems can be better managed with help from practitioners working collaboratively. The need for patients to travel to other health care facilities for treatment is also reduced.

Northam has been selected as one of the six GP Super Clinics to be established in WA, with the Wheatbelt GP Network identified as the preferred operator for the new \$3 million GP Super Clinic.

## Wheatbelt GP Network

The Wheatbelt GP Network and Amity Health (formerly Great Southern GP Network) deliver services into the Southern Wheatbelt catchment. The *Wheatbelt GP Network* (formerly the Central Wheatbelt Division of General Practice) is a network of GPs who work within a geographical area known as the Central Wheatbelt that encompasses the towns of Northam, Toodyay, York, Beverley, Quairading, Corrigin, Bruce Rock, Narembeen, Cunderdin, Wyalkatchem, Kellerberrin, Kununoppin, Merredin, Goomalling, Dowerin, Wongan Hills, Dalwallinu, Bindoon, Gingin, Moora, Lancelin and Cervantes.

The Network aims to improve the health outcomes of the Central Wheatbelt area population through facilitating links between GPs and strengthening primary health care services. Wheatbelt GP Network also offers the following allied health services:

- Wheatbelt Support Services comprises a team of counsellors and psychologists, who together provide counselling service to the Wheatbelt.
- Dietician provides individual and group consultations
- Diabetes Educator provides individual and group consultations.

Wheatbelt GP Network is also funded via COAG to increase Aboriginal people's access to GP services provided in Northam, Merredin and Narrogin.

Wheatbelt GP Network is a not-for-profit organisation that is largely funded by the Commonwealth Department of Health and Ageing Divisions of General Practice Program. With the introduction of Medicare Locals, core funding will progressively transfer to the Medicare Locals program and cease on the 30<sup>th</sup> June 2012.

## Home and Community Care (HACC)

The HACC Program is a joint Commonwealth, State and Territory initiative which funds basic maintenance and support services to help frail older people and younger people with disabilities to continue living in their community.

## Kaata-Koorliny Employment and Enterprise Development Aboriginal Corporation (KEEDAC)

Kaata-Koorliny Employment and Enterprise Development Aboriginal Corporation (KEEDAC) Narrogin and Northam, WA, have received funding over 36 months to deliver the *Community Support Service* to improve Aboriginal access to mainstream and Aboriginal services in Narrogin and Northam, WA.

The KEEDAC Community Support Service supports Indigenous community members and their families by providing links and referrals to a range of mainstream and Aboriginal services, which may include welfare and social support, family violence, health (including drug and alcohol services), housing, child care and legal. The role will also entail the development and fostering of relationships with other service providers through promoting access and pathways to their services.

KEEDAC provides other key services for Aboriginal people living in the Wheatbelt. These include:

- The Indigenous Employment Program aims for sustainable employment, mainly within the rural industries;
- The Youth and Family Support; and

- The Personal Helpers and Mentors Program.

### **Medical Specialist Outreach Assistance Program (MSOAP)**

The MSOAP aims to improve access to medical specialists in rural and remote communities and reduce some of the financial disincentives incurred by medical specialists in providing outreach services. Funds are available for the costs of travel, meals and accommodation, facility fees, administrative support at the outreach location, lease and transport of equipment, telephone support and up-skilling sessions for resident health professionals.

### **South West WA Medicare Local (SWWAML)**

The *South West WA Medicare Local (SWWAML)* is one of first group of 19 Medicare Locals that commenced across Australia on the 1 July 2011. SWWAML was formed through an alliance of the following three GP Networks: GP Down South; Greater Bunbury Division of General Practice; and Great Southern GP Network. SWWAML covers the Wheatbelt, South West and Great Southern, with offices in Albany, Northam and Busselton.

For further information visit: [www.sw-medicarelocal.com.au/Home.aspx](http://www.sw-medicarelocal.com.au/Home.aspx)

## **5.4 Not-for-Profit Agencies**

### **Aged care residential services**

The aged care residential services are detailed in Section 6.5.

The shires of Merredin, Bruce Rock, Yilgarn, Westonia, Wyalkatchem, Kellerberrin, Mukinbudin, Trayning, Nungarin, Koorda and Mount Marshall have agreed to regionally unite to address the critical issue of Aged Care within their sub region, and deliver an Aged Care Regional Solution for the Central East Wheatbelt.

Initiated during the Royalties for Regions Country Local Government Regional Planning during late 2011, the Aged Care Regional Solution project will explore possible models of low and high aged care in terms of well-aged accommodation, services and governance.

The 11 local governments have partnered with the Wheatbelt Development Commission, who will manage the project, and RDA Wheatbelt, who will provide critical links to the Federal government.

### **Holyoake**

Holyoake Community Drug Service Team provides services for individuals and their families with alcohol and other drug misuse issues. It also provides education and prevention services to communities and professionals within the Wheatbelt area. Its main role is to empower people and communities impacted by addictions to create positive and sustainable outcomes.

Holyoake operates under a Memorandum of Understanding with the WACHS Mental Health section to provide a coordinated service to clients with 'cross-over' needs. They operate the "No Wrong Door" model that works for people with a drug and/or alcohol issue and mental health problems.

Holyoake offers individual, couple, family and group counselling. The *Indigenous Services Program* supports Aboriginal families impacted by alcohol or drug use

The Community Drug Service Team is based in both Northam and Narrogin, and provides outreach services to Merredin, Wyalkatchem, Gingin, Goomalling and all points west to Beverley.

### **Avon Youth, Community and Family Services**

Avon Youth is working with at risk young people (13yo to 24yo) and their families. They provide supported transitional accommodation: a male residence and a female residence through the Supported Accommodation Assistance Program, and accept self-referral or referral from agencies. They also provide other support and referrals to agencies dependent on individual's needs.

### **Relationships Australia**

Provide mediation and counselling services to individuals, couples, children and families.

### **Royal Flying Doctor Service (RFDS)**

The RFDS provides a pivotal role throughout country Western Australia providing medical and nursing services to transfer patients to larger regional or metropolitan hospitals. There are no RFDS bases located in the Wheatbelt, but they do transfer patients from the Wheatbelt to the metropolitan area. This is due to the relative closeness of the Wheatbelt to Perth metropolitan.

### **Silver Chain**

Silver Chain is one of the largest providers of community and health services to the Western Australian community. Silver Chain provide a diverse range of services, including home care, palliative care, emergency care, family health care and other care services to residents living in metropolitan and rural Western Australia. Within the Western Wheatbelt, Silver Chain provides palliative care and rehabilitation services in the home and support the WoundsWest Program.

### **St John Ambulance**

Northam has two paid paramedics and 21 ambulance volunteers that coordinate patient transfers in partnership with WACHS to district, regional and metropolitan health services.

## 5.5 Student programs

### Medical Student Work Experience

Northam occasionally has medical students come to the hospital for work experience. Work experience for medical students is aligned with a local GP and not based at Northam Hospital.

## 5.6 Private providers

At the time of writing there were 11 GPs in Northam. Full time GPs are currently in all small towns in the Western Wheatbelt, except Wundowie. One GP provides obstetric services and one provides anaesthetic services.

There are two private dentists, five private physiotherapists and one private clinical psychologist in Northam. Currently there are no private dieticians in the Northam area.

## 6 CURRENT AND FUTURE SERVICE DELIVERY

The following section details the current service models and future service reform strategies for the Western Wheatbelt based on the issues and priorities highlighted in Section 3.9, the demography and health status information in Section 4.0 and the activity seen by the hospitals and health services (Section 6.0). The information in this chapter will provide guidance for services in the district as they work towards consolidating improved models of care under the SIHI (refer to Section 3.7).

Section 6.3 provides an overview of current and future inpatient demand and supply activity for the district including patient flows within the region and outflows to other regional and metropolitan healthcare facilities.

The remaining sub-sections detail each service/department's current service profile, historical activity, activity projections (where data is available and reliable) and proposed strategies for:

- Meeting the health needs of the population (refer Section 4.0) and projected demand for services.
- Implementing Commonwealth and State Government policy. For example, the required role delineations as described in the WA Health CSF.
- Addressing the issues highlighted and meeting the expectations of staff and stakeholders.
- Achieving the intent of the SIHI to ensure high quality, sustainable safe services for Southern Inland area.

Overall the region reports that they are meeting or working towards meeting the role delineations stipulated in the Clinical Services Framework (CSF). Implementing the recommended strategies will be dependent on appropriate resourcing, endorsement, local collaborations and partnerships with other providers. The degree to which the staff, GPs and specialists can be attracted and retained to deliver the services will also determine the level of change achieved.



## 6.1 Ambulatory Health Care Services Profile

The current and proposed ambulatory care services for Western Wheatbelt residents are outlined below. Please note quantitative activity data is presented where available.

### 6.1.1 WACHS primary health care services

Primary health care services provide first level community health care, across the life continuum. Primary health care encompasses medical (GPs) and nursing services along with the core services of population health (including child and maternal health, Aboriginal health, allied health, school and youth health, child health and health promotion); community mental health; oral health; community aged care and chronic disease care coordination. Within country WA these services are delivered by a range of service providers, including both WACHS primary and secondary level services.

SIHI seeks to support all health services, particularly those closest to the community, to enable the consumer and community to access services closer to home, to self-manage their health needs in the best possible way and to build on the strengths of the consumer and community to get the best health return.

As part of the *National Health and Hospitals Reform Agenda*, the Commonwealth Department of Health and Ageing has outlined the national reform agenda for primary health care services in Australia which includes:

- better integration of services
- access to multiple primary health professionals at one site
- co-location of services to improve accessibility for small communities

The *National Primary Health Reform Program* provides the opportunity to significantly improve primary health services delivery as well as the administration of these services. Primary Health Care Organisations (Medicare Locals) are proposed as key drivers of change.

One of the key aims of SIHI is to provide a platform to realign health service delivery to boost primary health care services and implement the *National Primary Health Reform Program* direction.

The preferred future model of primary health care in the Western Wheatbelt will support the *National Primary Health Reform Program*, align with the intentions of SIHI and link with Medicare Locals and Local Health Networks.

Integrated primary health care services offer the opportunity for improved economies of scale and efficiencies, integrated systems and promotion of a collaborative approach to patient and consumer health care and service improvement.

This service planning exercise for the Western Wheatbelt is an opportunity to reconsider the organisation of primary health care service in line with developments in acute, aged and emergency care. Integrated programs addressing issues such as chronic disease care coordination, community rehabilitation, maternal and child health, youth health, oral health and suicide prevention, will enhance the services delivered.

The current service model, key issues and challenges and proposed service model are described, by each Western Wheatbelt primary health care service below.

## WACHS Population Health Services

WACHS – Wheatbelt Population Health Services are an essential element of the continuum of care for the Western Wheatbelt. Population health services cover public and community health services across the age and care continuum. The focus is on health promotion and prevention plus interventions directed at preventing or minimising the progression of disease where possible.

In the Wheatbelt, WACHS population health services include:

- Wheatbelt Public Health Unit: based in Northam and provides services across the region including disease control and health promotion programs. In-reach services are provided to the small communities - either at a health site or another local facility.
- Wheatbelt Aboriginal Health Service (WAHS): based in Northam and provides Aboriginal health services from Northam and outreach services to all towns in the district based on need to address the health and wellbeing needs of the Aboriginal community. They are also responsible for the delivery of Aboriginal health promotion, social work and 'Bringing Them Home' counselling to the whole Wheatbelt region.

Aboriginal health services are highly integrated within the Wheatbelt Population Health Unit, with the Wheatbelt Aboriginal Health Service providing some regional services and holding a programmatic responsibility and coordinating function.

- Four Primary Health Care Teams deliver the following services in partnership with non-government providers, GPs and other private primary care providers:
  - Child Development Teams - including the provision of services for children with developmental delays and disabilities
  - Child Health Services.
  - School Health Services.
  - Immunisation Services.
  - Continence Services.
  - Women's Health Services.
  - Chronic Disease Services including asthma and diabetes education.
  - Allied Health Services:
    - o Occupational Therapy.
    - o Physiotherapy.
    - o Speech Pathology.
    - o Dietetics.
    - o Podiatry.
  - Health Promotion.

In 2009/10 there were 26,696 occasions of service for community health services at Northam (AOD pivot, 2011).

Around 6% of the community health occasions of service were for Aboriginal residents, which is similar to the overall proportion of Aboriginal people living in the Western Wheatbelt (5%).

There are several other not-for-profit and private providers in the district and region who provide primary health care services – refer chapter five health partners.

It is the intention that more service and funding partnership approaches will develop over time to address the health needs of the population identified in this plan.

## Community Aged Care Services

The Wheatbelt Regional Community Aged Care Program includes the following services:

- *Aged Care Assessment Teams (ACATs)* assess the care needs of the aged care client and refers them to community and residential aged care service providers. There is an ACAT team in Narrogin.
- The Home and Community Care (HACC) program which provides services such as domestic assistance, social support, nursing care, respite care, food services and home maintenance, which aims to support people who live at home and whose capacity for independent living is at risk of premature admission to long-term residential care.
- The Older Patients initiative (OPI) aims to reduce avoidable or premature admissions of older people to hospitals through early identification of people at risk, complex care coordination and provision of age friendly services.
- Community Aged Care Packages (CACPs) are funded by the Australian Government and are targeted at frail older people, aged 70 years and over (or 50 years and over for Aboriginal and Torres Strait Islander people), with complex care needs who wish to remain living in their own home. The CACP program support people who would otherwise be assessed as requiring a low level of residential care. The Extended Aged Care at Home (EACH) provides care for people who would otherwise be assessed as requiring a high level of residential care and the Extended Aged Care at Home Dementia (EACHD) program supports people who have complex high-care needs associated with their dementia
- Residential care, while provision of residential aged care is the responsibility of the Australian Government, the WACHS provides 'flexible care places' in some small towns where private aged care facilities are not viable. These are provided under a MPS funding agreement.

Furthermore, geriatrician services are contracted through Royal Perth Hospital for the Western Wheatbelt. Geriatricians visit Northam 28 times a year and Moora once per year. There is also a visiting psycho-geriatric service to Northam that undertakes assessments, consultation and liaison for identified clients in association with the regional Aged Care Unit and Mental Health Team, education and support for health care professionals and ongoing access for advice and follow up.

## Public Oral Health Care

There are currently no public adult dental chairs available to residents of the Western Wheatbelt however discussions have begun with a local dentist to provide a mix of public and private services at Northam Hospital. Care for school children is available at Dental Therapy Centres at a range of schools.

## Alcohol and Other Drug Services

The community drug and alcohol service is provided by Holyoake as described in Section 5.4.

## Community Mental Health Services

Within the Western Wheatbelt community mental health services are provided from Northam. Community mental health services work is focused on the assessment and

treatment of high risk, acutely unwell people with complex needs. This includes statutory mental health care. Due to the level of demand with the more complex high risk presentations the community mental health service is doing more crisis type intervention. The activity is outlined below, but as with the community health data, should be treated as a guide only.

**Table 18: Western Wheatbelt Community Mental Service occasions of service (2007/08 - 2009/10)**

| Community Mental Health | Occasions of service |         |         |
|-------------------------|----------------------|---------|---------|
|                         | 2007/08              | 2008/09 | 2009/10 |
| Northam                 | 10,537               | 11,435  | 12,606  |

Source: MHIS. Note this is indicative only.

### Mental Health Prevention and Promotion Services

There are a number of mental health prevention and promotion activities that are provided by population health in the Western Wheatbelt including the 'Act, Belong, Commit' program. Wheatbelt Mental Health Service has also received COAG funding to facilitate the development and implementation of a specifically targeted Aboriginal Mental Health Preventative and Promotion Service. Department of Education school psychologists are also available across the district.

#### Recommendations for service reform - Primary health care services

Support the development of new Primary Care Services through SIHI for the Western and Coastal Wheatbelt area. This includes a Primary Care Integration Service and Primary Care Nurse Practitioner who will advance primary care nursing. These positions will work collaboratively with the WACHS Population Health services and other primary care providers to develop new, partnership focused, evidence based service delivery models that address service gaps for primary health care including:

- Maternal & Child Health
  - Develop a lactation consultancy in the Wheatbelt and provide the training and FTE to support a consultant.
  - Continue consultations with metropolitan child health services and Swan Kalamunda Health Service in relation to paediatric, audiology and child psychology services.
  - Implement early childhood intervention programs and parenting in conjunction with other providers
  - Piloting a community midwifery model of care for antenatal and postnatal care, in some smaller communities.
  - Developing and improving early years child development services to address the vulnerabilities identified in the AEDI.
- Health Promotion, Allied Health and Oral Health
  - Increase the emphasis on health promotion and illness prevention to keep people well in the community.
  - Provide more community based allied health services by redirecting inpatient allied health resources.

## Recommendations for service reform - Primary health care services

- Provide a two-chair public dental service, ideally located within the proposed ambulatory health care facility (funded as part of SIHI Stream 2).
- Explore other models of oral health service delivery including community based Oral Health Therapists
- Aged Care, Aboriginal health and Chronic Disease
  - Develop and improving evidence based models of care for chronic disease that increase the focus in the community and reflect the WACHS Chronic Disease Self Management Strategy.
  - Develop an aged care focused sub-acute service, including sub-acute beds, located in Northam for Wheatbelt residents to enable rehabilitation to be provided closer to home, rather than in the metropolitan area or in an inappropriate setting.
  - Implement processes to ensure allied health assessment of older people with an acute illness and who are inpatients to prevent functional decline.
  - Increase FTE to decrease the waitlist and meet the projected demand for ACAT services due to an ageing population.
  - Increase access to visiting geriatrician services (Stream 1) and review what specialist follow up care could be provided by videoconferencing.
  - Ensure HACC services are more culturally appropriate and flexible and promote these services to families. The employment of more Aboriginal staff and support workers and working with Aboriginal families to determine their needs would assist in this process. Offer Aged Care traineeships for Aboriginal people.
  - Provide aged care self-directed packages for an individual and/or family to purchase services that they require, similar to the Disability Services Model.
  - Expand the Older Persons Initiative across the Western Wheatbelt with associated enhancements across the referral pathways.
  - Older person's mental health office to have access to a hot desk with aged care services to support seamless service provision with ACAT and Geriatrician/Psychogeriatrician.
  - Develop capacity to provide appropriate accommodation for people requiring respite and/or transitional care to meet the need in the Western Wheatbelt.
  - Increased capacity for continence management in adults by training nursing staff and physiotherapists across the Western Wheatbelt.
  - Build on, develop and revitalize existing culturally appropriate clinics to provide accessible outreach focused chronic disease prevention, screening and palliative care programs for Aboriginal people.
- Mental Health/ Drug and Alcohol
  - Increase capacity to be able to provide more case management/treatment and recovery services for those with severe mental illness, specifically for Aboriginal people.
  - Ensure Wheatbelt Health Services work more closely with Wheatbelt Aboriginal Health Service to support Aboriginal clients and their family and carers access Wheatbelt Health Services.

## Recommendations for service reform - Primary health care services

- Strengthen the implementation of integrated care pathway models for people with mental health and co-occurring substance use issues including co-located services, joint case management, care coordination and integrated care pathways
- Enhance mental health promotion and prevention services
- Increased Aboriginal Social and Emotional Wellbeing (SEWB) and Mental Health programs needed to address the intergenerational impact of grief/loss/trauma/rage and loss of elders.
- Increase Men’s health programs – especially targeting family violence, drugs and alcohol, mental health, family functioning and general health and wellbeing
- Increase child and youth mental health services.
- Need for more social and emotional wellbeing support for children and young people and their parents/carers.

### 6.1.2 Same day surgery

Refer to Section 6.4.2.

### 6.1.3 Outpatient services

#### Current service model

The following outpatient services are provided at Northam through visiting medical specialists in addition to a range of nursing outpatient services (e.g. wound care):

- |                     |                  |                   |
|---------------------|------------------|-------------------|
| • Audiology.        | • Gynaecology.   | • Psychiatry.     |
| • Cardiology.       | • Oncology.      | • Radiology.      |
| • Endocrinology.    | • Ophthalmology. | • Renal Medicine. |
| • Gastroenterology. | • Paediatrics.   | • Rheumatology.   |
| • General Surgery.  | • Podiatry.      | • Urology.        |

### Recommendations for service reform - Outpatient Services

- Explore the options of utilising telehealth to improve access to specialist services if the number of visiting specialist appointments cannot be increased.
- Refer also to recommendations regarding priorities for visiting specialists listed under medical services (Section 6.4.1).

