The Great Southern region is located on the south coast of Western Australia adjoining the Southern Ocean. The total land area of the Great Southern region is 39,000 square kilometres, making up 1.5% of Western Australia’s total land area.

Albany is the major regional centre of the Great Southern region, with other population hubs including Denmark, Gnowangerup, Katanning, Kojonup, Mount Barker and Ravensthorpe.

According to the Accessibility/Remoteness Index of Australia (ARIA), the Great Southern region is mostly classified as outer regional (44%). Thirty-nine per cent of the region is classified as Remote, with the area of Ravensthorpe Shire being considered Very Remote (17%).

Great Southern health services

The Great Southern region incorporates a network of public hospital facilities supported by a range of community-based services including public health, aged care and mental health services; as well as a number of public and private health partners and providers.

The Great Southern health region is organised around the Albany Health Campus as the major ‘hub’ for public health services. A range of regional services are coordinated from Albany to support the Integrated District Health Service in Katanning and smaller hospitals, multi-purpose services and nursing posts throughout the region. In total, there are seven hospital facilities located across the Great Southern region.

As part of WA Country Health Service, the Great Southern Aboriginal Health Service works in partnership with Aboriginal communities and health service providers in the Great Southern region to provide culturally appropriate healthcare to meet the needs of the region’s Aboriginal and Torres Strait Islander peoples.

Population

In 2016, the estimated regional population of the Great Southern was 62,104, representing 12% of the population of rural Western Australia and 2.4% of the State’s population. There are approximately 1.6 people per square kilometre which is greater than the State and rural average (1.0 and 0.24 people per square kilometre respectively).

The Great Southern has an older age structure than the rest of the State, with a relatively low proportion of residents in the 0-4 year age group and a greater proportion aged 50 and above. Figure 1 illustrates the Great Southern age structure against the rest of the State.

Based on 2015 data, 4.5% of the Great Southern’s population were Aboriginal. This is similar to the State’s proportion (3.6%).

With thanks to WA Country Health Service for permission to use data from various sources including the Great Southern Regional Health Profile 2015 which can be accessed at www.wacountry.health.wa.gov.au/index.php?id=445 listed under Regional Health Profiles
Measure of disadvantage

Socio-Economic Indexes for Areas (SEIFA) measures a broad range of determinants of disadvantage. A score of 1,000 is considered a baseline and scores over or below are considered to represent advantage or disadvantage respectively. Research has shown that a lower SEIFA score is correlated with increased factors contributing to poor health.

In 2016, the Great Southern Local Government Area (LGA) with the lowest SEIFA score was Katanning (907) and the greatest was Kent (1,046). There is some variability within LGAs in the Great Southern, for example, there are two areas within Albany with a score of 789 and 1,103 respectively. The Katanning LGA has a score in the lowest 20% of scores in the State.

Hospitalisations

The overall hospitalisation rate in the Great Southern was significantly lower than that of the State for both males and females (standardised rate ratio of 0.9). Aboriginal people in the Great Southern were half as likely to attend hospital compared to the State rate for Aboriginal people. Within the Great Southern, Aboriginal people were twice as likely to attend hospital compared to non-Aboriginal people in the Great Southern.

The main causes of hospitalisation in the Great Southern during the period 2011-2015 were digestive diseases (14%), pregnancy and childbirth (9%) and musculoskeletal diseases (8%).

Potentially preventable hospitalisations

From 2011-2015, rates of potentially preventable hospitalisations (PPH) in the Great Southern were 10% greater than the rest of the State. This rate is explained by a greater incidence of PPH relating to chronic conditions. Table 1 represents the leading causes of PPH during this time period. Rates of PPH for Aboriginal people were 4.1 times greater than for non-Aboriginal people over the same time period.