## 6.2 Emergency Services Profile

### Current service model

#### *Northam Hospital CSF role delineation – Level 3*

Level 3 emergency services should provide:

- Local GPs who are rostered to provide 24 hour cover, with services provided by a Registered Nurse (RN).
- Resuscitation and stabilisation.
- Access to visiting specialist services or by telehealth.

The Northam Hospital ED currently meets the CSF role delineation. The ED at Northam Hospital provides 24/7 management and stabilisation of all forms of emergency illness including life threatening illness requiring immediate resuscitation and management of all traumas. Medical coverage is provided by local GPs. A district wide ED nurse practitioner role commenced in February initially based at York to provide up skilling and clinical education to nursing staff.

The other smaller hospitals in the Western Wheatbelt operate nurse-led models of care with close on call support from local GPs. Northam ED provides telephone support to smaller sites after hours with transfer to Northam if clinically appropriate.

An emergency clinical coordination project has commenced develop sustainable models to improve emergency patient transfers in collaboration with Royal Flying Doctors Service and St. John Ambulance.

### Activity summary

#### *Actual and projected activity*

- The next table outlines the historical and projected number of attendances to Northam and other Western Wheatbelt Hospital EDs.
- While it is projected that the number of ED attendances to Northam will increase by 53% between 2011/12 and 2021/22 and 27% to other hospitals, historically, the number of attendances to the EDs has been steadily decreasing each year. The increase in projections is due to the modelling methodology used in which the State ED triage rates are applied to the local population.
- The attendances for triage 5 categories are projected to decrease in line with what has been happening at a State level, which is consistent with the expected decrease as a result of the SIHI.
- ED projections will be remodelled in late 2011/12.
- At Northam Hospital, 14% of attendances involved an Aboriginal person. The proportion of attendances by Aboriginal people varied from 6% in Wyalkatchem and York to 21% in Goomalling and Moora.



**Table 19: Western Wheatbelt hospitals: Actual and projected emergency department presentations and bays, by triage category.**

| Hospital                                 | Actual presentations |              |              | Projected presentations |               |               |
|--|----------------------|--------------|--------------|-------------------------|---------------|---------------|
|  | 2008/09              | 2009/10      | 2010/11      | 2011/12                 | 2016/17       | 2021/22       |
| <b>Northam Hospital</b>                  |                      |              |              |                         |               |               |
| Triage 1                                 | 34                   | 13           | 37           | 37                      | 48            | 61            |
| Triage 2                                 | 460                  | 402          | 515          | 458                     | 641           | 870           |
| Triage 3                                 | 1,988                | 1,711        | 2,163        | 2,202                   | 2,803         | 3,423         |
| Triage 4                                 | 4,318                | 4,881        | 4,581        | 4,801                   | 6,472         | 8,299         |
| Triage 5                                 | 1,710                | 1,256        | 1,007        | 1,473                   | 1,277         | 1,036         |
| <b>Total</b>                             | <b>8,511</b>         | <b>8,263</b> | <b>8,303</b> | <b>8,974</b>            | <b>11,245</b> | <b>13,697</b> |
| <b>ED bays</b>                           | <b>4.5</b>           | <b>4.2</b>   | <b>4.6</b>   | <b>4.8</b>              | <b>6.1</b>    | <b>7.5</b>    |
| <b>Other Western Wheatbelt hospitals</b> |                      |              |              |                         |               |               |
| Triage 1                                 | 38                   | 53           | 44           | 39                      | 49            | 61            |
| Triage 2                                 | 282                  | 328          | 447          | 273                     | 359           | 458           |
| Triage 3                                 | 1,002                | 1,061        | 1,389        | 1,040                   | 1,312         | 1,604         |
| Triage 4                                 | 3,566                | 3,768        | 3,954        | 4,105                   | 5,468         | 6,962         |
| Triage 5                                 | 4,621                | 4,494        | 3,555        | 3,972                   | 3,442         | 2,849         |
| <b>Total</b>                             | <b>9,509</b>         | <b>9,704</b> | <b>9,389</b> | <b>9,430</b>            | <b>10,630</b> | <b>11,934</b> |
| <b>ED bays</b>                           | <b>4.1</b>           | <b>1.3</b>   | <b>4.4</b>   | <b>4.1</b>              | <b>4.7</b>    | <b>5.5</b>    |

Source (historic): WACHS online ED pivot, extracted 12th September 2011;  
 Source (projections) WACHS ED Projections Pivot (Based on ABS Series B+)

The estimated number of treatment bays is calculated from the attendances for each triage category using the benchmarks in Table 20. These benchmarks have also been applied to the historic activity above to give an indication of the current number of ED bays required to meet demand. As shown in the table above, ED bays are projected to increase to eight for Northam and a further six across other Western Wheatbelt EDs by 2021/22.

**Table 20: ED Planning Benchmarks**

| Measure                                       | Treatment Space      | Benchmark                           | Source   |
|---|----------------------|-------------------------------------|--|
| Emergency department presentations (all ages) | Fast Track           | 1/3000 yearly T4 and T5 attendances | Adapted from Emergency Demand Treatment Space Calculator, The Advisory Board Company, 2009 |
|   | General ED           | 1/1000 yearly T2 and T3 attendances |  |
|   | Trauma/Critical Care | 1/500 yearly T1 attendances         |  |

Source: WACHS Planning Team

*Emergency department presentations, by age*

- There were noticeable differences in the age of patients attending to the EDs at Western Wheatbelt hospitals.
- One quarter of attendances at Beverley and Wyalkatchem involved someone over the age of 65 (compared with around 15% in other hospitals).
- Wongan Hills had a greater proportion of patients presenting to ED aged 0 to 14 year olds than other Western Wheatbelt hospitals (34% compared with around 25%).

**Table 21: Western Wheatbelt hospitals: Emergency department presentations, by age category (2010/11)**

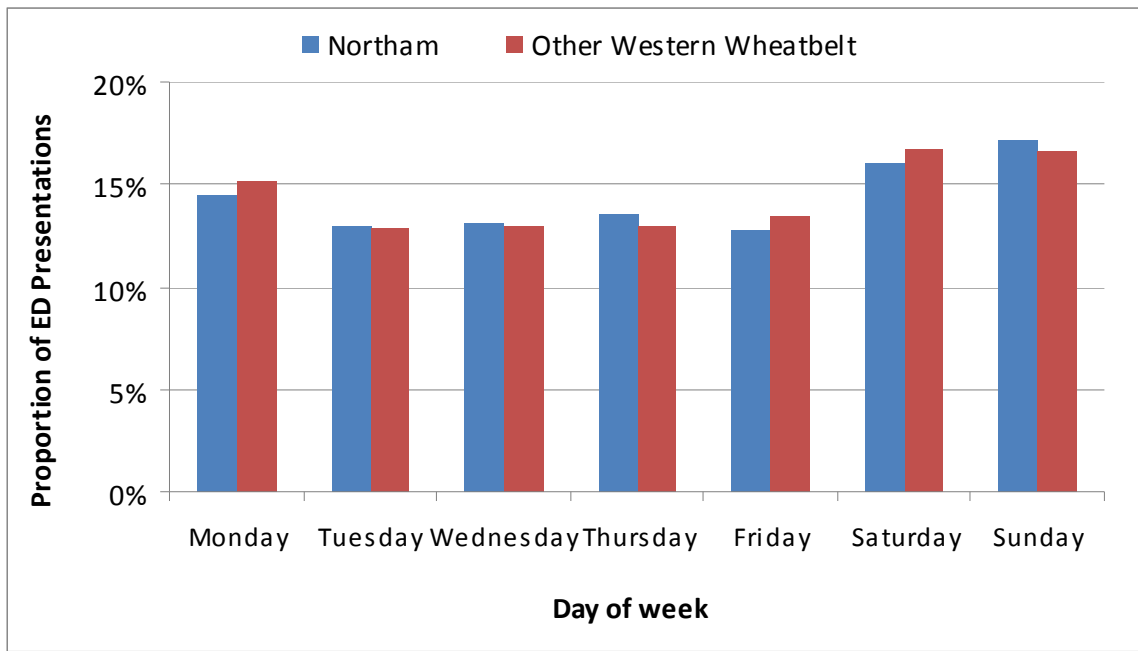
| Age          | Number of presentations (2010/11) |             |             |             |            | Total        |
|--------------|-----------------------------------|-------------|-------------|-------------|------------|--------------|
|              | 0-14                              | 15-44       | 45-64       | 65-84       | 85+        |              |
| Northam      | 2247                              | 3139        | 1721        | 988         | 208        | 8303         |
| Beverley     | 145                               | 188         | 126         | 108         | 26         | 593          |
| Cunderdin    | 204                               | 277         | 123         | 69          | 17         | 690          |
| Dalwallinu   | 405                               | 582         | 270         | 178         | 18         | 1453         |
| Goomalling   | 311                               | 320         | 201         | 109         | 44         | 985          |
| Moora        | 509                               | 952         | 441         | 268         | 35         | 2205         |
| Wongan Hills | 283                               | 312         | 134         | 75          | 39         | 843          |
| Wyalkatchem  | 190                               | 207         | 162         | 156         | 27         | 742          |
| York         | 423                               | 655         | 448         | 297         | 55         | 1878         |
| <b>Total</b> | <b>4717</b>                       | <b>6632</b> | <b>3626</b> | <b>2248</b> | <b>469</b> | <b>17692</b> |

Source: WACHS online ED pivot, extracted 12<sup>th</sup> September 2011

#### Actual day and time of attendances

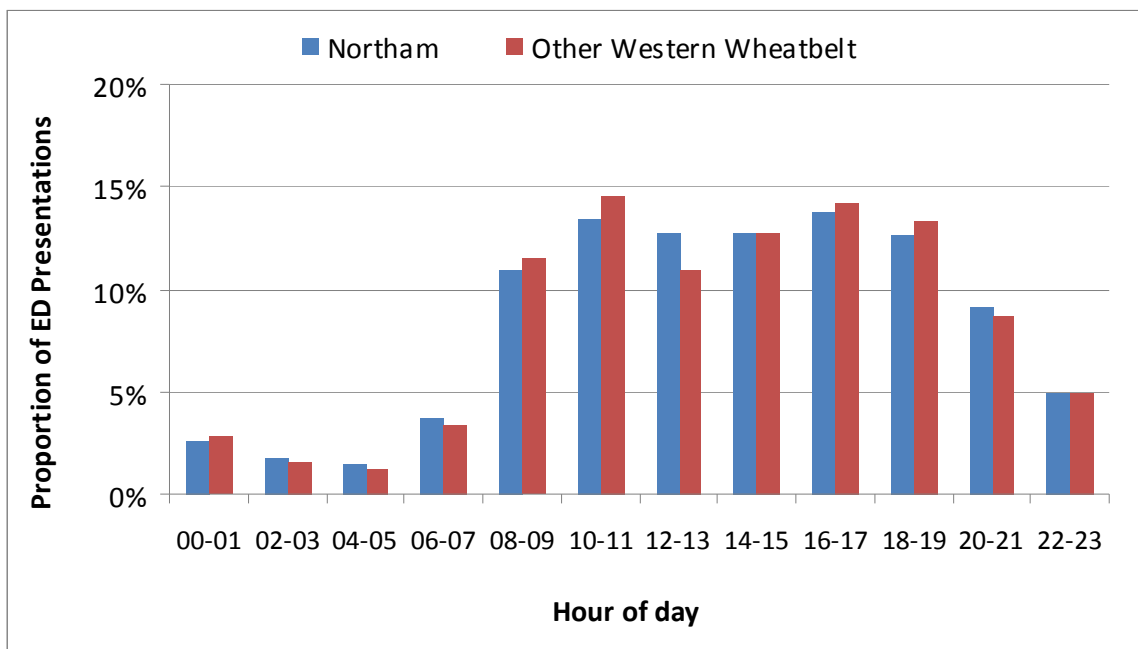
As shown in the following figures all Western Wheatbelt hospitals show similarities in regards to the weekday and time of day that people attend to the Western Wheatbelt EDs. Approximately one in three of attendances occur over the weekend. Approximately two-thirds of attendances occur between 8am and 6pm, with peak times being between 8am and 11am and 2pm and 7pm.

**Figure 10: Proportion of emergency department attendances by day of week, 2009/10**



Source: WACHS online Emergency Department pivot, extracted 2nd June 2011

**Figure 11: Proportion of emergency department attendances by hour of day, 2009/10**

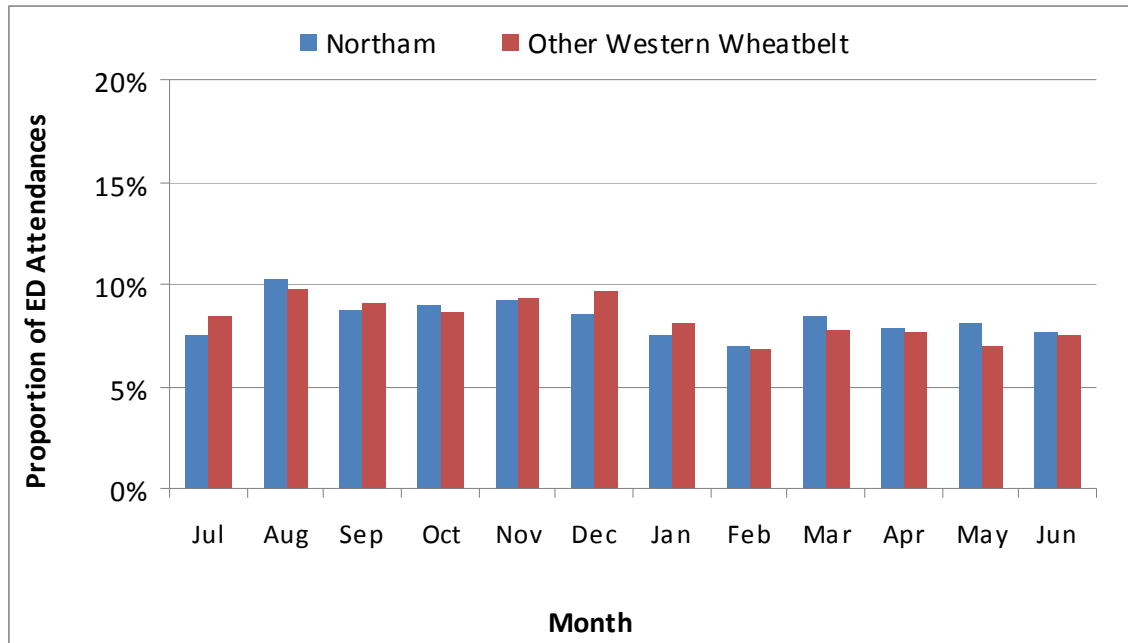


Source: WACHS online Emergency Department pivot, extracted 2<sup>nd</sup> June 2011

**Actual month of attendances**

There is little seasonal variation shown in the ED attendances at Northam and other Western Wheatbelt hospitals.

**Figure 12: Proportion of Emergency Department attendances by month of year, 2009/10**



Source: WACHS online Emergency Department pivot, extracted 2nd June 2011

**Actual mental health emergency department attendances, including alcohol and other drugs**

- In 2009/10, 3% of all attendances to the Northam ED and 2% of attendances to the other Western Wheatbelt hospitals were classified as ‘mental health or alcohol/drug’ issue (WACHS Online Emergency Department Pivot, 2 June 2011).
- In 2009/10 ‘alcohol/drug (only)’ accounted for around 16% of the mental health and alcohol/drug attendances at Northam Hospital and 23% of these attendances at other Western Wheatbelt hospitals (WACHS Online Emergency Department Pivot, 2 June 2011).

## Recommendations for service reform - Emergency Services

- According to the WA Health CSF, the role delineation for ED services at Northam Hospital will remain as Level 3 (Department of Health, 2010a).
- Disaster preparedness services to increase from Level 3 to 4 by 2014/15. The detailed descriptions for each level are outlined in the CSF (Department of Health, 2010a).
- Provide 24/7 medical coverage to the ED and emergency surgical services by investing the recurrent funding available from SIHI Stream 1.
- Clarify and confirm the ED 24/7 model of care (Stream 1 SIHI) including:
  - Clarifying the role of a nurse practitioner in emergency care.
  - Determining the care pathways for emergency services that are consistent with the district network model.
  - Identifying strategies to separate ambulatory care cases from the ED - moving outpatients and visiting specialist to the new Ambulatory Health Care Centre.
- Participate actively in clinical coordination project to improve clinical coordination, consultation and advice from metropolitan emergency specialists and intra-regional coordination and clinical governance of community care.
- Further capitalise on the current district ED nurse practitioner role based at York.
- Implement training for GPs, staff and other stakeholders to meet changes to the emergency services models of care.
- Facilitate access to emergency services training for all stakeholders.
- Northam Hospital to work in conjunction with IHMS at Yongah Hill Detention Centre to provide seamless transition and medical services when clients are required to present to the ED at Northam.
- Establish electronic integrated medical records across all sites.
- Introduce telehealth and e-health services to increase access to supervision, assessment and training (e.g. videoconferencing for Rural Link).
- Introduce workforce reform initiatives to sustain service delivery as per Section 7.1.
- Increase the number of treatment bays to eight at Northam Hospital to meet future demand.

## 6.3 Inpatient Services Profile

### 6.3.1 District Current Activity Overview

**Table 22: Western Wheatbelt Hospitals: Health Activity Summary**

| Category   | Northam | Moora | Beverley | Cunderdin | Dalwallinu | Goomalling | Wongan Hills | Wyalkatchem | York  |
|--|---------|-------|----------|-----------|------------|------------|--------------|-------------|-------|
| <b>EMERGENCY DEPARTMENT (2010/11)</b>              |         |       |          |           |            |            |              |             |       |
| Number of treatment bays                           | 6       | 2     | 1        | 2         | 3          | 2          | 2            | 1           | 3     |
| Emergency Department Attendances                   | 8,303   | 2,205 | 593      | 690       | 1453       | 985        | 843          | 742         | 1,878 |
| <b>RESIDENTIAL AGED CARE as at 31/11/2011</b>      |         |       |          |           |            |            |              |             |       |
| Number of residential beds (low & high care)       | 0       | 20    | 14       | 9         | 10         | 12         | 10           | 13          | 22    |
| <b>ACUTE INPATIENT CARE (2009/10)</b>              |         |       |          |           |            |            |              |             |       |
| Number of active acute multiday beds               | 30      | 10    | 5        | 3         | 6          | 4          | 4            | 1           | 11    |
| Total multiday separations                         | 1,304   | 427   | 72       | 43        | 131        | 134        | 117          | 68          | 176   |
| Total multiday bed-days                            | 7,334   | 1,384 | 304      | 259       | 532        | 481        | 679          | 673         | 1,259 |
| Average multi day Bed Occupancy                    | 20.1    | 3.8   | 0.8      | 0.7       | 1.5        | 1.3        | 1.9          | 1.8         | 3.4   |
| Number of active same-day beds                     | 13      | 3     | -        | -         | -          | -          | -            | -           | -     |
| Total same-day separations                         | 977     | 131   | 14       | 7         | 81         | 9          | 18           | 8           | 76    |
| Total same-day bed-days                            | 977     | 131   | 14       | 7         | 81         | 9          | 18           | 8           | 76    |
| Average Same-day bed occupancy                     | 2.7     | 0.4   | -        | -         | -          |            |              |             |       |
| Total separations                                  | 2,281   | 558   | 86       | 50        | 212        | 143        | 135          | 76          | 252   |
| Total bed days                                     | 8,311   | 1,515 | 318      | 266       | 613        | 490        | 697          | 681         | 1,335 |
| Average bed occupancy                              | 22.8    | 4.2   | 0.9      | 0.7       | 1.7        | 1.3        | 1.9          | 1.9         | 3.7   |
| Average Multiday Length of Stay                    | 5.6     | 3.2   | 4.2      | 6.0       | 4.1        | 3.6        | 5.8          | 9.9         | 7.2   |
| Public Acute Self Sufficiency (All WWHD Hospitals) | 41.5%   |       |          |           |            |            |              |             |       |

*Inpatient data excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 days at separation. Includes public patients in private hospitals. Average bed occupancy is derived by beddays/365.*

*Source: WA Hospital Morbidity Data System, via Clinical Activity Modeling Unit, WACHS online ED pivot, WACHS online bed pivot*

### 6.3.2 Acute Inpatient services provided from Western Wheatbelt hospitals

Northam Hospital provides a range of inpatient and ambulatory emergency, medical, surgical, obstetric, paediatric and mental health services to its catchment population and supports an integrated network of services at eight smaller hospital sites.

There were 3,793 separations supplied by WACHS Western Wheatbelt in 2009/10, as shown in Table 23. Nine in ten (3,307) of these separations involved residents of the Western Wheatbelt. The majority of separations were supplied by Northam Hospital (60% - 2281 separations), followed by Moora (15%). Moora Hospital had the greatest proportion of separations from other health districts (31%), with the majority of these coming from the Coastal Wheatbelt which currently has no local inpatient facilities.

**Table 23: Western Wheatbelt Hospitals: Supply of acute services for residents and others (2009/10)**

| Hospital           | Separations by Resident Grouping |                   |                   |                    |            |              | % of Total Separations |
|--------------------|----------------------------------|-------------------|-------------------|--------------------|------------|--------------|------------------------|
|                    | Coastal Wheatbelt                | Eastern Wheatbelt | Western Wheatbelt | Southern Wheatbelt | Other      | Total        |                        |
| Beverley           | <5                               | 0                 | 71                | 11                 | <5         | 86           | 2.3                    |
| Cunderdin          | <5                               | <5                | 47                | 0                  | 0          | 50           | 1.3                    |
| Dalwallinu         | 0                                | <5                | 170               | <5                 | 41         | 212          | 5.6                    |
| Goomalling         | 0                                | <5                | 140               | 0                  | <5         | 143          | 3.8                    |
| Moora              | 107                              | <5                | 383               | <5                 | 67         | 558          | 14.7                   |
| Northam            | 7                                | 171               | 2,047             | 5                  | 51         | 2,281        | 60.1                   |
| Wongan Hills       | <5                               | <5                | 131               | 0                  | <5         | 135          | 3.6                    |
| Wyalkatchem-Koorda | <5                               | <5                | 74                | 0                  | <5         | 76           | 2.0                    |
| York               | <5                               | <5                | 244               | 0                  | 8          | 252          | 6.6                    |
| <b>Total</b>       | <b>116</b>                       | <b>176</b>        | <b>3,307</b>      | <b>17</b>          | <b>177</b> | <b>3,793</b> | <b>100.0</b>           |

*Note: Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 days at separation.*

*Source: WA Hospital Morbidity Data System, via Clinical Activity Modeling Unit*

### 6.3.3 Where do residents of Western Wheatbelt go for acute inpatient treatment?

In 2009/10, 11,959 separations from all WA private and public hospitals involved residents of the Western Wheatbelt. Of these separations:

- 28% (3,307) were supplied by hospitals within the Western Wheatbelt health district;
- 1% (82) were from other Wheatbelt hospitals;
- 38% (4,517) were separated from public metropolitan hospitals; and
- 33% (3,963) were privately treated (0.1% were privately treated in rural facilities and 33% were privately treated in metropolitan facilities).

The data is presented in the next Table.

**Table 24: Western Wheatbelt residents: Inpatient separations at all WA Health and private health facilities (2009/10)**

| Area  | Hospital                | Residents' Total Separations 2009/10 | % of Total Public & Private Separations | % of Total Public Separations |
|---|-------------------------|--------------------------------------|---|-------------------------------|
| <b>WACHS Western Wheatbelt</b>                        | Beverley                | 71                                   | 0.6                                     | 0.9                           |
|   | Cunderdin               | 47                                   | 0.4                                     | 0.6                           |
|   | Dalwallinu              | 170                                  | 0.4                                     | 2.1                           |
|   | Goomalling              | 140                                  | 1.2                                     | 1.8                           |
|   | Moora                   | 383                                  | 3.2                                     | 4.8                           |
|   | Northam                 | 2,047                                | 17.1                                    | 25.6                          |
|   | Wongan Hills            | 131                                  | 1.1                                     | 1.6                           |
|   | Wyalkatchem-Koorda      | 74                                   | 0.6                                     | 0.9                           |
|   | York                    | 244                                  | 2.0                                     | 3.1                           |
| <b>Sub-total (WACHS – Western Wheatbelt)</b>          |                         | <b>3,307</b>                         | <b>27.7</b>                             | <b>41.4</b>                   |
| <b>Other Wheatbelt District</b>                       | All                     | 82                                   | 0.7                                     | 1.0                           |
| <b>Other WACHS Regions</b>                            | All                     | 90                                   | 0.8                                     | 1.1                           |
| <b>Sub-total ( WACHS)</b>                             |                         | <b>3,479</b>                         | <b>29.1</b>                             | <b>43.5</b>                   |
| <b>South Metropolitan Area Health Service (SMAHS)</b> | Armadale                | 123                                  | 1.0                                     | 1.5                           |
|   | Fremantle (inc Kaleeya) | 178                                  | 1.5                                     | 2.2                           |
|   | PHC                     | 22                                   | 0.2                                     | 0.3                           |
|   | RPH                     | 1,195                                | 10.0                                    | 14.9                          |
|   | RPH Rehab               | 129                                  | 1.1                                     | 1.6                           |
|   | Other                   | 94                                   | 0.8                                     | 1.2                           |
| <b>Sub-total (SMAHS)</b>                              | <b>All</b>              | <b>1,741</b>                         | <b>14.2</b>                             | <b>21.3</b>                   |
| North Metropolitan Area Health Service (NMAHS)        | Graylands               | 50                                   | 0.4                                     | 0.6                           |
|   | Joondalup               | 123                                  | 1.0                                     | 1.5                           |
|   | KEMH                    | 348                                  | 2.9                                     | 4.4                           |
|   | SCGH                    | 937                                  | 7.8                                     | 11.7                          |
|   | Swan                    | 788                                  | 6.6                                     | 9.9                           |
|   | Other                   | 136                                  | 1.1                                     | 1.7                           |
| <b>Sub-total (NMAHS)</b>                              | <b>All</b>              | <b>2,382</b>                         | <b>17.9</b>                             | <b>26.8</b>                   |
| <b>Child and Adolescent Health Services</b>           | All                     | 463                                  | 3.9                                     | 5.8                           |
| <b>Contracted Metro</b>                               | All                     | 209                                  | 1.7                                     | 2.6                           |
| <b>Sub-total (metro)</b>                              |                         | <b>4,517</b>                         | <b>37.8</b>                             | <b>56.5</b>                   |
| <b>Total Public*</b>                                  |                         | <b>7,996</b>                         | <b>66.9</b>                             | <b>100.0</b>                  |
| <b>Private</b>  | Metro                   | 3,957                                | 33.1                                    |                               |
|   | Rural                   | 6                                    | 0.1                                     |                               |
| <b>Total (Private and Public)</b>                     |                         | <b>11,959</b>                        | <b>100.0</b>                            |                               |

*Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 days at separation. Includes public patients in private hospitals.  
Source: WA Hospital Morbidity Data System, via Clinical Activity Modeling Unit*



### 6.3.4 How much do Western Wheatbelt hospitals treat Western Wheatbelt residents locally?

'Self-sufficiency' is a calculation used to identify the proportion of resident acute separations that are managed by a local region/district. It is an indicator of the district's capacity to provide acute care closer to home.

Due to remoteness and availability of onsite specialists, a country health service will not achieve 100% self-sufficiency. Highly acute and complex patients will continue to be transferred to Perth where more specialised services and medical equipment are located.

As shown in Table 25, the self sufficiency of the Western Wheatbelt in 2009/10 was 42%. That means 42% of residents who required public health care received that care from a Western Wheatbelt facility. This has decreased from 49% in 2005/06.

**Table 25: Western Wheatbelt hospitals: Public self-sufficiency, 2005/06 to 2009/10**

| Public self sufficiency |         |         |         |         |
|-------------------------|---------|---------|---------|---------|
| 2005/06                 | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
| 49%                     | 48%     | 48%     | 44%     | 42%     |

*Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 at separation.*

*Source: WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

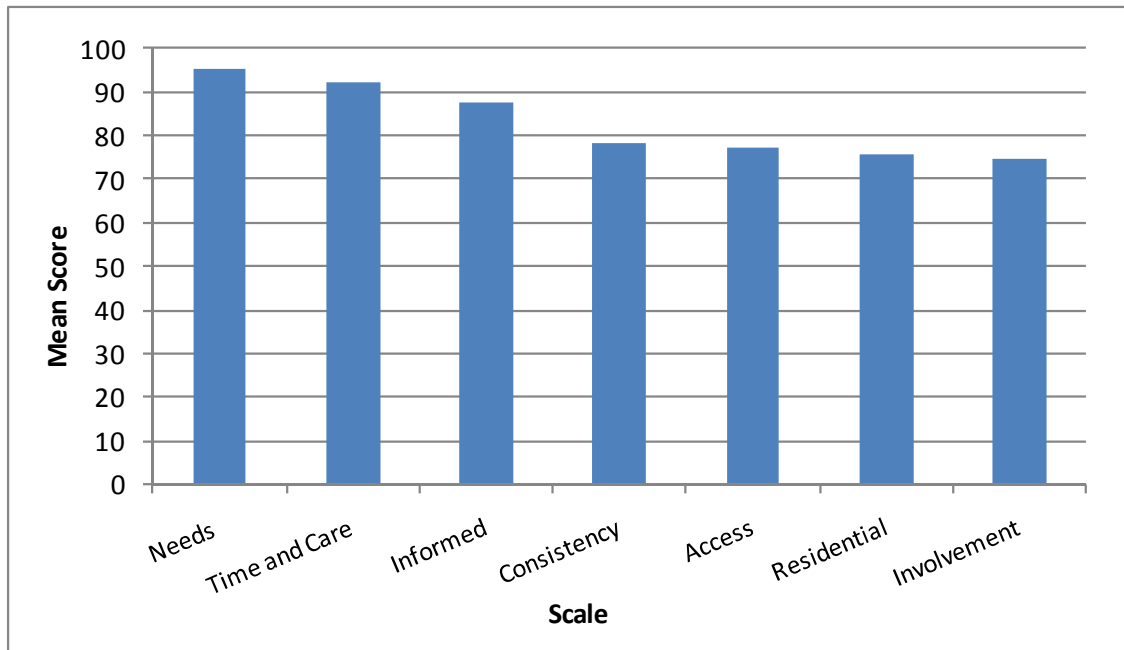
### 6.3.5 Patient satisfaction at Northam Hospital

In 2009/10, a sample of adult patients who had stayed less than 35 nights at Northam Hospital completed a patient satisfaction survey. The answers to the survey have been grouped into themes (scales) that represent how the patients rated the hospital on a particular aspect of health service. The following items were measured:

- Needs Scale: Meeting personal as well as clinical needs
- Time and Care Scale: Time and attention paid to patient care
- Informed Scale: Information and communication
- Consistency Scale: Continuity of care
- Access Scale: Getting into hospital
- Residential Scale: Food and residential aspects
- Involvement Scale: Involved in decisions about your care and treatment

As shown in Figure 13, the 'needs' and 'time and care' scales were rated the highest (above 90), while the 'Involvement' scale was rated the lowest (74). Overall patients were satisfied with their hospital stay and its outcome.

**Figure 13 Mean scale scores, Northam Hospital (adults, 0-34 nights), 2009/10**



Source: Patient Evaluation of Health Services (Epidemiology Branch)

**Note:** this scale score does not represent the percentage of patients satisfied with the service.

### 6.3.6 Length of stay performance

WA Health is now using an activity based funding (ABF) and management (ABM) system. Within the ABF, inpatient separations with a length of stay between one-third and three times the WA average length of stay (known as the central episode) for a DRG will be funded at the same price. This funding mechanism means that separations within the central episode that have a length of stay greater than the average will tend to cost the hospital more than the payment they receive and those with less are an opportunity to save money which can be reinvested in other services.

Separations with a length of stay greater than three times the WA average are regarded as being over the high boundary of the central episode (outlier episodes of care). These high boundary separations are of particular interest from a safety and quality perspective and in the ABF/M as they are more likely to have adverse events associated with them.

In 2009/10 there were 155 separations at Northam Hospital that had a length of stay that was greater than three times the WA average. These 155 separations resulted in 1,229 beddays (3.4 beds) of over boundary stay.

Within the service planning the models of care and hospital processes, such as admission and discharge, will also need to be considered within the context of how they impact on the average length of stay.

## 6.4 Current Inpatient Service Model

### Current service model

Inpatient services at Northam Hospital include medical, surgical, maternity, paediatric and palliative care services. Rostered GPs at Northam Hospital cover the acute inpatient admissions as required. The current service model and activity are outlined in the following sections.

### Activity summary

#### Current and projected activity

- As shown in Table 26, the separations at Northam Hospital are projected to increase by 134% at Northam between 2009/10 and 2021/22.
- The separations at the smaller Western Wheatbelt hospitals are also projected to increase.
- The beddays are projected to increase at a slower rate, as a result of the increase in the proportion of separations that are sameday.
- The inpatient activity at Northam Hospital and other Western Wheatbelt hospitals are broken down by medical, surgical, obstetrics, paediatrics and palliative care in subsequent sections of this Service Plan.

**Table 26: Western Wheatbelt hospitals: Actual and projected inpatient separations (2007/08–2021/22)**

| Hospital       | 2007/08<br>(actual) | 2008/09<br>(actual) | 2009/10<br>(actual) | 2012/13<br>(projected) | 2016/17<br>(projected) | 2021/22<br>(projected) | % growth<br>(2009/10 -<br>2021/22)<br>(projected) |
|----------------|---------------------|---------------------|---------------------|------------------------|------------------------|------------------------|---|
| <b>Northam</b> |                     |                     |                     |                        |                        |                        |   |
| Sameday        | 950                 | 909                 | 977                 | 1,384                  | 2,757                  | 3,551                  | 263%  |
| Multiday       | 1,298               | 1,144               | 1,304               | 1,437                  | 1,631                  | 1,793                  | 38%   |
| <b>Total</b>   | <b>2,248</b>        | <b>2,053</b>        | <b>2,281</b>        | <b>2,820</b>           | <b>4,388</b>           | <b>5,344</b>           | <b>134%</b>                                       |
| <b>Other</b>   |                     |                     |                     |                        |                        |                        |   |
| Sameday        | 329                 | 391                 | 344                 | 406                    | 730                    | 919                    | 167%  |
| Multiday       | 1,457               | 1,419               | 1,168               | 1,231                  | 1,344                  | 1,470                  | 26%   |
| <b>Total</b>   | <b>1,786</b>        | <b>1,810</b>        | <b>1,512</b>        | <b>1,637</b>           | <b>2,073</b>           | <b>2,390</b>           | <b>58%</b>  |

*Excludes boarders, unqualified neonates and residents.*

*Source (actual): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

*Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+*

**Table 27: Western Wheatbelt hospitals: Actual and projected inpatient beddays and bed requirements (2009/10–2021/22)**

| Hospital       | 2009/10<br>(actual) |               | 2012/13<br>(projected) |               | 2016/17<br>(projected) |               | 2021/22<br>(projected) |               |
|----------------|---------------------|---------------|------------------------|---------------|------------------------|---------------|------------------------|---------------|
|                | Beddays             | Occupied Beds | Beddays                | Occupied Beds | Beddays                | Occupied Beds | Beddays                | Occupied Beds |
| <b>Northam</b> |                     |               |                        |               |                        |               |                        |               |
| Sameday        | 977                 | 2.7           | 1,384                  | 3.8           | 2,757                  | 6.4           | 3,551                  | 8.3           |
| Multiday       | 7,373               | 20.2          | 8,319                  | 22.8          | 9,299                  | 25.5          | 10,020                 | 27.5          |
| <b>Total</b>   | <b>8,350</b>        | <b>22.9</b>   | <b>9,703</b>           | <b>26.6</b>   | <b>12,056</b>          | <b>31.9</b>   | <b>13,571</b>          | <b>35.7</b>   |
| <b>Other</b>   |                     |               |                        |               |                        |               |                        |               |
| Sameday        | 344                 | 0.9           | 406                    | 1.1           | 730                    | 1.7           | 919                    | 2.2           |
| Multiday       | 5,850               | 16.0          | 6,179                  | 16.9          | 6,751                  | 18.5          | 7,207                  | 19.7          |
| <b>Total</b>   | <b>6,194</b>        | <b>17.0</b>   | <b>6,585</b>           | <b>18.0</b>   | <b>7,480</b>           | <b>20.2</b>   | <b>8,127</b>           | <b>21.9</b>   |

*Excludes boarders, unqualified neonates and residents.*

*Source (2009/10): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

*Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+*

*Includes 1,000 renal dialysis separations in 2016/17 and 1,067 in 2021/22. Beds for renal dialysis are based on a 170% occupancy.*

- By 2021/22, it is projected that the number of beddays at Northam will be around 13,000. This indicates that the current number of inpatient beds (48, of which 43 are active) will be sufficient to meet future demand.

#### **Inpatient activity by age group**

- As shown in Table 28, around one quarter of separations at Northam hospital involved patients aged 15 to 44 years, while 9% (206 separations) involved patients aged 85 years and over.
- As shown in Table 29, the other Western Wheatbelt hospitals had a greater proportion of separations of patients aged 85 years and over when compared to Northam Hospital (15% compared with 9%).
- Patients aged 85 and over accounted for one-third of separations at York and nearly one in five separations at Cunderdin and Wyalkatchem hospitals.

**Table 28: Northam Hospital: Inpatient separations, by age group (2009/10)**

| Stay Type    | Number of separations by age group |            |            |            |            |              |
|--------------|------------------------------------|------------|------------|------------|------------|--------------|
|              | 0-14 yrs                           | 15-44 yrs  | 45-64 yrs  | 65-84 yrs  | 85+ yrs    | Total        |
| Sameday      | 21                                 | 177        | 349        | 393        | 37         | 977          |
| Multiday     | 48                                 | 342        | 285        | 460        | 169        | 1,304        |
| <b>Total</b> | <b>69</b>                          | <b>519</b> | <b>634</b> | <b>853</b> | <b>206</b> | <b>2,281</b> |

*Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 at separation.*

*Source: WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

**Table 29: Other Western Wheatbelt hospitals: Inpatient activity (separations) by age group, 2009/10**

| Hospital     | Number of separations by age group |           |           |           |         | Total |
|--------------|------------------------------------|-----------|-----------|-----------|---------|-------|
|              | 0-14 yrs                           | 15-44 yrs | 45-64 yrs | 65-84 yrs | 85+ yrs |       |
| Beverley     | 5                                  | 14        | 24        | 31        | 13      | 87    |
| Cunderdin    | n/a                                | 8*        | 13        | 20        | 9       | 50    |
| Dallwallinu  | 43                                 | 46        | 54        | 51        | 18      | 212   |
| Goomalling   | 9                                  | 26        | 42        | 47        | 19      | 143   |
| Moora        | 51                                 | 149       | 179       | 121       | 58      | 558   |
| Wongan Hills | 10                                 | 59        | 27        | 21        | 18      | 135   |
| Wyalkatchem  | n/a                                | 14*       | 14        | 35        | 13      | 76    |
| York         | 10                                 | 33        | 43        | 89        | 77      | 252   |

*\*Numbers of children were too small to report (<5) so have been included in the 15-44 year olds. Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 at separation. Source: WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

#### **Inpatient separations, by Aboriginality**

- As shown in Table 30, Aboriginal and Torres Strait Islander people accounted for 6% of the 2009/10 separations at Northam Hospital.
- Aboriginal and Torres Strait Islander people were over-represented in the 2009/10 separations at Wongan Hills Hospital, accounting for 35% of separations, but only 7% of the Wongan Hills population.