Table 1 – 2011-2015 top five leading causes of PPH in ages 15-64 years

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number</th>
<th>% of total PPH</th>
<th>Rate vs State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental conditions</td>
<td>448</td>
<td>14</td>
<td>0.9</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>416</td>
<td>13</td>
<td>1.3</td>
</tr>
<tr>
<td>Iron deficiency anaemia</td>
<td>311</td>
<td>10</td>
<td>1.3</td>
</tr>
<tr>
<td>UTIs incl. pyelonephritis</td>
<td>275</td>
<td>8</td>
<td>0.8</td>
</tr>
<tr>
<td>Convulsions and epilepsy</td>
<td>267</td>
<td>8</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks
Mortality

Mortality is an important population health indicator. Knowing the reasons for and causes of death can assist in the planning of health services to prevent and avoid mortality where possible.

There is a demonstrable gap in life expectancy between rural Western Australia and metropolitan Perth. This gap increases the more remotely a person lives.

There is also a discrepancy between the life expectancy of Aboriginal and non-Aboriginal people in Australia. This gap is estimated by the Australian Bureau of Statistics to be 8.6 years for males (71.6 years life expectancy) and 7.8 years for females (75.6 years life expectancy)\(^1\).

In the Great Southern, during the period 2011-2015, the mortality rate was similar to the rest of the State (rate ratio of 1.04). The top five leading causes of death are described in Table 2.

**Table 2 – 2011-2015 Great Southern leading causes of mortality**

<table>
<thead>
<tr>
<th>Condition</th>
<th>% of all deaths</th>
<th>Rate ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischaemic heart disease</td>
<td>13</td>
<td>1.04</td>
</tr>
<tr>
<td>Dementia (incl Alzheimers disease)</td>
<td>6</td>
<td>0.84</td>
</tr>
<tr>
<td>Cerebrovascular diseases</td>
<td>6</td>
<td>0.95</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>5</td>
<td>0.85</td>
</tr>
<tr>
<td>COPD</td>
<td>5</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks

During the period 2011-2015, almost half of all deaths in the Great Southern were considered to be avoidable (49%), occurring at a rate similar to the rest of the State. Table 3 shows the causes and rate ratios of the top five causes of avoidable mortality in the Great Southern.

**Table 3 – 2011-2015 Great Southern leading causes of avoidable mortality**

<table>
<thead>
<tr>
<th>Condition</th>
<th>% of all deaths</th>
<th>Rate ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischaemic heart disease</td>
<td>20</td>
<td>1.02</td>
</tr>
<tr>
<td>Suicide and self-inflicted injuries</td>
<td>10</td>
<td>1.10</td>
</tr>
<tr>
<td>COPD</td>
<td>8</td>
<td>1.30</td>
</tr>
<tr>
<td>Transport accidents</td>
<td>8</td>
<td>1.7</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>7</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks

Child and adolescent health

**Low birth weight**

Low birth weight is defined by the World Health Organisation as less than 2,500 grams. From the period 2007-2008 to 2015-2016, the proportion of low birth weight full-term babies born to mothers in the Great Southern was 2%. The proportion was greater amongst Aboriginal babies (8.5%), which was greater than the State rate (5.1%).

**Australian Early Development Census**

The Australian Early Development Census (AEDC) is a measure of how children are developing across five domains upon commencing full-time school. These domains are physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge. For more information on the AEDC, visit https://www.aedc.gov.au/about-the-aedc.

Within the Great Southern, proportions of developmentally vulnerable children in one or more domains ranged from 5% in Jerramungup to 37% in Katanning. The proportion of developmentally vulnerable children in two or more domains ranged from 0% in Cranbrook to 20% in Katanning. Table 4 shows the AEDC scores of LGAs in the Great Southern.