**Table 30: Western Wheatbelt hospitals: Inpatient separations, by Aboriginality, 2009/10**

| Category     | Inpatient category |                | Total | % Aboriginal |
|--------------|--------------------|----------------|-------|--------------|
|              | Aboriginal         | Non-Aboriginal |       |              |
| Northam      | 132                | 2,149          | 2,281 | 6%           |
| Beverley*    | <5                 | n/a            | 87    | n/a          |
| Cunderdin*   | <5                 | n/a            | 50    | n/a          |
| Dallwallinu  | 17                 | 195            | 212   | 8%           |
| Goomalling   | 9                  | 134            | 143   | 6%           |
| Moora        | 113                | 445            | 558   | 20%          |
| Wongan Hills | 47                 | 77             | 135   | 35%          |
| Wyalkatchem* | <5                 | n/a            | 76    | n/a          |
| York         | 6                  | 246            | 252   | 2%           |

*\*Numbers were too small to report (<5). Excludes boarders, unqualified neonates and residents. Also excludes Nursing Home Type patients with beddays greater than 180 at separation. Source: WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

## 6.4.1 Medical services profile (Adult)

### *Northam Hospital CSF role delineation – Level 3*

Level 3 medical services should provide:

- 24/7 on-call by GP or visiting medical practitioner.
- 24 hour cover by a Registered Nurse.
- GP inpatient care.
- Outpatient care by general physician or visiting general medicine specialist or via Telehealth.
- Access to some allied health services.

Northam Hospital fully achieves its CSF role delineation for medical services as they are provided by the local GPs 365 days per year, 24 hours per day with 24 hour cover by a Registered Nurse (RN) and access to allied health services. A range of visiting medical specialists provide the following services:

- Orthopaedics.
- Rheumatology.
- Cardiology.
- Dermatology.
- Pain Management.
- Ophthalmology.
- Respiratory Physician.
- Radiology.

In terms of cancer care coordination and chemotherapy, the WA Cancer and Palliative Care Network in collaboration in WACHS appointed a Rural Cancer Nurse Co-coordinator (RCNC) in January 2007. The RCNC facilitates a coordinated regional approach to cancer services for patients in the Wheatbelt. Northam Hospital employs a full time Cancer Support Nurse who provides support in the home and within the hospital via a two bed palliative care unit.

## Activity summary

### *Wheatbelt Assumptions for Projected Activity, 2011*

Future inpatient activity projections were remodelled in late 2011 by the Department of Health Clinical Modelling Unit, the WACHS Planning Team and the region. The updated modelling for the Wheatbelt was based on the following assumptions:

- An increase in the relative utilisation of renal dialysis to account for people moving to receive their dialysis care.
- An increase in the public self-sufficiency of renal dialysis (to 95%), in line with the WACHS Renal Plan. In the Western Wheatbelt the renal dialysis service will operate at Northam Hospital with four chairs.
- An increase in the public self-sufficiency for chemotherapy (to 75%), in line with the WACHS Cancer Plan.
- An increase in the public self-sufficiency of select ESRGs, in line with the role delineation of the hospitals.

### *Current and Projected Activity (Adult)*

- The activity for inpatient medical services in Northam is outlined in the Table below. The data excludes activity that is categorised as paediatrics, mental health, obstetrics and palliative care, as these service areas are presented in subsequent sections.
- There has been a 4% increase in medical service activity at Northam Hospital between 2007/08 and 2009/10. The medical activity within the other Western Wheatbelt hospitals has decreased by 13% over the same period.
- The number of medical separations involving individuals 15 years and over to Northam is anticipated to grow steadily in future years, as outlined in Table 31. This increase is due to the introduction of renal dialysis as well as the forecast population growth for the area and proposed workforce reforms.

**Table 31: All Western Wheatbelt hospitals: Actual and projected adult medical service activity**

| Hospital       | Historical   |              |              | Projected    |              |              |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                | 2007/08      | 2008/09      | 2009/10      | 2012/13      | 2016/17      | 2021/22      |
| <b>Northam</b> |              |              |              |              |              |              |
| Sameday        | 338          | 282          | 316          | 590          | 1,791        | 2,326        |
| Multiday       | 845          | 804          | 918          | 1,003        | 1,146        | 1,277        |
| <b>Total</b>   | <b>1,183</b> | <b>1,086</b> | <b>1,234</b> | <b>1,593</b> | <b>2,938</b> | <b>3,603</b> |
| <b>Other</b>   |              |              |              |              |              |              |
| Sameday        | 215          | 279          | 237          | 279          | 580          | 739          |
| Multiday       | 1,146        | 1,119        | 944          | 990          | 1,086        | 1,192        |
| <b>Total</b>   | <b>1,361</b> | <b>1,398</b> | <b>1,181</b> | <b>1,269</b> | <b>1,666</b> | <b>1,931</b> |

*Note: Excludes unqualified neonates and boarders.*

*Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit*

*Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+*

*Includes 1,000 renal dialysis separations for 2016/17 and 1,295 for 2021/22 for Northam.*

## Recommendations for service reform - Medical Services

- Under the CSF, the role delineation for the majority of medical services at Northam Hospital will remain at Level 3 to 2020, except for:
  - Medical oncology which will increase from a Level 2 to a Level 3 service by 2014/15 due to the increased availability of chemotherapy.
- As per Stream 1 of SIHI prioritise needs for visiting specialists based on identified need and work with Midland Health Campus. Services might include one or more of any of the following areas of identified need: Ophthalmology, diabetes education, paediatrics, oncology, respiratory services, pain management, orthopaedics, psychiatry and psychogeriatric services.
- According to the CSF and *Renal Dialysis Plan*, there will be Level 4 renal services at the Northam Hospital by 2014/15. This means Narrogin will provide:
  - Four-chair general hospital-based satellite service.
  - Visiting specialist or general physician with nephrology skills.
  - More complicated cases.
  - Assessment services.
  - Specialist RN.
  - Access to designated allied health services.
  - Outreach support for home dialysis.
  - Some allied health undergraduate education.
  - Other strategies as directed by the WACHS Renal Dialysis Plan (2010).
- The *WACHS Cancer Services Plan 2011* and the *WA Health CSF* recommends the role delineation for medical oncology services increase from a Level 2 to a Level 3 service at Northam Hospital by 2014/15 which means they will offer:
  - A five chair, one bed rural cancer unit which provides chemotherapy.
  - A three double bedroom patient accommodation facility.
  - 24 hour cover by a Registered Nurse.
  - GP in patient care.
  - Low risk chemotherapy for the 4 most common cancers and palliative patients.
  - Outpatient care by resident general physician and visiting medical oncologist with support via Telehealth.
  - Multidisciplinary case conferencing with tumour specific specialist for all patients.
  - Access to some allied health services.
- Integrate patient flow for renal dialysis and chemotherapy from small hospitals to Northam.
- Regional Medical and Nurse Director to work with secondary and general hospitals such as Midland and Armadale, Joondalup to improve discharge planning, increase specialist services and provide professional supervision and support.
- Advocate to the Department of Health WA and WACHS Area Information



## Recommendations for service reform - Medical Services

Services to establish shared electronic medical records

- Expand services that are offered through telehealth, such as assessment and testing where possible.
- Introduce workforce reform initiatives to sustain service delivery as per Section 7.1.

### 6.4.2 Surgical services profile (Adult)

#### Current service model

##### *Northam Hospital CSF role delineation – Level 3*

Level 3 surgical services should offer:

- Surgery by GPs, general surgeons and visiting sub-specialists.
- Broad range of day and general surgery and some specialty surgery.
- Emergency surgery.
- Theatre trained nurses.
- More than 2 theatres.
- Access to designated allied health services.
- Some allied health undergraduate education.
- 24 hour cover by a Registered Nurse.
- Outpatient care.

Northam is one of four IDHS that provide acute surgical services within the Wheatbelt region. Northam currently only has one operating theatre and therefore the current service delivery model does not achieve the CSF role delineation.

There is a local resident general surgeon as well as procedural GPs who provide surgical services to the hospital. The theatres operate 4 days per week catering for multiday and day only procedures.

Northam is working towards achieving its CSF role delineation. However if the region is unsuccessful in obtaining additional GP proceduralists, given the very limited availability of this workforce, Northam would have great difficulty in sustainably and reliably achieving this role delineation. Alternatives would need to be considered such as increasing visiting specialist lists, transferring out where necessary or using more telehealth outpatient services. The region will also work towards nurse lead models of care primary health and chronic disease management with the implementation of the Nurse Practitioner workforce. Identification of opportunities for proceduralist Nurse Practitioners roles over the next few years will enhance the opportunities to meet customer demands for care closer to home. The Nurse Practitioner is not a substitute model for the GP proceduralist's service, rather, a service model in its own right.

## Activity summary

### Current and projected activity (adult)

- The multiday and same-day surgical activity for 15 years and over at Northam is outlined below. Surgical activity has decreased between 2007/08 and 2009/10, while other activity has increased, particularly for same-day activity. Across the rest of the district both surgical and other activity has decreased.
- The number of same day and multiday surgical admissions of patients aged 15 years and over to Northam is anticipated to grow in future years, as outlined in Table 32.
- The number of same-day surgical separations for patients aged 15 years and over at Northam Hospital is projected increase by 79% between 20011/12 and 2021/21. This increase is largely due to an increase in ophthalmology services.
- Same-day procedural activity is also projected to increase noticeably at Northam Hospital (89.0%).

**Table 32: All Western Wheatbelt hospitals: Actual and projected adult surgical separations**

| Hospital                | Historical |            |            | Projected  |            |            |
|-------------------------|------------|------------|------------|------------|------------|------------|
|                         | 2007/08    | 2008/09    | 2009/10    | 2012/13    | 2016/17    | 2021/22    |
| <b>Northam</b>          |            |            |            |            |            |            |
| Sameday surgical        | 245        | 235        | 199        | 235        | 278        | 357        |
| Multiday surgical       | 90         | 76         | 82         | 85         | 92         | 98         |
| <b>Total surgical</b>   | <b>335</b> | <b>311</b> | <b>281</b> | <b>320</b> | <b>370</b> | <b>455</b> |
| Sameday procedural      | 308        | 348        | 412        | 496        | 611        | 779        |
| Multiday procedural     | 14         | 22         | 14         | 16         | 21         | 23         |
| <b>Total procedural</b> | <b>322</b> | <b>370</b> | <b>426</b> | <b>512</b> | <b>632</b> | <b>802</b> |
| <b>Other</b>            |            |            |            |            |            |            |
| Sameday surgical        | 19         | 21         | 26         | 33         | 42         | 53         |
| Multiday surgical       | 34         | 34         | 10         | 11         | 13         | 14         |
| <b>Total surgical</b>   | <b>53</b>  | <b>55</b>  | <b>36</b>  | <b>45</b>  | <b>55</b>  | <b>67</b>  |
| Sameday procedural      | 13         | 13         | 13         | 15         | 17         | 21         |
| Multiday procedural     | 28         | 24         | 20         | 21         | 23         | 25         |
| <b>Total procedural</b> | <b>41</b>  | <b>37</b>  | <b>33</b>  | <b>36</b>  | <b>40</b>  | <b>45</b>  |

\* Procedural includes scopes and dental extractions and restorations

Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit

Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+

## Recommendations for service reform - Surgical Services

- Under the CSF, the role delineation for surgical services at Northam will remain at Level 3 to 2020/21.
- Explore options to increase elective surgery at Northam Hospital and/or the district by reviewing the central waitlist postcodes to ensure people can be offered surgery in their local community.
- Attract a workforce to provide surgical services and participate in an on-call 24/7 roster. Priorities include recruiting a GP surgeon, anaesthetist and obstetrician.
- Recruit and retain theatre staff to provide 24/7 care.
- Recruit visiting specialists (e.g. ENT, orthopaedics, ophthalmology, dermatology, plastics).
- Implement an independent practicing midwife model of care.
- Provide equipment and facilities to support visiting specialists and their support teams when appropriate.
- Explore partnerships with tertiary and general hospitals, especially Midland Health Campus to improve the range and flexibility of training opportunities for staff in the Wheatbelt.
- Develop strategic and committed relationships with tertiary hospitals and regional resource centres to support skill development and maintenance of clinicians.
- Promote new Medicare items to support use of telehealth.
- Introduce workforce reform initiatives to sustain service delivery as per Section 7.1.
- Advocate to the Department of Health and WACHS Area Information Services to establish shared electronic medical records.
- Utilise telehealth for post-operative care where possible and reduce the need for patient transport.
- As per the Recommendations section, upgrade the existing theatre at Northam Hospital and provide a second operating theatre.

### 6.4.3 Obstetric Services

#### Current service model

##### *Northam Hospital CSF role delineation – Level 3*

Level 3 obstetric services should provide:

- Elective and emergency caesarean capability.
- 24 hour anaesthetic service.
- Visiting obstetrician.
- Access to some allied health services.
- Service by GPs/GP obstetricians/District Medical Officers (DMO) and midwives.
- Access to 24 hour telephone support from obstetricians.
- Access to e-health or Telehealth.
- Onsite level 1 neonatal facilities.

Obstetric services are provided at Northam Hospital by one local GP obstetrician. None of the other MPS sites in the Western Wheatbelt provide planned obstetric services.

There is no visiting obstetrician to the Western Wheatbelt. Complex pregnancies and high risk deliveries are referred to Swan District Hospital or King Edward Memorial Hospital (KEMH). Adolescent births are delivered in Northam if uncomplicated, however if there are any issues they are referred to KEMH. If the GP obstetrician in Northam is away then there is an agreement in place with Swan District Hospital to transfer the woman there.

The majority of emergency maternity referrals in the Wheatbelt are referred to the metropolitan region as there is no facility in the Wheatbelt region with the capacity to perform emergency caesareans.

Currently Northam Hospital is not achieving its CSF Level 3 role delineation as there is no 24 hour anaesthetic cover or provisions for emergency caesareans. In addition, if Northam is unsuccessful in obtaining additional GP anaesthetic services, given the very limited availability of this workforce, Northam would have great difficulty in sustainably and reliably achieving this role delineation. Alternatives would need to be considered such as increasing visiting specialist lists, transferring out where necessary or using more telehealth outpatient services. The region will work towards a Nurse Practitioner proceduralist and midwifery model over the next few years. This model will not be a substitute model for the GP anaethetist service, but rather be a service model in its own right.

#### Activity summary

##### *Current and projected activity*

- Historical and projected obstetric services in Western Wheatbelt Hospitals are outlined in the next table.
- At Northam Hospital the actual obstetric activity decreased from 192 separations to 147 separations (23%) between 2007/08 and 2009/10.

- In contrast, the obstetric activity is projected to increase from 178 separations in 2011/12 to 219 separations in 2021/22.
- Whilst the projection data shows deliveries in other Western Wheatbelt hospitals, including Moora, these are not planned deliveries but rather unplanned emergencies. Northam will continue to be the only site to support planned deliveries in the future.

**Table 33: Western Wheatbelt hospitals: Actual and projected obstetric separations (2007/08 – 2021/22)**

| Hospital              | Historical |            |            | Projected  |            |            |
|-----------------------|------------|------------|------------|------------|------------|------------|
|                       | 2007/08    | 2008/09    | 2009/10    | 2012/13    | 2016/17    | 2021/22    |
| <b>Northam</b>        |            |            |            |            |            |            |
| Deliveries            | 108        | 80         | 81         | 107        | 132        | 142        |
| Ante-natal/Post-natal | 84         | 43         | 66         | 71         | 79         | 77         |
| <b>Total</b>          | <b>192</b> | <b>123</b> | <b>147</b> | <b>178</b> | <b>211</b> | <b>219</b> |
| <b>Other</b>          |            |            |            |            |            |            |
| Deliveries            | <5         | <5         | <5         | 5          | 6          | 7          |
| Ante-natal/Post-natal | 42         | 27         | 21         | 21         | 21         | 20         |
| <b>Total</b>          | <b>42</b>  | <b>27</b>  | <b>21</b>  | <b>26</b>  | <b>27</b>  | <b>27</b>  |

Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit  
 Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+

#### **Obstetric patient flows**

In 2009/10 there were 603 obstetric separations of Western Wheatbelt residents, of which 130 (22%) were in private hospitals. As shown in Table 34, 141 of the residents received public obstetric health care from a local WACHS facility, giving a Western Wheatbelt public obstetric self-sufficiency of 30%. The other 70% of separations were from other metropolitan facilities. High risk deliveries are transferred to Perth metropolitan hospitals even if they do present to local hospitals.

**Table 34: Western Wheatbelt resident obstetric separations, (2009/10)**

| Area                              | Hospital   | Residents' Total Seps 2009/10 | % of Total Public & Private Seps | % of Total Public Seps |
|-----------------------------------|------------|-------------------------------|----------------------------------|------------------------|
| Western Wheatbelt                 | Northam    | 119                           | 19.7%                            | 25.4%                  |
|                                   | Moora      | 10                            | 1.7%                             | 2.1%                   |
|                                   | Dalw alinu | 7                             | 1.2%                             | 1.5%                   |
|                                   | Other      | 5                             | 0.8%                             | 1.1%                   |
| <b>Sub-total (WWB)</b>            |            | <b>141</b>                    | <b>23.4%</b>                     | <b>30.1%</b>           |
| <b>Other Wheatbelt</b>            | All        | nil                           | -                                | -                      |
| <b>Other WACHS</b>                | All        | <5                            | n/a                              | n/a                    |
| <b>Sub-total ( WACHS)</b>         |            | <b>141</b>                    | <b>23.4%</b>                     | <b>30.1%</b>           |
| <b>CAHS</b>                       | All        | 5                             | 0.8%                             | 1.1%                   |
| <b>SMAHS</b>                      | All        | 26                            | 4.3%                             | 5.6%                   |
| <b>NMAHS</b>                      | All        | 296                           | 49.1%                            | 63.2%                  |
| <b>Sub-total (metro)</b>          |            | <b>327</b>                    | <b>54.2%</b>                     | <b>69.9%</b>           |
| <b>Total Public*</b>              |            | <b>468</b>                    | <b>77.6%</b>                     | <b>100.0%</b>          |
| <b>Private</b>                    | Metro      | 130                           | 21.6%                            |                        |
|                                   | Rural      | <5                            | n/a                              |                        |
| <b>Total (Private and Public)</b> |            | <b>603</b>                    | <b>100.0%</b>                    |                        |

Source: Hospital Morbidity Data System via Clinical activity modelling

### Recommendations for service reform - Obstetrics Services

- Under the CSF, the role delineation for obstetrics services at Northam Hospital will remain at a Level 3.
- To achieve the CSF role delineation, strategies and services are required to provide a sustainable maternity and 24/7 obstetric service for the Western Wheatbelt, including the capacity to deliver via caesarean section.
- Recruit and retain a second GP obstetrician and anaesthetist.
- Explore opportunities to support GPs to train in general surgery and give capacity for emergency caesareans with support via telehealth from Narrogin or Perth obstetricians.
- Consider a model of care for antenatal and postnatal care, similar to the pilot undertaken in the Southern Wheatbelt Health District whereby a child health nurse delivers antenatal and postnatal services to the community.
- Develop improved recruitment and retention strategies to maintain midwives and child health nurses.

## Recommendations for service reform - Obstetrics Services

- Utilise videoconferencing to provide antenatal, postnatal and parenting education and support to the community. For example, expand parenting support, such as midwifery, lactation, physiotherapy and education via videoconferencing and WA Health web based approved applications such as Skopia at smaller sites and directly to patient's homes.
- Improve ICT systems, such as STORK and patient held computers that allows them to be supported by telehealth at home.
- Promote shared care opportunities and the uptake of telehealth by obstetricians for higher risk patients so that antenatal care can be provided locally.
- Advocate to the Department of Health and WACHS Area Information Services to establish shared electronic medical records.
- Introduce other workforce reform initiatives to sustain service delivery as per Section 7.1.

### 6.4.4 Paediatrics services profile (0 – 14 years)

#### Current service model

##### *Northam Hospital CSF role delineation – Level 3*

Level 3 paediatric services offer:

- Designated paediatric ward, including short stay.
- Inpatient medical care by GP or paediatrician.
- On-call paediatric advice.
- Outpatient care by visiting paediatrician.
- Limited surgery by visiting paediatric surgeon or surgeon with paediatric skills.
- Day surgery, uncomplicated elective surgery and emergency surgery.
- Access to some allied health services.