**Table 4 – 2015 Great Southern AEDC scores**

<table>
<thead>
<tr>
<th>Community</th>
<th>Vulnerable children</th>
<th>Total surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One or more domains</td>
<td>Two or more domains</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Albany</td>
<td>98</td>
<td>21.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>14</td>
<td>25.9</td>
</tr>
<tr>
<td>Jerramungup</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Katanning</td>
<td>28</td>
<td>36.8</td>
</tr>
<tr>
<td>Kojonup</td>
<td>3</td>
<td>9.1</td>
</tr>
<tr>
<td>Plantagenet</td>
<td>12</td>
<td>21.4</td>
</tr>
<tr>
<td>Ravensthorpe</td>
<td>10</td>
<td>18.9</td>
</tr>
<tr>
<td>Australia</td>
<td>22</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks

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1. ABS, Life Tales for Aboriginal and Torres Strait Islander Australians, 2015-2017
**Immunisation**

The Australian target for immunisation is a rate of greater than 90% of children with a complete vaccination schedule at two years of age, with the recommendation that 100% of children are vaccinated at the age of school entry.

In the Great Southern in 2017, the proportion of all children vaccinated was below the 90% target in the 24 to < 27 month age group, as well as the 60 to < 63 month age group. Table 5 outlines the immunisation rates by age group and Aboriginality.

**Table 5 – 2017 Great Southern immunisation rates by age and Aboriginality**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
<th>All persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 to &lt; 15 months</td>
<td>100%</td>
<td>93%</td>
<td>94%</td>
</tr>
<tr>
<td>24 to &lt; 27 months</td>
<td>81%</td>
<td>90%</td>
<td>89%</td>
</tr>
<tr>
<td>60 to &lt; 63 months</td>
<td>100%</td>
<td>87%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks

**Chronic diseases in Aboriginal people**

In 2018-2019, 46% of Aboriginal people reported having at least one chronic disease that posed a significant health problem. This represents an increase of 6% since 2012-2013.

National evidence reports a greater burden and prevalence of chronic disease among Aboriginal people when compared to non-Aboriginal people. The demographic factors of remoteness (isolation) and socio-economic disadvantage of the Aboriginal population contribute to this burden of disease.

When compared to non-Aboriginal people, Aboriginal people in Western Australia are:

- 9.4 times more likely to have chronic kidney and/or urinary disease;
- 8.7 times more likely to have diseases of the endocrine system including diabetes;
- 4.1 times to have gastrointestinal disease; and
- 4 times more likely to have a long-term injury.

**Adult health**

**Chronic disease**

Chronic diseases are long lasting conditions with persistent effects. The self-reported, doctor-diagnosed prevalence of chronic disease in regional Western Australia is collected via the Western Australian Health and Wellbeing Surveillance (HWSS) survey. In 2013-2016, the HWSS found that of the Great Southern residents:

- 27% if adults reported being diagnosed with arthritis, at a rate greater than the State (20%);
- 23% of adults reported requiring medical treatment for an injury in the previous year;
- 15% reported a current mental health problem;
- 9% had asthma; and
- 7% of adults reported having osteoporosis.

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3 ABS 2019. National Aboriginal and Torres Strait Islander Health Survey, 2018-2019
Eye health

Eye health conditions are common in Australia and contribute to disadvantage due to childhood learning delays, lower participation in education and employment, and social isolation.

Based on national data, 13 million Australians (or 55%) have one or more long-term eye conditions.

Aboriginal people experience greater rates of visual impairment and blindness than non-Aboriginal people. Nationally, an estimated 18,300 Aboriginal people aged 40 and over experience vision impairment and blindness.

Trachoma

Trachoma is an eye infection that is caused largely by environmental factors such as sub-standard living conditions and overcrowded housing. Trachoma has been largely eliminated from the developed world; however, it is still prevalent in some remote Aboriginal communities in Australia.

Recent improvements in trachoma control in Aboriginal communities across Western Australia show that the number of at-risk communities has halved from 2010 to 2017; however, there are still some remote communities that only experienced a marginal decrease in trachoma incidence.

Maternal health

Overview of rural maternity services

Community based pregnancy and maternity care services are provided by WA Country Health Service (WACHS), regional hospitals, private general practitioners, Aboriginal Community Controlled Health Services and a range of community based and non-government organisations.

Birth rates

In 2015, the age-specific birth rate in the Great Southern was similar to that of the State at 67 and 64 per 1,000 women respectively. The age-specific birth rate was 1.2 times greater (84 per 1,000 women) for Aboriginal residents of the Great Southern than for non-Aboriginal residents (68 per 1,000 women).