Currently Northam hospital does not fully achieve the CSF Level 3 role delineation for paediatric services. There is no designated paediatric unit within the Western Wheatbelt, however Northam Hospital currently provides limited paediatric inpatient services and has the capacity to admit children to the hospital. Paediatric surgery is not currently available.

The region is currently exploring options to provide additional paediatrician services with Metropolitan Child Development Services and Swan-Kalamunda Health Service though the focus of this service will be on child development rather than acute care or surgery.

## Activity summary

### Current and projected activity

- Paediatric activity at Northam Hospital has decreased (27%) between 2007/08 and 2009/10 and is projected to increase slightly between 2012/13 and 2021/22, as outlined in the next table.
- Demand for services in regional areas, particularly for paediatric care is highly episodic and seasonal. There is a severe shortage of other paediatric services in the Wheatbelt region.

**Table 35: All Western Wheatbelt Hospitals: Actual and projected paediatric (0 – 14 years) separations (2007/08 – 2021/22)**

| Hospital       | Historical |            |            | Projected  |            |            |
|----------------|------------|------------|------------|------------|------------|------------|
|                | 2007/08    | 2008/09    | 2009/10    | 2012/13    | 2016/17    | 2020/21    |
| <b>Northam</b> |            |            |            |            |            |            |
| Medical        | 83         | 57         | 60         | 65         | 66         | 71         |
| Surgical       | 12         | 8          | 9          | 10         | 11         | 12         |
| Procedural     | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>Total</b>   | <b>95</b>  | <b>65</b>  | <b>69</b>  | <b>75</b>  | <b>77</b>  | <b>83</b>  |
| <b>Other</b>   |            |            |            |            |            |            |
| Medical        | 144        | 147        | 131        | 142        | 147        | 159        |
| Surgical       | <5         | <5         | <5         | 1          | 2          | 2          |
| Procedural     | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>Total</b>   | <b>144</b> | <b>147</b> | <b>131</b> | <b>143</b> | <b>148</b> | <b>162</b> |

Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit

Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+

### Paediatric Patient Flows

As shown in Table 36, 76% of the public paediatric separations of Western Wheatbelt residents are from metropolitan hospitals. The public self-sufficiency of Western Wheatbelt paediatric services was therefore 23% in 2009/10.



**Table 36: Western Wheatbelt resident paediatric inpatient separations, 0 – 14 years (2009/10)**

| Area                                   | Hospital     | Residents' Total Separations 2009/10 | % of Total Public & Private Separations | % of Total Public Separations |
|--|--------------|--------------------------------------|---|-------------------------------|
| WACHS Western Wheatbelt                | Northam      | 65                                   | 6.9%                                    | 8.8%                          |
|  | Moora        | 36                                   | 3.8%                                    | 4.9%                          |
|  | Beverley     | <5                                   | n/a                                     | n/a                           |
|  | Cunderdin    | <5                                   | n/a                                     | n/a                           |
|  | Dalwallinu   | 37                                   | 3.9%                                    | 5.0%                          |
|  | Goomalling   | 8                                    | 0.9%                                    | 1.1%                          |
|  | Wongan Hills | 10                                   | 1.1%                                    | 1.4%                          |
|  | Wyalkatchem  | <5                                   | n/a                                     |                               |
|  | York         | 9                                    | 1.0%                                    | 1.2%                          |
| Sub-total (WACHS – WWB)                |              | 173                                  | 18.4%                                   | 23.4%                         |
| Other Wheatbelt District               | All          | <5                                   | n/a                                     | n/a                           |
| Other WACHS Regions                    | All          | 7                                    | 0.7%                                    | 0.9%                          |
| Sub-total ( WACHS)                     |              | 180                                  | 19.1%                                   | 24.3%                         |
| South Metropolitan Area Health Service | All          | 36                                   | 3.8%                                    | 4.9%                          |
| North Metropolitan Area Health Service | All          | 102                                  | 10.8%                                   | 13.8%                         |
| Child and Adolescent Health Service    | All          | 422                                  | 44.8%                                   | 57.0%                         |
| Sub-total (metro)                      |              | 560                                  | 59.5%                                   | 75.7%                         |
| Total Public*                          |              | 740                                  | 78.6%                                   | 100.0%                        |
| Private                                | All          | 201                                  | 21.4%                                   |                               |
| <b>Total (Private and Public)</b>      |              | <b>941</b>                           | <b>100.0%</b>                           |                               |

*\*Includes public patients in private hospitals.*

*Excludes unqualified neonates, boarders and obstetrics.*

*Totals include suppressed <5 cells.*

*Source: Hospital Morbidity Data System via Clinical activity modelling*

### Recommendations for service reform - Paediatric Services

- As per the CSF, paediatric services will remain at Level 3 role delineation to 2020/21.
- In order for Northam Hospital to achieve Level 3 role delineation, it must:
  - Provide a designated paediatric ward.
  - Develop a visiting paediatric service to the Western Wheatbelt to provide surgical and outpatient services including the key priorities of child development, audiology and clinical psychology.

## 6.4.5 Mental health inpatient service profile (including Alcohol and Other Drugs)

### Current service model - adult and older adult emergency and inpatient services

#### *Northam Hospital CSF role delineation – Level 4*

Level 4 adult and older adult mental health inpatient and emergency services offer:

- Mental health professionals on call for emergency services.
- Emergency assessment capacity.
- Capacity for dedicated non-authorized mental health.
- Admission and management by GP or other medical officers.
- Capacity to cope with acutely unwell.
- Assessment and treatment for severe and persistent mental health conditions.
- Multidisciplinary staff available on call 24/7.
- Capacity for undergraduate and postgraduate teaching role.

Northam does not currently meet the delineation of a Level 4 inpatient mental health service as listed in CSF. There is no dedicated inpatient mental health facility in the Wheatbelt and local mental health professionals are not on call for out of hours emergency services. This service is provided by Rural Link.

Northam Hospital and to a far lesser extent the other Western Wheatbelt MPS sites treat people with mental health, drug and alcohol issues in the general wards of the hospital – not in dedicated mental health beds. Northam tends to primarily admit people with mild depression, anxiety and/or drug and alcohol issues rather than psychotic illnesses or major depression.

Videoconferencing is used for assessment, treatment, education and meetings and there is VC through Rural Link for out of hour's services.

The Western Wheatbelt has not yet established the non-authorized inpatient model that is present in the Southern Wheatbelt Health District in Narrogin. Narrogin operates a two bed mental health ward staffed by mental health nurses and which accepts voluntary but acutely unwell low risk mental health patients including those with psychosis and major depression. The model has enabled the Southern Wheatbelt to achieve a self-sufficiency rating for inpatient mental health services of 75% (i.e. 75% of residents are cared for closer to home). In contrast the Western Wheatbelt achieves a 52% public self-sufficiency. More people are treated in Perth, including private facilities. In the Western Wheatbelt patients are unable to access specialist mental health inpatient nursing care. The demand for inpatient mental health / drug and alcohol services by both Southern Wheatbelt and Western Wheatbelt residents is similar.

## Current service model – child and adolescent services

Child and adolescent inpatient mental health services at Northam are role delineated as nil. In the CSF there is no distinction between the different age groups in the detailed descriptions of the mental health services.

Community-based Child and Adolescent Mental Health Services (CAMHS) are provided across the Wheatbelt. Community Mental Health Services are described in Section 6.1.1.

## Activity summary

### Current and projected activity - Adult and older adult mental health activity (15 years and over)

- There has been a slight increase in mental health separations involving people aged 15 years and over at Northam Hospital between 2007/08 and 2009/10, driven by an increase in drug and alcohol activity.
- Mental health inpatient activity of those aged 15 years and over is projected to increase throughout the Western Wheatbelt, as outlined in Table 37.

**Table 37: All Western Wheatbelt Hospitals: Actual and projected adult and older adult Mental Health inpatient separations (15+ years)**

| Hospital         | Historical |            |            | Projected  |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
|                  | 2007/08    | 2008/09    | 2009/10    | 2012/13    | 2016/17    | 2021/22    |
| <b>Northam</b>   |            |            |            |            |            |            |
| Acute Psychiatry | 68         | 50         | 56         | 62         | 67         | 74         |
| Drug & Alcohol   | 34         | 34         | 51         | 61         | 71         | 84         |
| <b>Total</b>     | <b>102</b> | <b>84</b>  | <b>107</b> | <b>123</b> | <b>138</b> | <b>157</b> |
| <b>Other</b>     |            |            |            |            |            |            |
| Acute Psychiatry | 64         | 63         | 53         | 61         | 70         | 82         |
| Drug & Alcohol   | 48         | 45         | 25         | 29         | 33         | 39         |
| <b>Total</b>     | <b>112</b> | <b>108</b> | <b>78</b>  | <b>90</b>  | <b>103</b> | <b>120</b> |

Data includes acute mental health and drug and alcohol ESRGs.

Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit

Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+

### Adult mental health patient flow

- In 2009/10 there were 413 mental health separations of residents aged 15 years and over from the Western Wheatbelt at all private and public facilities of WA.
- 165 of these residents received their public health care from a local WACHS facility, giving a public mental health self-sufficiency of 52%. Of these patients, more than half (99) received their care at Northam Hospital.
- Generally, the length of stay in the Western Wheatbelt facilities was approximately 3.3 days, whereas in the length of stay in the private and public metropolitan area was 10.8 days.

**Table 38: Western Wheatbelt resident flow: Adult and older adult mental health inpatient separations at all public WA Health facilities (2009/10)**

| Area                                   | Hospital     | Residents' Total Separations 2009/10 | Residents' Total Beddays 2009/10 | % of Total Public & Private Separations | % of Total Public Separation |
|--|--------------|--------------------------------------|----------------------------------|---|------------------------------|
| WACHS Western Wheatbelt                | Beverley     | <5                                   | 5                                | 0.5%                                    | 0.6%                         |
|  | Cunderdin    | 8                                    | 16                               | 1.9%                                    | 2.5%                         |
|  | Dalwallinu   | 5                                    | 6                                | 1.2%                                    | 1.6%                         |
|  | Goomalling   | 12                                   | 45                               | 2.9%                                    | 3.8%                         |
|  | Moora        | 26                                   | 69                               | 6.3%                                    | 8.2%                         |
|  | Northam      | 99                                   | 391                              | 24.0%                                   | 31.2%                        |
|  | Wongan Hills | <5                                   | 6                                | 1.0%                                    | 1.3%                         |
|  | Wyalkatchem  | <5                                   | 7                                | 0.7%                                    | 0.9%                         |
|  | York         | 6                                    | 7                                | 1.5%                                    | 1.9%                         |
| Sub-total (WACHS – Western Wheatbelt)  |              | 165                                  | 552                              | 40.0%                                   | 52.1%                        |
| Other Wheatbelt District               | All          | 6                                    | 9                                | 1.5%                                    | 1.9%                         |
| Other WACHS Regions                    | All          | <5                                   | <5                               | 0.5%                                    | 0.6%                         |
| Sub-total ( WACHS)                     |              | 171                                  | 561                              | 41.9%                                   | 54.6%                        |
| South Metropolitan Area Health Service | All          | 37                                   | 200                              | 9.0%                                    | 11.7%                        |
| North Metropolitan Area Health Service | All          | 106                                  | 1,546                            | 25.7%                                   | 33.4%                        |
| Child and Adolescent Health Service    | All          | <5                                   | <5                               | 0.2%                                    | 0.3%                         |
| Contracted Metro                       | All          | 0                                    | 0                                | 0.0%                                    | 0.0%                         |
| Sub-total (metro)                      |              | 144                                  | 1,746                            | 34.9%                                   | 45.4%                        |
| Total Public*                          |              | 317                                  | 2,307                            | 76.8%                                   | 100.0%                       |
| Private                                | Metro        | 96                                   | 840                              | 23.2%                                   |                              |
|  | Rural        | 0                                    | 0                                | 0.0%                                    |                              |
| Total (Private and Public)             |              | 413                                  | 3,147                            | 100.0%                                  |                              |

*Includes acute mental health and drug and alcohol ESRGs.*

*Source: Hospital Morbidity Data System via Clinical activity modelling*

### Recommendations for service reform - Inpatient Mental Health Services

- Under the WA Health CSF, the role delineation for mental health services will remain at Level 4 for Northam Hospital (i.e. unauthorised beds only). The development of mental health services will be guided by the *WACHS Strategic Intent for Mental Health Services*, the CSF and the strategic directions of the Mental Health Commission. Strategies include:
  - Increase services to meet the needs of young people experiencing mental health and/or drug and alcohol problems, including capacity for mental health promotion and illness prevention.
  - Increase the visiting CAMHS psychiatry and psychogeriatrician services. This could be achieved by increasing existing psychiatry FTE and/or increasing

## Recommendations for service reform - Inpatient Mental Health Services

capacity of visiting specialists.

- Increase primary mental health care capacity within the intentions of SIHI.
- Provide a primary mental health clinician that is enabled to access: Medicare funding under Better Access, Better Outcomes; and/or Mental Health Nurse incentive program; or through SIHI Stream 2 primary health care services enable a long term funding for primary mental health. This would allow those who can be managed by GPs in primary care to stay in primary care with the additional support of psychotherapy or case management.
- Co-locate mental health services with the hospital to provide timely specialist liaison services and to enable greater security and duress support.
- Discuss with the Mental Health Commission the provision of sub-acute mental health services. This could include an intensive day therapy program to allow early discharge or admission diversion (i.e. providing 1:1 intervention and group programs). Programs would be designed to prevent transfer to authorised facilities, reduce ALOS for Northam inpatient admissions or provide day therapy options instead of hospitalisation.
- Promote Rural Link (after-hours telephone mental health specialist support).
- Develop a dedicated inpatient mental health model, learning from the success of the Southern Wheatbelt (Narrogin) model, for acutely unwell, low risk voluntary Western Wheatbelt mental health patients. This model would aim to achieve around 75% self-sufficiency for Western Wheatbelt residents.
- Negotiate for more services in the management of alcohol and other drug issues and up skill staff to enable more holistic care for clients with drug and alcohol issues and other physical ill-health comorbidities.
- Investigate strategies to improve patient transport/transfer options.
- Identify capacity to provide in patient alcohol and detox services.
- Establish six beds for supported accommodation similar to the Community Supported Residential Units (CSRU) model and need for a range of Independent Living Program (ILP) houses, such as single and double units.
- Need for recovery and rehabilitation programs for people with a mental illness. Model of care and skill and workforce to be determined.
- Develop a model for an adult drop-in centre in the Northam community.
- Further investment into dual diagnosis where people have both a mental illness and a drug and/or alcohol problem. Consideration of establishing a dedicated dual diagnosis role and training for all mental health staff to manage drug and alcohol issues and vice-versa.
- Introduce workforce reform initiatives as per Section 7.1.
- Establish an integrated medical records system.
- Increase use of telehealth and e-health services to increase access to treatment, supervision, assessment and training.

### 6.4.6 Palliative care services profile

#### Current service model

### Northam Hospital role delineation – Level 3

Level 3 palliative care services should offer:

- Inpatient care by an accredited GP.
- 24 hour cover by a clinical nurse with experience in palliative care services.
- Outpatient care by visiting general physician and possible palliative care specialist by Telehealth.
- Access to some allied health services.
- Consult liaison services for inpatients.

Inpatient palliative care services are provided as part of the hospice wing medical ward in Northam Hospital. A palliative care team supports nurses with inpatient palliative care and also provides a visiting support program to people in their homes in Northam, Toodyay and York. Silver Chain provides a linked community-based palliative care service under contract to WA Health.

## Activity summary

### Current and projected activity

- The recent and projected palliative care activity at Northam Hospital is presented in the table below. The palliative care separations fluctuated in 2008/09, but are projected to increase in the future.
- The majority (around 92%) of Western Wheatbelt residents who require palliative care receive that care locally.

**Table 39: All Western Wheatbelt hospitals: Actual and projected adult palliative care activity (2007/08 – 2021/22)**

| Hospital | Historical |         |         | Projected |         |         |
|----------|------------|---------|---------|-----------|---------|---------|
|          | 2007/08    | 2008/09 | 2009/10 | 2012/13   | 2016/17 | 2021/22 |
| Northam  | 19         | 14      | 17      | 19        | 22      | 25      |
| Other    | 29         | 33      | 27      | 29        | 33      | 37      |

Source (historic): WA Hospital Morbidity Data System, via Clinical Activity Modelling Unit  
Source (projections): WACHS Inpatient 2011 Modelling– based on ABS Series B+

## Recommendations for service reform - Palliative Care Services

- Under the CSF, palliative care services will remain at Level 3 to 2020.
- WACHS to work with the existing palliative care providers to implement the *Palliative Network Model of Care for WA* locally.

## 6.4.7 Sub-Acute and Rehabilitation Inpatient Care

### Current service model

### Northam Hospital role delineation – Level 3 - 4

Level 3-4 rehabilitation services should offer:

- Regular visiting services provided by district/regional allied health staff
- Full time salaried physiotherapy, occupational therapy
- Speech and social work services
- Region referral role
- Limited day hospital program
- Rehabilitation program for both inpatients and outpatients
- Links between regions and designated metropolitan hospitals
- Rehabilitation specialist services with experienced registered nurses, physiotherapists, occupational therapists, speech pathologists and dieticians.

Subacute care is defined as interdisciplinary care in which the need for *care is driven primarily by the patient's functional status* and quality of life rather than the underlying medical diagnosis. It may include care for patients who have multiple diagnoses, none of which is a principal diagnosis.

Avon & Central Wheatbelt Primary Health Service operates a sub-acute day hospital model at Northam Hospital where patients can be admitted to the hospital and are provided with intensive rehabilitation. The service also extends to day hospital type presentations and operates 5 days per week, with local transport provided. Access from distant communities is more difficult, but facilitated through short-term admissions to Northam Hospital (when capacity exists).

The residential aged care services available to Western Wheatbelt residents are outlined in Section 6.5.

One of the planned deliverables outlined in the WACHS Operational Plan is to implement the COAG sub acute care National Partnership Agreement.

### Activity summary

The WACHS Planning team has undertaken sub-acute modelling using the projected inpatient activity within select ESRGs, including rehabilitation and neurology but excluding Mental Health.

This modelling considers multiday separations of patients aged 15 years and over and considers how many sub-acute beds would be required by the projected activity of Northam Hospital as well as transferring 25% of sub-acute activity from smaller hospitals. Based on an 80% bed occupancy an estimated 12 sub-acute beds would be required in Northam Hospital by 2016/17.



## Recommendations for service reform - Inpatient Aged Care / Sub-Acute Care Services

- The role delineation for rehabilitation services will remain as a Level 3/4 until 2020.
- Review the rehabilitation model, services and number of acute and sub-acute beds required for Western Wheatbelt hospitals, so that care requirements meet population need.
- Determine a sub-acute / rehabilitation across the Western Wheatbelt that meets CSF Level 3 for rehabilitation, is flexible to meet the population needs (aged care) that is supported by appropriate workforce and infrastructure.



## 6.5 Residential Aged Care Services Profile

### Current service model

The table below details the residential aged care services provided in the Western Wheatbelt.

Residential aged care services are not provided at Northam Hospital and there is no plan for Northam Hospital to provide additional residential aged care capacity. However Northam does have patients who are not acute, are nursing home type patients and coded as care awaiting placement.

Currently residential aged care services are provided by private providers in Northam and York. The shires of Merredin, Bruce Rock, Yilgarn, Westonia, Wyalkatchem, Kellerberrin, Mukinbudin, Trayning, Nungarin, Koorda and Mount Marshall have unite to address the critical issue of Aged Care within their sub region, and deliver an Aged Care Regional Solution for the Central East Wheatbelt. Refer to Section 5.4.