Teenage mothers

The Great Southern experiences a high number of births to teenage mothers. In 2015 - 2016, the proportion of births to women aged less than 20 years was significantly greater (2.1 times) than the State. Over the same time period, the rate of births to teenage mothers that were Aboriginal was 26%, and 4% for non-Aboriginal mothers in the Great Southern.

Smoking in pregnancy

The risks associated with smoking in pregnancy include low birth weight, premature birth, placental complications and stillbirths.

Figure 2 shows the proportion of women who smoked during pregnancy from 2011-2012 to 2015-2016. Reported smoking during pregnancy amongst Aboriginal women fluctuated over the measurement period, peaking at 52% in 2012-2013. The five-year average proportion of births to Aboriginal mothers who smoked was 42% over this time period. There was a slight upward trend in smoking amongst non-Aboriginal mothers, with the five-year average being 13%.

OUTREACH SERVICE CONSIDERATIONS

- Data on smoking and alcohol use during pregnancy amongst Aboriginal women highlight the need for culturally appropriate antenatal and health promotion services in the Great Southern.
- Consider tailoring and distributing health promotion resources targeting smoking during pregnancy whilst providing outreach health services.
Alcohol in pregnancy
The effects of alcohol consumption during pregnancy are well documented. The prevalence of Fetal Alcohol Spectrum Disorder (FASD) in Western Australia has been estimated at 0.26 per 1,000 births with a disproportionate amount being observed in Aboriginal children (89%). It has been estimated that the prevalence rate has doubled over the past 30 years.

In some remote Aboriginal communities where high rates of prenatal alcohol have been recorded, FASD and partial FASD rates of 120.4 per 1,000 children have been observed.

Figure 3 shows an indication of alcohol use in pregnancy in the Great Southern. Eighty-five per cent of mothers in the Great Southern reported not consuming alcohol while pregnant, while 66% (n=25) of Aboriginal mothers reported not consuming alcohol while pregnant. Of the 13 respondents who reported consuming alcohol while pregnant, eight reported consuming more than one standard drink per week.

Gestational Diabetes Mellitus
In the period 2011-2012 to 2015-2016, it was reported that 6% of Aboriginal women in the Great Southern who gave birth had a diagnosis of GDM.

This is compared to 4% in non-Aboriginal women. Percentages of Aboriginal and non-Aboriginal women with GDM across country Western Australia was 7.1% and 5.9% respectively for the same time period.

Mental health
Suicide was the leading cause of death in Great Southern residents aged 15-25 in 2011-2015. Rates of youth suicides were significantly greater in the Great Southern when compared to the State and metropolitan Perth, particularly amongst young men (1.8 times greater than the State rate, see Table 6). The youth suicide rate was 1.1 times greater than the State rate for young women in the Great Southern.

Between 2013 and 2016, one-in-seven (15%) of Great Southern adults aged 16 and over reported having a current diagnosis of a mental health problem. Females experienced a similar prevalence when compared to males (17% and 14% respectively). These rates are similar to the State rate, which is 17% for females and 10% for males respectively. Only 8% of those surveyed in the Great Southern reported using a mental healthcare service in the past 12 months.

Great Southern residents aged between 15-64 accessed mental health services at a significantly lower rate when compared to the State. Intentional self-harm was the second greatest cause of mortality after ischaemic heart disease in the Great Southern at a rate 1.1 times greater than the State.

Table 6 – 2006-2015 youth suicides per 100,000 persons by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Great Southern</th>
<th>Metropolitan</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males (15-24 years)</td>
<td>34.8</td>
<td>15.1</td>
<td>19.6</td>
</tr>
<tr>
<td>Females (15-24 years)</td>
<td>9.8</td>
<td>6.4</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Source: DOH, Health Tracks

OUTREACH SERVICE CONSIDERATIONS

- Increase access to mental health services targeting youth and the Aboriginal population in the Great Southern.
- Collaborate with other service providers delivering social and emotional wellbeing programs in the Great Southern.