**Table 40: Residential Aged Care Facilities in the Western Wheatbelt District (beds as at 2009/10)**

| Residential Care Facility                    | Location     | High Care Beds | Low Care Beds | Respite Beds | Total |
|--|--------------|----------------|---------------|--------------|-------|
| Beth Avon                                    | Northam      | -              | 32            | 1            | 33    |
| The Residency                                | Northam      | 44             | 6             | -            | 50    |
| Beverley MPS                                 | Beverley     | 5              | 0             | 1            | 5     |
| Alex Miles Frail Aged Lodge Hostel           | Beverley     | 0              | 11            | -            | 11    |
| Cunderdin MPS                                | Cunderdin    | 5              | 0             | -            | 5     |
| Ian Roberts Lodge                            | Cunderdin    | 0              | 4             | -            | 4     |
| Dalwallinu MPS                               | Dalwallinu   | 8              | 0             | -            | 8     |
| Pioneer House Frail Aged Hostel (Sandlewood) | Dalwallinu   | 0              | 4             | -            | 4     |
| Goomalling MPS                               | Goomalling   | 8              | 0             | -            | 8     |
| Quamby Lodge Hostel                          | Goomalling   | 0              | 4             | -            | 4     |
| Moora MPS                                    | Moora        | 12             | 0             | -            | 12    |
| Moora Frail Aged Hostel                      | Moora        | 0              | 10            | -            | 10    |
| Wongan Hills MPS                             | Wongan Hills | 3              | 0             | -            | 3     |
| Lovegrove Lodge Hostel                       | Wongan Hills | 0              | 6             | -            | 6     |
| Wyalkatchem Koorda MPS                       | Wyalkatchem  | 0              | 5             | -            | 5     |
| Wallambin Lodge Hostel                       | Wyalkatchem  | 0              | 6             | -            | 6     |
| York MPS                                     | York         | 10             | -             | -            | 10    |
| Pioneer Memorial Lodge                       | York         | -              | 15            | -            | 15    |

Source: [www.agedcareguide.com.au/](http://www.agedcareguide.com.au/) and WACHS online bed pivot, accessed 20 January 2012.

In support of the residential aged care places there are currently 18 community and extended aged care packages managed by Silver Chain in the Western Wheatbelt.

### Activity summary

Commonwealth aged care planning benchmarks for high and low care residential aged care places, applied to forecast populations, provide another indicator of demand. The current benchmarks are for the provision of 44 high care beds and 44 low care beds for every 1,000 people that is aged 70 years and over (non-Aboriginal) and aged 50 years and over (Aboriginal).

SIHI includes a residential aged care and dementia investment program that will provide incentives for private providers to expand residential aged and dementia care across the Southern Inland area, including the Western Wheatbelt.

**Table 41: Residential care activity – Western Wheatbelt hospitals (2009/10)**

| Location     | Facility                           | Beddays       | No. of residential care beds | Occupancy Rate |
|--------------|------------------------------------|---------------|------------------------------|----------------|
| Northam      | Northam                            | 827           | 0                            | n/a            |
| Beverley     | Beverley MPS                       | 1,915         | 5                            | 102%           |
|              | Alex Miles Frail Aged Lodge Hostel | 3,615         | 11                           | 90%            |
| Cunderdin    | Cunderdin MPS                      | 1,486         | 5                            | 81%            |
|              | Ian Roberts Lodge                  | 1,251         | 4                            | 86%            |
| Dalw allinu  | Dalw allinu MPS                    | 2,812         | 8                            | 100%           |
|              | Pioneer House Frail Aged Hostel    | 976           | 4                            | 67%            |
| Goomalling   | Goomalling PMS                     | 2,925         | 8                            | 100%           |
|              | Quamby Lodge Hostel                | 1,460         | 4                            | 100%           |
| Moora        | Moora MPS                          | 4,288         | 12                           | 99%            |
|              | Moora Frail Aged Hostel            | 2,944         | 10                           | 81%            |
| Wongan Hills | Wongan Hills MPS                   | 1,223         | 3                            | 101%           |
|              | Lovegrove Lodge Hostel             | 2,104         | 6                            | 96%            |
| Wyalkatchem  | Wyalkatchem-Koorda MPS             | 1,966         | 5                            | 99%            |
|              | Wallambin Lodge Hostel             | 2,096         | 6                            | 96%            |
| York         | York MPS                           | 3,683         | 10                           | 101%           |
|              | Pioneer Memorial Lodge, York       | 5,002         | 15                           | 91%            |
| <b>Total</b> |                                    | <b>40,573</b> | <b>116</b>                   | <b>95%</b>     |

Source: WACHS online Bed Numbers pivot.

## Recommendations for service reform – Residential aged care

- Leverage partnerships with private aged care residential providers to provide residential aged care and dementia care as per Stream 6 of the SIHI Initiative.
- Work with the Wheatbelt MOU Group, Wheatbelt Development Commission and the private sector to develop a new model of aged care for the Wheatbelt that is both centralized for specialty needs (e.g. dementia) and de-centralized for some of the longer term residential care needs.
- Review the need for the provision of HACC services after hours.
- Review the role of an aged care nurse practitioner for the Wheatbelt region.
- Increase the number of consults by a geriatrician (visiting service and/or via telehealth).
- Explore options to deliver aged care assessment and treatment by telehealth.
- Explore options with shires and Medicare Locals to provide access to programs that promote community participation and activities for aged care residents of the small district hospitals.

## 6.6 Clinical Support Services Profile

### 6.6.1 Medical Imaging

#### Current service model

##### *Northam Hospital role delineation – Level 4*

- Mobile service and limited to x-ray of extremities, chest, abdomen
- Interpreted by onsite doctor/health professional or by electronic means
- On site designated room
- Radiographer in attendance who has regular access to radiological consultation
- Simple ultrasound capacity for fetal monitoring
- Teleradiology facility available
- Facilities for general and fluoroscopy, in addition to mobile CD for wards, OR and ED
- Auto film processing capacity
- Mobile image intensifier in OR and/or ICU/CCU
- Staff radiographer on-call 24 hours
- Visiting specialist radiological appointment
- Always has ultrasound
- May have CT scanner
- Registered nurse as required

The Medical Imaging Department at Northam Hospital provides x-ray, general CT and ultrasound services. Ultrasound is provided Monday to Thursday and outside these times contract services are required. There are 2.0 FTE radiographers and one ultrasonographer providing a 24 hour service. The department open from 8am to 5pm with an on call service available after hours.

Currently all Western Wheatbelt residents are required to travel to Northam for ultrasound and CT services. MPS sites provide limited x-ray services only and courier x-rays to the current contractor based in Mandurah for reporting. Moora Hospital currently has digital imaging capacity. Waitlist times can vary however there is usually at least a day's wait hence some people travel to Perth for imaging.

#### **Recommendations for service reform - Medical Imaging Services**

- There is no Medical Imaging Technician position at Moora Hospital or provision of ultrasound. Both of these are required to meet CSF Level 3 Radiography.
- Digital imaging to be implemented across all Western Wheatbelt sites.
- Sites doing less than 30 x-rays to be reviewed to ensure safe practice.

## 6.6.2 Pharmacy

### Current service model

#### *Northam Hospital role delineation – Level 2*

- Service oversight by pharmacist located elsewhere
- Drugs supplied on individual prescription from community pharmacy
- Visiting pharmacist from regional hospital
- Minimal clinical service
- Staff education
- Drugs provided by regional hospital

Overall the Wheatbelt region's pharmacy service, which is located in Narrogin, achieves the CSF Level 2 role delineation.

The pharmacy department at Narrogin Hospital supplies the Wheatbelt region with both clinical pharmaceutical and supply services to Northam Hospital and the MPS site supplies are ordered by the iPharmacy system and imprest based (weekly). There is a current vacancy for a Clinical Pharmacist at Northam Hospital.

#### **Recommendations for service reform - Pharmacy Services**

- Implement Pharmacy reform as per Action 15 of the WACHS Operational Plan 2010/11.
- Review the management and governance processes for provision of pharmacy services to smaller hospitals.

## 6.6.3 Pathology

### Current service model

#### *Northam Hospital role delineation – Level 3*

- Specimen collection by RN or GP
- Specimens transmittal to referral laboratory
- Specimen collection by pathology staff
- Able to perform a defined range urgent tests

PathWest are contracted to provide all pathology services for WACHS.

In Northam tests are carried out on site, with the exception of histopathology, cytology and specialised blood tests, which are sent through to Perth. A number of other sites

in the region have capacity for point of care testing and also access to a Reflatron to carry out basic tests.

#### **Recommendations for service reform - Pathology Services**

- Point of Care pathology testing to be implemented across Western Wheatbelt sites as per WACHS Policy. PathWest leading the development of guidelines and implementation. Point of Care testing to be located in or adjacent to the ED.
- Review pathology facility needs, in conjunction with the anticipated pathology requirements of the smaller hospitals in the district.
- Northam Hospital to continue to provide 'hub' type services for Western Wheatbelt patients.

### **6.6.4 Sterilising Services**

#### **Current service model**

A Central Sterilising Services Department (CSSD) is provided at Northam Hospital which also provides sterilising services for outlying hospitals, health centres and doctors' surgeries.

#### **Recommendations for service reform – Sterilising Services**

- Current capacity and service delivery model for sterilising services to continue.
- Provide an additional Steris processing machine.

### **6.6.5 Infection Control**

#### **Current service model**

The role of the infection control team is to reduce hospital and healthcare infections through education, surveillance, process and consultancy. Currently there is 0.5 FTE for infection control based in Northam.

#### **Recommendations for service reform - Infection Control**

- Determine regional need for dedicated infection control role.

## 6.6.6 Telehealth and e-health

### Current service model

The Wheatbelt region currently utilises telehealth for staff meetings, staff education, and the receiving of outpatient appointments provided by the metropolitan health services.

The SIHI Telehealth Investment Scheme will provide the opportunity to standardise telehealth venues ensuring that these are clinically appropriate. This will assist with receiving additional services from specialists and other health professionals for patient assessment, follow up and care planning. Additionally it will allow telehealth service delivery to be developed within the region resulting in improved access to healthcare for Wheatbelt health consumers.

Considerable work is being undertaken by the *Statewide Telehealth Service* to establish and deploy improved videoconferencing technologies and supporting systems in a consistent and scalable manner across WA Health Department sites.

The initial focus of telehealth will be:

- Clinical telehealth service provision – live, synchronous interaction between two or more locations conducted by videoconference.
- Emergency telehealth – enabling remote monitoring and triage of patients in the acute care setting.

These models will be developed to enable smaller regional sites to link into larger resource centres and / or metropolitan providers in order to access services and advice. Telehealth can deliver:

- Efficient and cost effective services while improving service access, equity, safety and quality.
- Improved health outcomes through increased service access and support.
- Better education, training and support opportunities for local health care providers and consumers.
- Improved collaboration and communication between health care providers.

### Recommendations for service reform - Telehealth Services

- Ensure infrastructure and staffing are available to support the implementation and uptake of new and existing telehealth services enabled through SIHI.
- Strengthen and improve access to services through the use of innovative technologies such as videoconferencing to link tertiary, secondary and primary care providers with health consumers.
- Plan and deploy 'fit for purpose' telehealth facilities and systems in both clinical and education areas that are appropriate for the service delivery.
- Ensure that training and other education packages address the different skill sets of clinicians, administrators and telehealth coordinators.
- Drive greater use of telehealth for clinical care, including assessment, follow up, support and patient monitoring.

## 6.7 Non-Clinical Support Services Profile

### 6.7.1 Food services

#### Current service model

Kitchen services at Northam Hospital provide *Meals on Wheels* (30-40 per day, 5 days per week) and hospital meals at Northam. There are no apprenticeships but there is a traineeship through Employment Directions for three days per week. The kitchen does its own ordering.

#### Recommendations for service reform – Food Services

- Participate in review of all non-clinical services across all the Western Wheatbelt sites and investigate whether a centralised cook chill model would have benefits and support some other smaller Western Wheatbelt sites.

### 6.7.2 Linen services

#### Current service model

The current laundry providing linen services to Northam Hospital is located off-site. Laundry services are provided for all MPS sites in the Western Wheatbelt. Friday's have been identified as a difficult day for delivery as all hospitals are delivered to and truck becomes very full. All goods are delivered on trolleys.

#### Recommendations for service reform - Linen Services

- Review what services can be consolidated and provided from Northam Hospital. The review would focus on a cost benefit analysis, a social cost analysis and involve consultation with staff, communities, industrial and professional groups.
- Explore the need to relocate the existing linen service to be on-site at Northam Hospital as part of the upgrade to Northam Hospital.

### 6.7.3 Engineering and Maintenance / Cleaning and Gardening

#### Current service model

Cleaning and gardening services are provided by locally employed WACHS staff at all sites. There is an Engineering and Maintenance team based at Northam Hospital that has responsibility for the continuity of essential services on all hospital sites and hospital buildings in the Western Wheatbelt.



## Recommendations for service reform – Engineering and Maintenance

- Undertake a thorough audit of all Western Wheatbelt facilities, storage capacity and future requirements (e.g. condition of infrastructure).

### 6.7.4 Supply Department

#### Current service model

A regional service model is operated for supply, providing a 'just in time' service. All ordering is completed electronically and delivered centrally to Northam and then sent out to the smaller sites. Ordering is usually completed two to three times per week. Oracle is used for stores ordering with the catalogue being managed by Health Corporate Network (HCN).

## Recommendations for service reform – Supplies

- WACHS and HCN to review the stores ordering process, to identify cost and time savings for delivery and storage; and to reduce the amount of returned goods through improved product descriptions and images.

### 6.7.5 Information & Communication Technology

#### Current service model

There is a regional centralised ICT model provided with a staff help desk based in Northam. The service is provided from 7.00am to 5.30pm with an on call service outside these hours.

Computer hardware is provided by the Health Information Network (HIN). The ICT Department work closely with HIN.

## Recommendations for service reform – ICT

- WACHS has established an ICT Strategic Plan that will guide developments for the next five years, including equipment investment and application development. Service and workforce implications for establishing electronic medical records and human resource systems will need to be identified.
- Any future facility planning must consider this ICT strategy and include broader HIN requirements.

## 6.7.6 Learning and Development

### Current service model

Human Resources (HR) provide services to the whole of the Wheatbelt. There is a HR manager in Northam and a HR consultant and HR administration in Narrogin. HR also look after Occupational Safety and Health (OSH) issues for the Wheatbelt. The team provide recruitment support and advice, manage grievances, provide day to day advice, employee support and training.

The Learning and Development team is responsible for the coordination of training and development across the Wheatbelt region.

#### Recommendations for service reform – Learning and Development

- Establish a coordinated approach for training and education and include training facilities for this in the Wheatbelt.
- Provide an increased level of staff development and support in the use of telehealth and ehealth technology.
- Undertake a review of human resource and learning development to determine organisational structure and FTE requirements.
- In places where service models are changing ensure training and change management is in place to support changing service models.

## 6.7.7 Corporate Services

### Current service model


The WACHS - Wheatbelt Regional Corporate Services are coordinated from Northam. This includes the administration, ICT, corporate governance, human resource, medical records management and financial accountability structures and systems for the Western Wheatbelt.

HCN known as WA Health's shared services centre, was established five years ago and provides WACHS with centralised Employment and Payroll Services. In addition, HCN provides support to components of the finance function.

HIN was established in 2005 as Health's shared ICT service. HIN provides WACHS with a range of ICT related services, but ICT staff remain managed through WACHS.

#### Recommendations for service reform – Corporate services

- WACHS has established an ICT Strategic Plan that will guide ICT developments for the next five years, including equipment investment and application development. Service and workforce implications of establishing electronic medical records and human resource systems will need to be identified.
- Enhance partnerships with HIN for ICT support (e.g. define role delineation and level of collaboration).

- 
- Review departmental ICT needs to better manage services, databases and records (e.g. electronic medical records and upgrades to STORK).
  - Integrate electronic medical records across the continuum of care (e.g. GPs, primary care services, mental health and discharge planning).
  - Increase capacity of human resource and occupational health and safety resources to provide more support to health services across the Western Wheatbelt.
  - Review the suitability of government vehicles in supporting the changing models of care in the Western Wheatbelt. For example, current vehicles do not meet ICT departmental needs whereby tools and equipment are transported.

## 7 OTHER SERVICE DELIVERY ENABLERS

### 7.1 Workforce

The increased demand on health services within the Western Wheatbelt is leading to a shortage of experienced, skilled staff within the district and the risk of 'burn-out' increasing. Many staff are also extremely keen to further their development, education and learning and are being denied the opportunity due to the shortage of staff in the area as well as some training (such as theatre nurse training) only being offered in metropolitan areas.

There is a high turnover of staff and recruitment and retention is also an issue within the region as there is limited access to accommodation and incentives as well as child care for staff which is leading to an ageing workforce.

Currently a model of clinical education for all streams does not exist in the Wheatbelt and there are a number of staff that are performing dual roles (nurses taking on a clinical nurse educator role), situations where inexperienced staff are placed in high pressure situations and difficulty in finding staff with a varied and large skill base. Knowledge in delicate and specialist areas such as dementia and Aboriginal Health is also lacking as staff have either not been exposed to, or have not had adequate cover provided, in order to receive the necessary education.

Other current problems highlighted include a distinct lack of OHS FTE to cover staff in the Wheatbelt as well as the unknown impact the new detention centre facility will have on existing health services.

Consultation undertaken with stakeholders expressed a need for a comprehensive review of the regional workforce to develop and implement a strategy to attract, retain and nurture the workforce. This strategy would include:

- A dedicated FTE allocated to provide workforce planning, coordination and programs surrounding staff training and education.
- Additional HR FTE to be explored to assist managers in areas such as recruitment, retention and workforce development.
- Succession planning to build career pathways for staff and graduates.
- Succession planning to ensure staff can work across the Western Wheatbelt and in areas that require back-filling for staff training or general staff absences.
- Orientation programs.
- Continue 'trans-disciplinary' types of interventions (e.g. maximizing the use of core skill sets common to allied health) for high need groups of patients.
- Providing better incentives for staff to remain in rural and remote areas rather than the metropolitan area (e.g. suitable and modern housing for singles and families onsite and offsite and paid overtime).
- Provide short-term self-contained accommodation for visiting specialists, locums and transient staff to access.
- Review workforce models to support new models of care that include assistants in nursing, nurse practitioners, independent midwives; rotational nursing and midwifery programs for country to coast and ocean to outback.

## 7.2 Transport and retrieval

Travel and lack of transport is an on-going issue within the Western Wheatbelt. The lack of viable patient transport options within the region as well as to and from metropolitan areas plays a significant role in the health and wellbeing of residents and places a strain on the existing delivery of health services to the Western Wheatbelt.

Patients unable to drive or access transport to appointments or referrals where performed in the metropolitan region often forego their appointments, compromising their health and increasing their risk of developing chronic diseases. More often than not existing staff such as nurses are currently driving patients to these appointments resulting in a shortage of staff at Northam and smaller sites. This problem is exacerbated when a mental health patient is involved as two staff must accompany the patient. Similarly, where patients require transport from smaller sites to Northam Hospital via ambulance, it leaves the smaller communities without an ambulance and in some cases, where police are required to escort patients, without a police presence in the area.

There is also a current lack of voluntary transport services, difficulty in accessing suitable, reliable vehicles and no public transport. This is causing residents to leave the area due to a lack of transport facilities to and from health services.

Several suggestions were put forward during the consultation period in order to alleviate the issue:

- Work with the shire zones and the Wheatbelt Development Commission to explore the feasibility of a zone based community volunteer organisation to provide a patient driving service for non-urgent patient transport and inter-hospital transport. Volunteers perform the driving service and cars leased from council, subsidised by PATS. Where volunteers are not available, dedicated paid internal staff could provide the service when the transport is a planned trip. This would follow a similar initiative to that currently in place in Narrogin.
- A transport loop bus to Perth and back. This option would require a significant amount of coordination to make it feasible.
- A more structured, formalised system for transport from smaller hospitals to Northam and back and also to Perth.

The SIHI aims to reduce inter-hospital transfers for Triage 3-5 and this is likely to result in more admissions of Triage 3 locally. The SIHI will provide a safe, sustainable and coordinated 24/7 emergency model for the Wheatbelt in partnership with GPs, ensuring a networked ED response model across the district and with other emergency response providers. In addition the SIHI aims to ensure Northam achieves its CSF role delineation so more patients can be admitted from local EDs.

The statistics for patient transfers are shown below.

The following data details the historical number, type and location of patient transfers for the Western Wheatbelt.

### RFDS inter-hospital patient transfers

The following table outlines the number of inter-hospital RFDS patient transfers from the Western Wheatbelt between 2007/08 and 2009/10. In 2009/10 close to half the transfers were from Dalwallinu Hospital.

**Table 42: Western Wheatbelt hospitals: RFDS transfers 2007/08-2009/10**

| Hospital     | 2007/08   | 2008/09    | 2009/10    |
|--------------|-----------|------------|------------|
| Dalwallinu   | 27        | 36         | 48         |
| Moora        | 11        | 13         | 12         |
| Northam      | 15        | 23         | 17         |
| Other        | 17        | 49         | 35         |
| <b>Total</b> | <b>70</b> | <b>121</b> | <b>112</b> |

Data *includes* unqualified neonates and boarders. Excludes emergency evacuations funded by the Commonwealth.

Source: WACHS RFDS pivot, extracted 30<sup>th</sup> June 2011.

In 2009/10 three in five (61%) RFDS transfers from Western Wheatbelt hospitals were to Royal Perth Hospital, followed by 22% to Sir Charles Gairdner Hospital.

**Table 43: Destination of RFDS Transfers from Western Wheatbelt, 2009/10**

| Hospital                      | 2009/10    |
|-------------------------------|------------|
| Royal Perth Hospital          | 69         |
| Sir Charles Gairdner Hospital | 24         |
| Princess Margaret Hospital    | 11         |
| Other                         | 8          |
| <b>Total</b>                  | <b>112</b> |

Data *includes* unqualified neonates and boarders. Excludes emergency evacuations funded by the Commonwealth.

Source: WACHS RFDS pivot, extracted 30<sup>th</sup> June 2011

### Non-RFDS inter-hospital patient transfers

Table 44 outlines the number of inter-hospital patient transfers from the Western Wheatbelt via ambulance, health service owned transport or helicopter evacuation.

In 2009/10 there were 760 of these transfers from Western Wheatbelt hospitals, with 355 of these being from Northam Hospital. Note: there would also be ambulances associated with the RFDS transfers shown above in Table 43 that are excluded from this information.

**Table 44: Western Wheatbelt hospitals: Non RFDS inter-hospital transfers (2008/09 – 2009/10)**

|                                | Type                  | 2008/09     | 2009/10     |
|--------------------------------|-----------------------|-------------|-------------|
| Northam                        | Ambulance             | 312         | 299         |
|                                | Hospital Transport    | 17          | 49          |
|                                | Helicopter Evacuation | 5           | 7           |
|                                | Other*                | 176         | 157         |
|                                | Total                 | 510         | 512         |
| Other (excludes nursing posts) | Ambulance             | 431         | 378         |
|                                | Hospital Transport    | 16          | 22          |
|                                | Helicopter Evacuation | 14          | 5           |
|                                | Other*                | 296         | 280         |
|                                | Total                 | 757         | 685         |
| <b>Total^</b>                  |                       | <b>1267</b> | <b>1197</b> |

Data *includes* unqualified neonates and boarders.

*Includes transfers to acute hospitals, psychiatric hospitals and nursing homes. Excludes transfers from residential aged care facilities and nursing posts.*

\* Other includes private/public transport, police and other.

^Total includes the small numbers suppressed in the table.

Source: WACHS online ED pivot and WACHS online ATS pivot, as at 7<sup>th</sup> February 2011.

Note: Ambulances include volunteer, community or hospital owned ambulances, but exclude instances where an ambulance is used in conjunction with RFDS, other plane or helicopter.

As shown in Table 45, in 2009/10 one in five (18%) of the non-RFDS transfers from Western Wheatbelt hospitals were to other Wheatbelt facilities (hospitals and nursing homes). Four in five of the transfers (81%) were to metropolitan facilities, with Royal Perth Hospital receiving the largest number (344 or 29% of all transfers).

**Table 45: Destination of non RFDS inter-hospital transfers from Western Wheatbelt (2009/10)**

| Region              | Hospital                      | 2009/10 |
|---------------------|-------------------------------|---------|
| Transferred from ED |                               |         |
| Wheatbelt           | Northam Hospital              | 112     |
|                     | Moora Hospital                | 10      |
|                     | Goomalling Hospital           | 8       |
|                     | Other Wheatbelt               | 15      |
| Metro               | Swan District Hospital        | 115     |
|                     | Armadale/Kelmscott Hospital   | 21      |
|                     | Royal Perth Hospital          | 238     |
|                     | Princess Margaret Hospital    | 103     |
|                     | Sir Charles Gairdner Hospital | 70      |
|                     | Other^                        | 130     |

| Region                            | Hospital                           | 2009/10     |
|-----------------------------------|------------------------------------|-------------|
| <b>Transferred from inpatient</b> |                                    |             |
| Wheatbelt                         | Northam Hospital                   | 11          |
|                                   | Avon Valley Residency Nursing Home | 16          |
|                                   | Bethavon Hostel (Aged Care)        | 19          |
|                                   | Other Wheatbelt                    | 20          |
| Metro                             | Royal Perth Hospital               | 106         |
|                                   | Princess Margaret Hospital         | 18          |
|                                   | Sir Charles Gairdner Hospital      | 46          |
|                                   | Swan District Hospital             | 34          |
|                                   | Other^                             | 105         |
| <b>Total</b>                      |                                    | <b>1197</b> |

*Data includes unqualified neonates and boarders.*

*Includes transfers to acute hospitals, psychiatric hospitals and nursing homes. Excludes transfers from residential aged care facilities and nursing posts.*

*^Includes not stated.*

*Source: WACHS online ED pivot and WACHS online ATS pivot, as at 7th February 2011.*

### 7.3 Cultural security

Whilst WACHS provide an Aboriginal Health Service, the need to provide culturally appropriate health services and facilities for the area's Aboriginal population is well recognised, including the recruitment of more Aboriginal staff as both health workers and across the workforce more generally. For example, there is limited uptake of Home and Community Care (HACC) Services by Aboriginal families and no non-government Aboriginal Community Controlled Health Organisation (ACCHO) providing GP services in the District or Wheatbelt wider region.

Strengthening the cultural security of services will work towards ensuring Aboriginal people receive appropriate care at the right time in the right setting and would align with the intentions of Commonwealth and State Government policies.

### 7.4 Patient accommodation

There is a current lack of patient accommodation options in the Western Wheatbelt. As a result, people often are required to go to metropolitan areas. Certain population groups are currently suffering from a lack of patient accommodation services and they include patients requiring long-term accommodation, those with drug and alcohol problems, those with a mental illness and young people who have suffered a head injury.

Similarly, there is a lack of short-term family type accommodation settings. This is of particular importance where pregnant women are concerned and the ability to have family staying close by is an attractive option and a better alternative than travelling to Perth to deliver their child.



## 7.5 Disaster preparedness and response

The CSF recommends Northam Hospital operate as a Level 4 service (Department of Health, 2010a). This equates to a Group 3 rating in WA Health Capital Works Program's *Redundancy and Disaster Planning Guidelines*. The full requirements are listed online ([www.public.health.wa.gov.au/cproot/2540/2/Redudancy%20and%20Disaster%20Planning.pdf](http://www.public.health.wa.gov.au/cproot/2540/2/Redudancy%20and%20Disaster%20Planning.pdf)) and include strategies to enhance security across the sites. Refurbishment of the Northam Hospital should include the opportunity upgrade facilities for greater compliance to Government Policy.

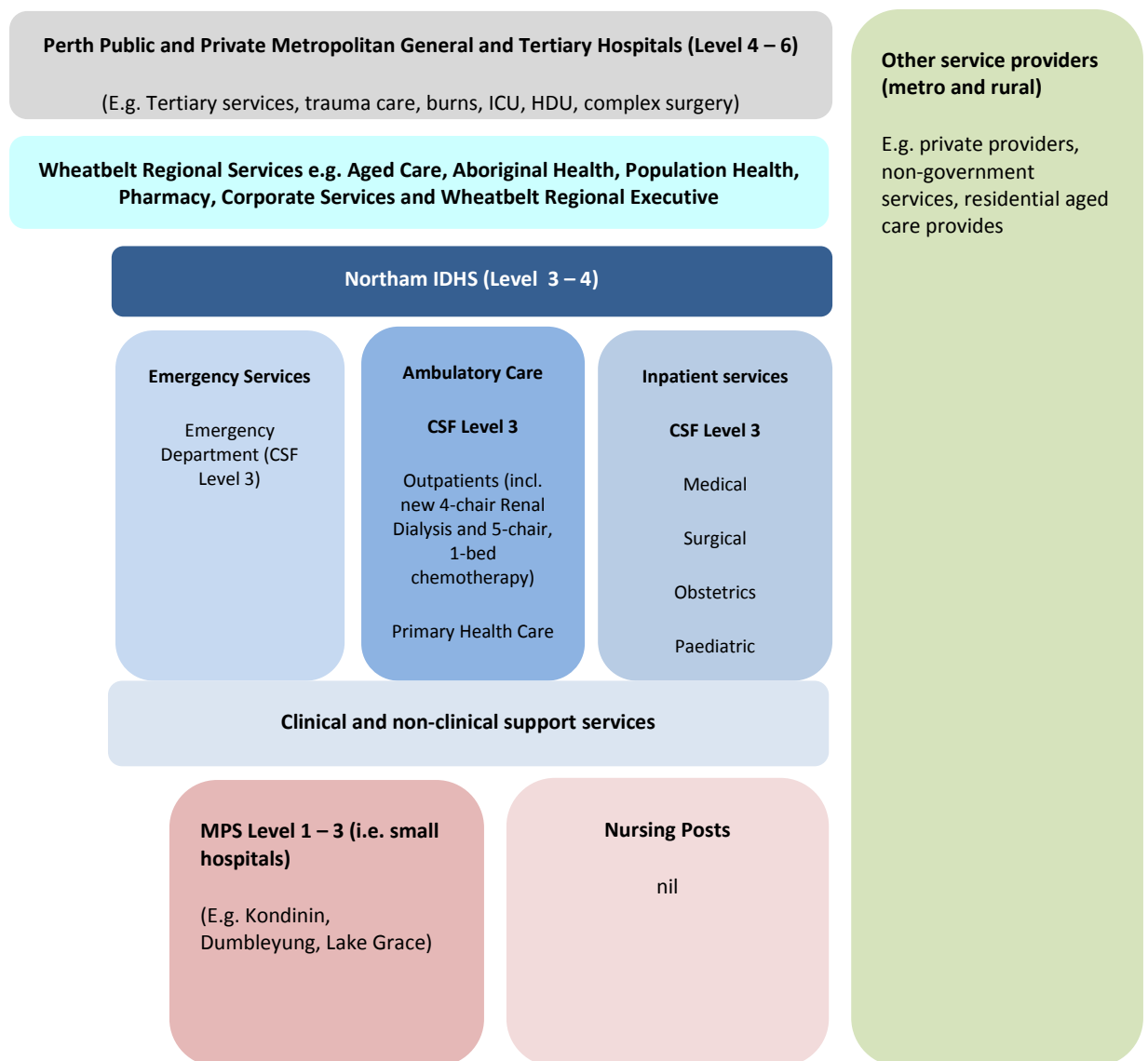
## 7.6 Contemporary facility design

Future redevelopment of the Western Wheatbelt sites should align with the *Australasian Health Facility Guidelines* and various building codes and guidelines of Australia to ensure the facilities are contemporary and able to meet modern best practice models of care. The list of upgrades highlighted during service planning is detailed in Section 10.

## 8 PROPOSED FUNCTIONAL MODEL OF CARE

The following section provides a visual representation of the future functional external relationships for the Western Wheatbelt. The figure attempts to summarise the range of services available across the district and the role delineation. Patients will flow to and from any of the services listed. The levels provided are from the CSF (Department of Health, 2010a).

**Figure 14: Future Functional Model of Care for Western Wheatbelt**



## 9 CONCLUSION

This Service Plan is the outcome of extensive research and consultation with WACHS and their stakeholders to set the strategic directions for service delivery across the Western Wheatbelt for the next ten years.

The Service Plan will be invaluable to the development of the *Implementation Plan* for the \$565 million *Royalties for Region's Southern Inland Health Initiative (SIHI)* as well as forming the basis for other funding opportunities as they arise. The recommendations contained within will inform the service reform and capital works initiatives designed to enhance the sustainability, self-sufficiency and network of health services in the Western Wheatbelt over the next five years.

The strategic directions and recommendations for service delivery outlined in this Service Plan will enable the WACHS to better manage demand for services, improve efficiencies in patient care, meet the needs of the local catchment area and ensure alignment with existing policies and strategies, including the SIHI project.

The Plan will also assist in informing the development of future business cases for the potential redevelopment of services. It is essential that this Service Plan is reviewed as facility planning progresses, National/State policies are introduced and the needs of the community change.

An ongoing proactive approach to service planning will ensure that healthcare services remain responsive to the rapidly changing community, new policy developments and advances in medical care and technology.

## 10 RECOMMENDATIONS

The following recommendations should be undertaken over the next six to 12 months as planning progresses to Business Case development and beyond.

### Service reform recommendations

- Determine the higher level strategic directions for the Wheatbelt region once the development of service plans for the Western, Eastern and Coastal Wheatbelt areas is complete and where possible pool resources and efforts to achieve service reform across the Region (e.g. workforce development, patient transport, community midwifery model, sub-acute rehabilitation services and increasing post-acute and hospital in the home services).
- Develop an Implementation Plan to identify the key operational and facility implications arising from the service delivery strategies outlined in this document. This will ensure all key issues arising from the Service Plan are considered to progress service reforms and to enable full achievement of current and future CSF role delineations. This includes determining priorities within the Service Plan for the Western Wheatbelt and Wheatbelt region that align with the funding intentions of the SIHI to ensure priorities are met, including but not limited to:
  - Utilise recurrent funding for medical and emergency services (Stream 1)
  - Establishing a one-stop shop by co-locating primary health care services on the Northam Hospital (Stream 2) by building an Ambulatory Care facility.
  - Utilise recurrent funding for primary health care services (Stream 2) to boost primary health care services.
  - Determine Wheatbelt sites that are suitable for Stream 3: Primary Health Care Demonstration Program informed by their historical and projected acute activity levels.
  - Prioritise the redevelopment or refurbishment of small hospitals and nursing posts in the Western Wheatbelt as per Stream 4 supported by building condition audits.
  - Employ a Wheatbelt Telehealth Project Implementation Team (Stream 5)
  - Leverage partnerships with private aged care providers to establish residential aged care and respite beds (Stream 6)
- Implement the recommendations of the key Commonwealth and State Government policy, including:
  - Provide a four chair satellite outreach renal dialysis service at Northam Hospital and two chair satellite outreach renal dialysis service at Moora Hospital (WACHS Renal Dialysis Plan 2010-2021).
  - Provide a five chair, one bed rural cancer unit which provides chemotherapy as per the WACHS Cancer Plan.
  - Upgrade services and facilities to comply as a Group 3 service for emergency management and redundancy planning.
  - Work with the Department of Health's Health Information Network branch (HIN) to establish electronic shared and integrated medical records (as per the National Health Reform Agreement).
- Consolidate the future functional models of care for emergency services and primary health care within the Western Wheatbelt.
- Determine the workforce strategy and recurrent cost implications (workforce model to include a focus on education and training for GPs, medical, nursing and allied health staff).

- Determine the private and inter-governmental partnerships to be formed to enable the future models of care to be established.
- Continue the 'community engagement' model for service planning to ensure services are suitable and culturally secure services for all residents.

### Facility development – Northam Hospital

- Support the achievement of service reform above by redeveloping Northam Hospital. This includes utilising the funding allocation available from SIHI and other funding sources to:
  - Co-locate primary health care services, outpatients and visiting medical specialists within a purpose built Ambulatory Care Centre. Include an area for maternity outpatient services. Area to accommodate four-chair Satellite Outreach Service renal service and ECG space (as funded through SIHI Stream 2).
  - Increase the number of ED treatment bays from 4 to 8.
  - ED to have an interview room with dual egress, duress and access to videoconferencing facilities.
  - Refurbish and extend ED to include observation areas and staff desks to accommodate increased activity, support new models of care and improve patient flow.
  - Review the recommendation to re-locate a point of care pathology laboratory within or adjacent to ED.
  - Review the recommendation to co-locate cancer, aged and palliative care support services.
  - Review the recommendation to refurbish Northam Hospital to provide better patient flow and ward design in order to accommodate the needs of mental health patients.
  - Provide a fully functional second operating theatre.
  - Review and upgrade the current theatre area to improve function and ensure compliance with relevant Australian codes and standards.
  - Provide a three double bedroom patient accommodation facility as per the WACHS Cancer Plan.
  - Provision of a two-chair public dental service, possibly located within the new Ambulatory Care Centre.
  - Maintain 30 bed multiday and 13 day same-day bed capacity at Northam.
  - Provide multipurpose consult rooms to accommodate visiting mental health and allied health staff.
  - Provide telehealth enabled interview rooms in the hospital and ambulatory centre to allow crisis level primary assessment and secondary consultation but also may be able to utilise private MBS funded psychiatrists in an outpatient capacity.
  - Provide increased administration area for confidential note writing.
  - Provide hot desks with appropriate technology available for visiting staff.
  - Ensure ICT bandwidth is upgraded to support telehealth and viewing of medical imaging.
  - Provide wireless technology across Northam Hospital.
  - Ensure telehealth technology is available and accessible across Northam Hospital.
  - Ensure telehealth facilities are located closer to the ward areas (e.g. mobile telehealth facilities and fixed facilities in ED and inpatient areas, including areas for viewing of medical imaging results).

- Disability access required to all services.
- Consider appropriate short term staff accommodation on-site (e.g. for locums and transient staff).
- Older person's mental health office to have access to a hot desk with Aged Care Services to support seamless service provision with ACAT and a Geriatrician/Psychogeriatrician.
- Provision of an extra room for storage of equipment and rooms designed to take into account equipment requirements.
- Review security at all hospital sites.
- Refurbish Northam Hospital facilities to meet WA Health Redundancy and Disaster Planning.
- Investigate the recommendation to provide a centralised UPS to reduce machine during power spikes.
- Investigate the ability to design the aged care facility to accommodate secure dementia beds.
- Investigate the recommendation for a separate room for children of mental health service staff to use whilst staff are working.
- Investigate more supported accommodation for people with a mental illness.
- Undertake an audit to identify where updates to fittings are required.

### Facility development – Moora Hospital

- To support the achievement of service reform, the following future capital works at Moora Hospital will need to be investigated:
  - Moora Hospital ED to have an interview room with dual egress, duress and access to videoconferencing facilities.
  - Provide consult rooms with dual egress, duress.
  - Refurbish Moora Hospital facilities to meet WA Health Redundancy and Disaster Planning.
  - Investigate the recommendation of a new building for community, primary and Aboriginal health services.
  - Provide wireless technology across Moora Hospital.
  - Ensure telehealth technology is available and accessible across Moora Hospital.

### Facility development – Western Wheatbelt hospitals

- To support the achievement of service reform, the following capital works at Western Wheatbelt small hospitals will need to be investigated:
  - All Western Wheatbelt small hospital EDs to have an interview room with dual egress, duress and access to videoconferencing facilities.
  - Provide wireless technology across all hospitals.
  - Refurbish Western Wheatbelt small hospital facilities to meet WA Health Redundancy and Disaster Planning.
  - Ensure telehealth technology is available and accessible across all hospitals.
  - Capacity to provide emergency power at all Western Wheatbelt smaller hospitals to allow for all power points to be running when mains power is lost.

**Table 46: Summary of preliminary facility needs at Northam Hospital**



The following needs will be discussed and determined as planning continues.

| Services                      | Current configuration                | Future Configuration  |
|-------------------------------|--------------------------------------|---|
| <b>Ambulatory Health Care</b> |                                      | 2 x chair public dental clinic<br>4 x chair renal dialysis<br>Maternity outpatients<br>Consult space for outpatients<br>Multipurpose consult rooms<br>Population health |
| <b>Rural Cancer Unit #</b>    |                                      | 5 x chair, one bed rural cancer unit<br>A three double bedroom patient accommodation facility.  |
| <b>Acute Care Inpatient</b>   | 30 multiday beds<br>13 same-day beds | 30 multiday beds:<br>13 same-day beds<br>Upgrade existing rooms to be compliant with modern standards   |
| <b>Emergency Department</b>   | 4 x Treatment Spaces                 | 8 x Treatment Spaces<br>Interview room with dual egress<br>Procedure room<br>Consult rooms to be determined   |
| <b>Theatres</b>               | 1 x theatre                          | 2 x theatres  |
| <b>Linen services</b>         | Off-site                             | Onsite  |

*# If funding from the Commonwealth Health & Hospital's fund does not eventuate due to changing political priorities than developing cancer units at Narrogin and Northam will remain a priority.*

## 11 GLOSSARY

| Term  | Meaning   |
|---|---|
| <b>Acute care</b>                             | Care in which the need for treatment is driven primarily by the patient's principal medical diagnosis rather than their functional status.  |
| <b>Admitted patient</b>                       | Is a person who has been assessed by the treating clinician as meeting at least one of the minimum criteria for admission to an inpatient area and who undergoes the hospital's formal or statistical admission process as either a same-day, overnight or multi-day patient.   |
| <b>Ambulatory health care centre</b>          | Is a health facility where ambulatory health care services are provided along with emergency department care and overnight inpatient admissions.  |
| <b>Ambulatory care services</b>               | Is a broad term that generally refers to the planned services provided to patients who are able to 'walk in and walk out' on the same-day. Ambulatory care services can include primary health care services, day surgery and outpatients (e.g. wound care and management).   |
| <b>Authorised bed</b>                         | Authorised under the <i>Western Australia Mental Health Act, 1996</i> to accept involuntary admission to a Mental Health Unit. Unauthorised facilities cannot accept involuntary admissions.  |
| <b>Catchment area</b>                         | A catchment area refers to the geographical area that a health service will primarily provide services to. It is usually bound by one or more local statistical areas as defined by the Australian Bureau of Statistics.  |
| <b>Clinical support services</b>              | Includes services to support the operations of clinical services. Includes pharmacy, medical imaging, central sterilising services and pathology.   |
| <b>Co-located/ Collocated</b>                 | Co-located services are located together in the one facility.<br>Collocated services are located adjacent to another or in close proximity to one another, generally in a separate buildings.   |
| <b>Culturally secure</b>                      | Services or facilities that are culturally appropriate and meet local cultural and religious needs.   |
| <b>Fluoroscopy</b>                            | Is a type of medical imaging that shows a continuous x-ray image on a monitor, much like an x-ray movie. It is used to diagnose or treat patients by displaying the movement of a body part or of an instrument or dye (contrast agent) through the body.   |
| <b>Health consumer</b>                        | A term utilised to refer to individuals who are likely to or are currently accessing WACHS services. Includes inpatients and clients.   |
| <b>Length of stay</b>                         | The number of days spent in hospital by a patient for a single admission. Calculated as date of separation minus date of admission.   |
| <b>Model of care / service delivery model</b> | A service delivery model is a framework that establishes how particular health care services will be delivered. The model stipulates the key features of a service such the key aim/focus of care provided; type of specialist and general services provided; the preferred strategy for patient management and flow; and the relationships required with other stakeholders to deliver care. One of the key features of the Service Plan is the future service delivery models. These form the foundation for workforce and master planning. |
| <b>Multi-day patient</b>                      | Is a patient that was admitted to, and separated from, the hospital on different dates. Therefore, a booked same-day patient who is subsequently required to stay in hospital for one night or more is an overnight patient; a patient who dies, is transferred to another hospital or leaves of their own accord on their first day in the hospital is a same-day patient even if the intention at admission was that they remain in hospital at least overnight.  |
| <b>Non-clinical support services</b>          | Includes corporate support, information and communication technology services, supply services, site maintenance, cleaning, kitchen services and laundry services. Services that are required to maintain the safety and comfort of staff, patients and visitors.   |



| Term                              | Meaning  |
|-----------------------------------|--|
| <b>Primary health care</b>        | <p>Is an aspect of ambulatory health care but is generally first level health care. The term is sometimes used interchangeably with the term primary care although primary care tends to refer to the clinical care provided by GPs. Primary health care gives priority to those most in need, maximises community and individual self-reliance and participation and involves collaboration with other sectors. It includes:</p> <ul style="list-style-type: none"> <li>• Health promotion</li> <li>• Illness prevention</li> <li>• Clinical treatment and care of the sick</li> <li>• Community development</li> <li>• Advocacy and rehabilitation</li> </ul> <p>Primary health care is provided by general practitioners, practice nurses, primary/community/child health nurses, pharmacists, dentists, allied health professionals, aged care workers, support workers and many other providers across the local, state and federal government sectors, non-government organisations and the private sector.</p>                                |
| <b>Primary health care centre</b> | <p>Refers to a stand-alone health facility where primary health care services are provided. It would ideally be located in close proximity to emergency department and may be collocated with inpatient, outpatients, minor wound care and diagnostic services. A primary health care centre does not include day surgery services.</p>  |
| <b>Role delineation</b>           | <p>Indicates the type and level of services provided by a hospital, as outlined in the WA Health <i>Clinical Services Framework 2010 - 2020</i>.</p>   |
| <b>Same-day patient</b>           | <p>A same-day patient is a patient who is admitted and separated on the same day of inpatient admission. May be either a planned booked patient or an unplanned patient transferred from the emergency department. A patient cannot be both a same-day patient and an overnight or multi-day stay patient at the one hospital.</p> <p>The category of same-day is determined retrospectively; that is, it is not based on the intention to admit and separate on the same date. Rather, a patient is deemed to have been a same-day patient, if in retrospect, it can be seen that the patient was admitted to, and separated from, the hospital on the same date. Therefore patients who die, transfer to another hospital or leave of their own accord on their first day in the hospital are included. Booked same-day patients who are subsequently required to stay in hospital for one night or more are excluded and regarded as a multi-day patient. Examples of same-day activity include renal dialysis, colonoscopy and chemotherapy.</p> |
| <b>Separation</b>                 | <p>Separation is the most commonly used measure to determine the utilisation of hospital services. A separation equates to a patient leaving a healthcare facility because of discharge, sign-out against medical advice, transfer to another facility/service or death. Separations, rather than admissions, are used because hospital data for inpatient care are based on information gathered at the time of discharge.</p>  |
| <b>Service planning</b>           | <p>Is a process of:</p> <ol style="list-style-type: none"> <li>1. Documenting the demographics and health status of a health service's catchment area.</li> <li>2. Recording the current status and projected future demands for the health service.</li> <li>3. Evaluating the adequacy of the existing health service to meet the future demands.</li> </ol> <p>The process involves analysis of current and future population and service data and consultation with a range of internal and external stakeholders to develop the future service delivery models for the identified health campus or site.</p> <p>The key deliverable or outcome of service planning is a Service Plan.</p>   |
| <b>Service plan</b>               | <p>A Service Plan will outline the current and preferred future profile for services operating from an identified health campus or site. It will include the context for service delivery including the population profile, future demand, existing policies and strategies and the preferred future service delivery models.</p>  |
| <b>Sub-acute care</b>             | <p>Interdisciplinary or multidisciplinary care in which the need for care is driven primarily by the patient's functional status and quality of life rather than the underlying medical diagnosis. It may include care for patients who have multiple diagnoses, none of which can be specified as the principal diagnosis.</p>  |

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## APPENDIX A: METHOD FOR DEVELOPING THE SERVICE PLAN

Developing the Western Wheatbelt Service Plan included Aurora Projects and WACHS undertaking the following methods:

### Project Plan (July 2011)

- A Project Plan detailing the method, consultation process, timeframe, key milestones and budget for the planning process for developing the Service Plan was negotiated with and signed off by WACHS.

### Literature Review (August – December 2011)

- Key literature including Commonwealth, State and local policies were reviewed to provide direction for service reform as contained Section 3.5 in this Service Plan.

### Data Analysis (August – December 2011)

WACHS Clinical Planning Team provided the following data:

- Demographic data analysis of Estimated Resident Population (population numbers) and Australia Bureau of Statistics Series B+ (population growth).
- Health status activity data obtain from the WA Health and Wellbeing Survey (2009) and various morbidity and mortality databases.
- Actual and projected health service activity from various Department of Health databases.

### Consultation workshops (September 2011)

Round 1 of Service Planning Consultation workshops were conducted with staff of the Western Wheatbelt hospitals to determine the District's strengths, emerging issues, areas for improving the existing model of care and opportunities to implement the intentions of the Southern Inland Health Initiative. Workshops engaged representatives from emergency, acute, aged care, primary health care services and clinical and non-clinical support services.

### Validation workshops (November 2011)

A thematic analysis was undertaken of the data collected in Round 1. Validation workshops were held with staff of Round 1 to confirm the outcomes and determine the strategic direction as detailed in this Service Plan.

### External stakeholder consultation (November 2011)

WACHS conducted a series of workshops with external stakeholders to promote the objectives of the Service Plan and the Southern Inland Health Initiative and obtain their views for local service reform.

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## APPENDIX B: ORGANISATIONAL STRUCTURES

Figure 15: WACHS Wheatbelt Region: Population Health (as of January 2012)

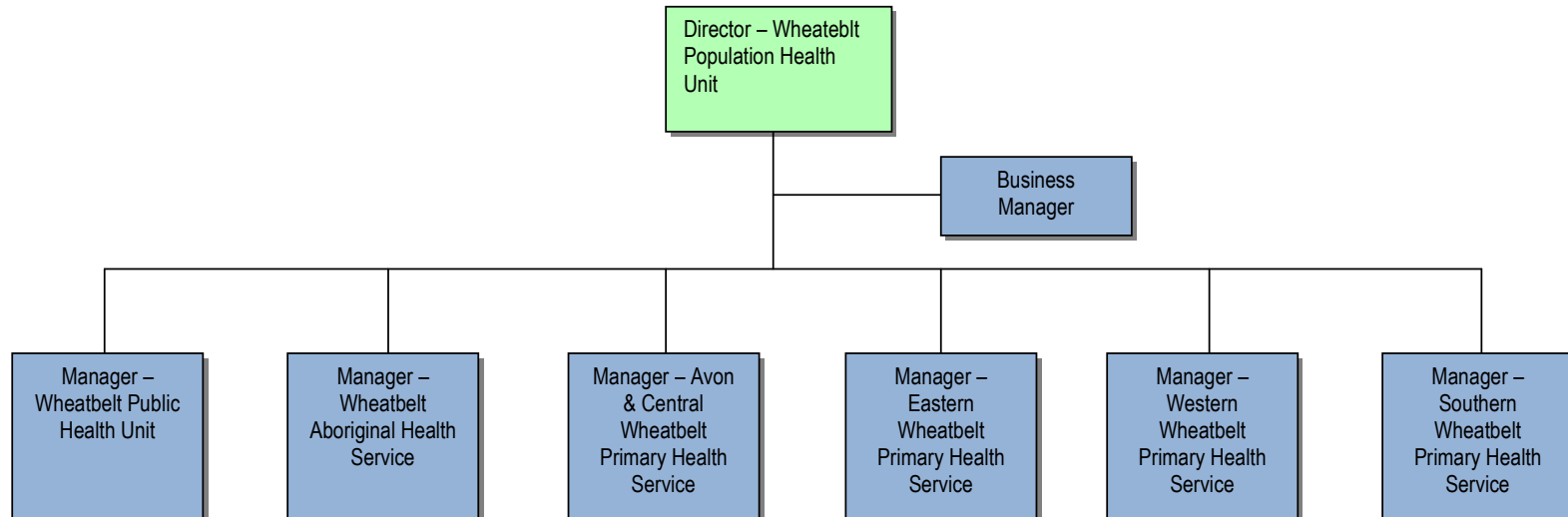


Figure 16: Western Wheatbelt Primary Health Service (as of May 2011)

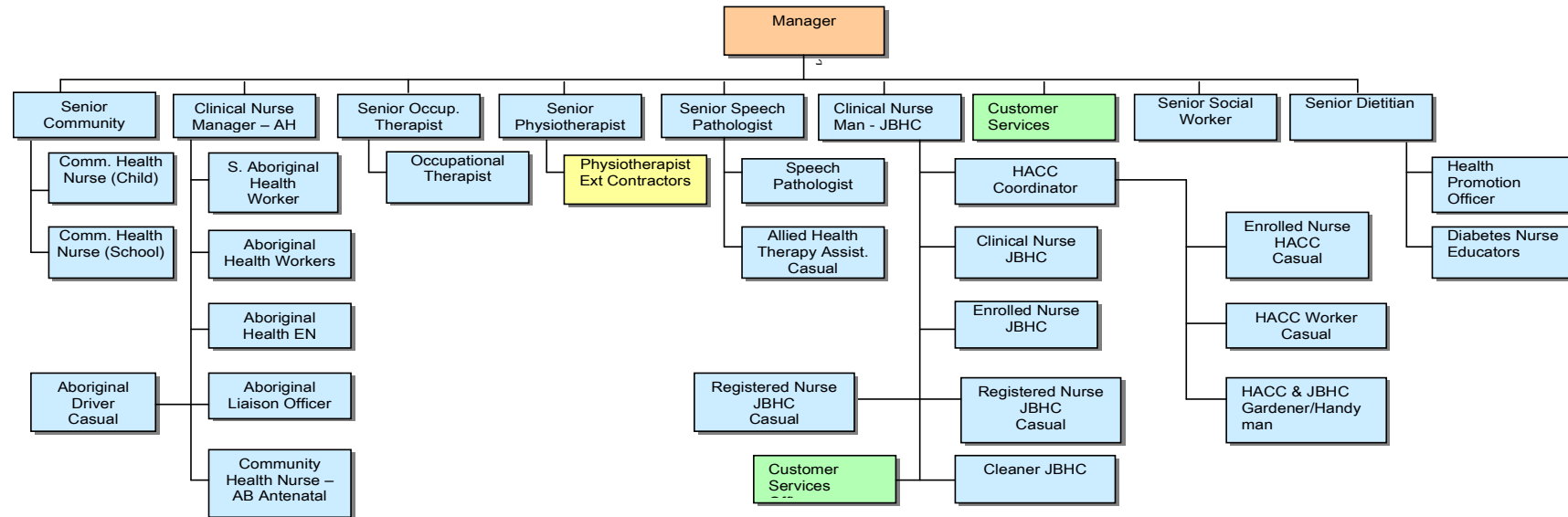
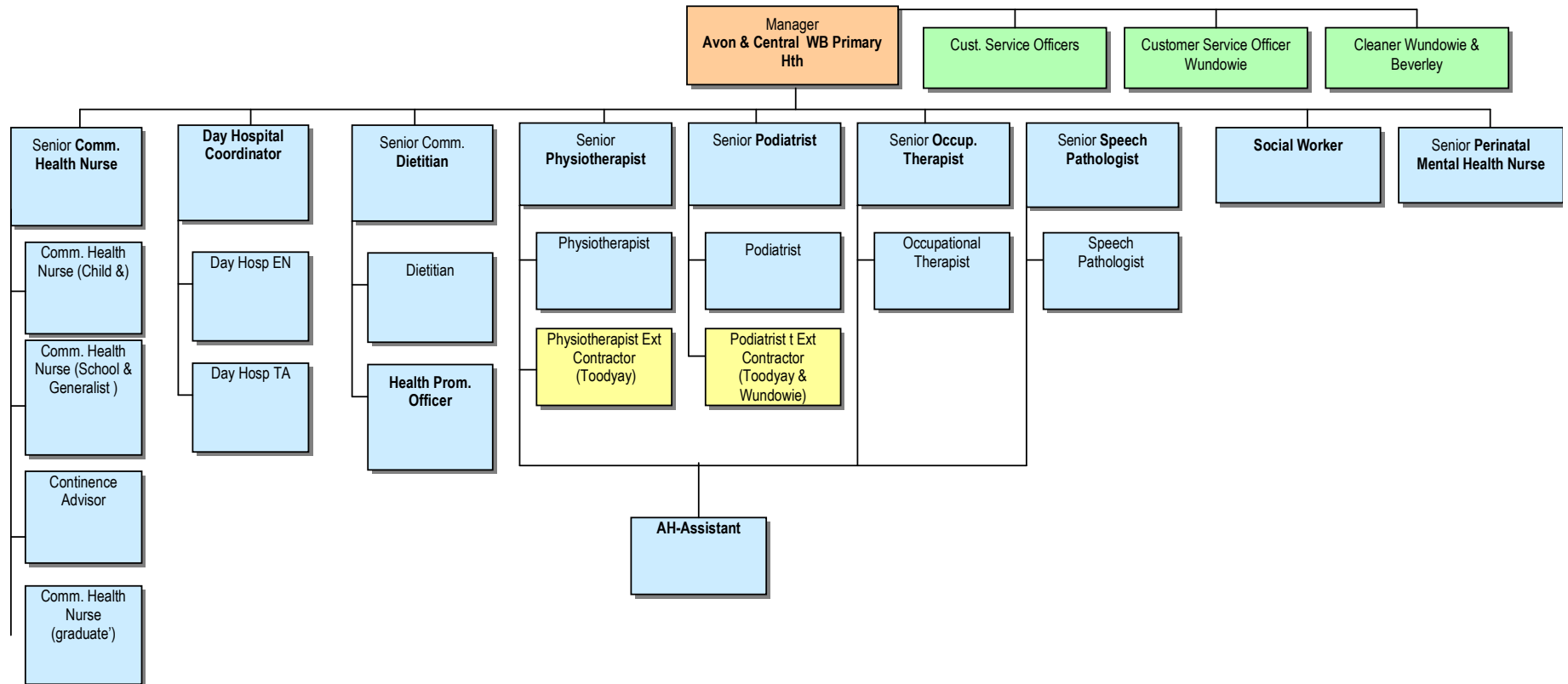
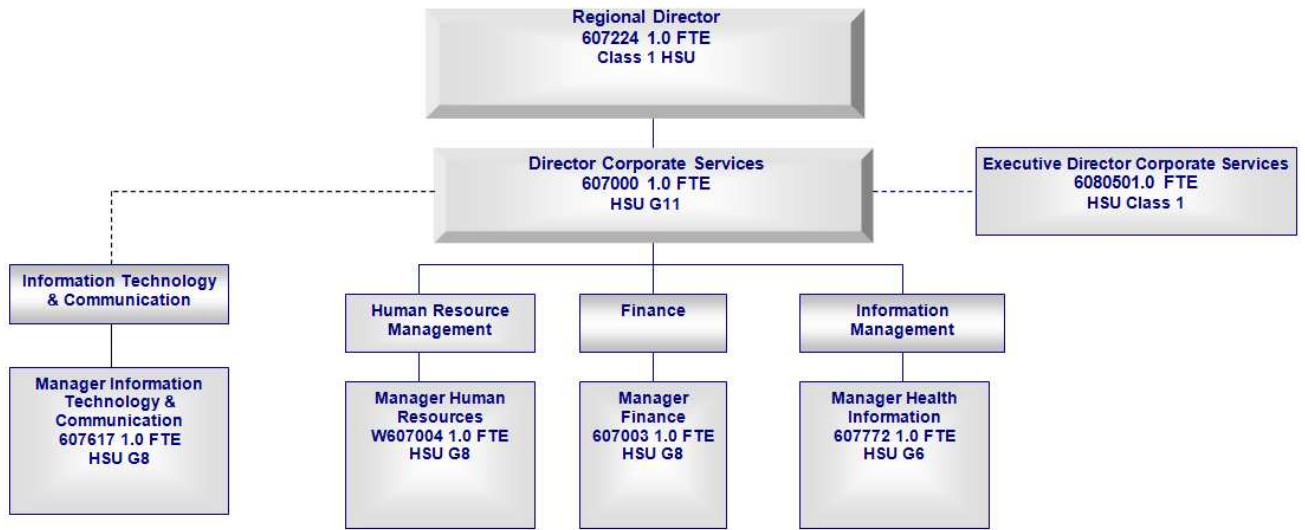


Figure 17: Avon & Central Wheatbelt Primary Health Service (as of September 2011)





**Figure 18: Corporate Services Structure**



Source: WACHS Wheatbelt Organisational Structure (May 14 2012)