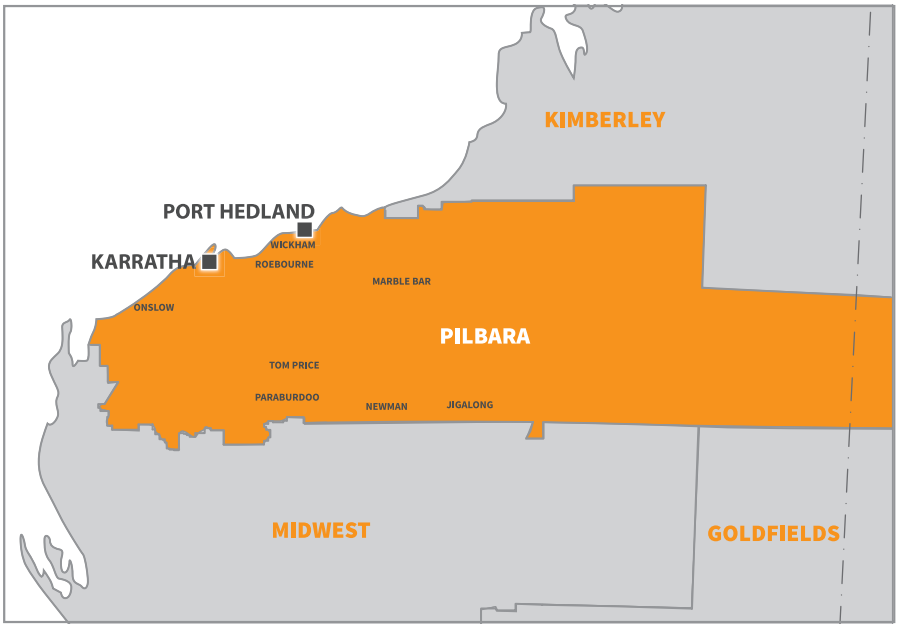
Outreach

PILBARA – POPULATION AND HEALTH SNAPSHOT

The Pilbara is Western Australia's second most northerly region. Encompassing 506,000 square kilometres, the Pilbara borders the Northern Territory to the east, and the Indian Ocean to the west. There are two health districts – East and West Pilbara. The main population centres in the Pilbara are Port Hedland, Karratha and Newman. The Pilbara provides Western Australia with its two largest export revenue earners – iron ore and liquefied gas.

According to the Accessibility/ Remoteness Index of Australia (ARIA), almost the entire region (99%) is classified as Very Remote with the remaining 1% classified as Remote.



Pilbara health services

The Pilbara 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 three main hospital facilities in the Pilbara region are Karratha, Newman and South Hedland. These support smaller regional hospitals – Onslow, Paraburdoo, Roebourne and Tom Price.

The region is also home to three Aboriginal Community Controlled Health Services (ACCHSs) based in Newman, Port Hedland and Roebourne. These ACCHSs provide culturally appropriate services and outreach to the smaller communities in the Pilbara.

Population

The 2016 estimated residential population of the Pilbara is 61,435, which represents 11.5% of the regional population and 2.4% of the population of Western Australia. There are approximately 0.13 people per square kilometre in the Pilbara, which is lower than the State population density of 1 person per square kilometre.

Compared to other regions in Western Australia, the Pilbara has a relatively young age structure. This is mostly due to an influx of males aged between 20 and 44 years working in the local construction and mining industries. In addition to the resident population, the Pilbara hosts a high number of 'fly-in fly-out' workers.

Aboriginal and Torres Strait Islander peoples represent 16% of the Pilbara population, which is greater than the State proportion of 3.6%. The Aboriginal population of the Pilbara has a younger age structure than the non-Aboriginal population.

Government of **Western Australia**
WA Country Health Service

With thanks to WA Country Health Service for permission to use data from various sources including the Pilbara 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.

The Pilbara Local Government Area (LGA) with the lowest score was 945 for the East Pilbara and the greatest was Karratha with 1,035. There is some variability in socio-economic disadvantage within some LGAs. For example, there is a small area within the Port Hedland LGA with a score of 1,153. Conversely, there is a small area within the East Pilbara LGA with a score of 585.

OUTREACH SERVICE CONSIDERATIONS

- **The large proportion of Aboriginal people in the Pilbara highlights the need for culturally safe health service provision.**
- **Areas of significant socio-economic disadvantage highlight the need for bulk-billed visiting health services in the Pilbara.**

Hospitalisations

The overall hospitalisation rate in the Pilbara was similar to the State rates of hospitalisation. The female hospitalisation rate was significantly greater than the State rate, while the rate for males was significantly less (1.4 times and 0.7 times respectively).

The main causes of hospitalisation in the Pilbara were injury and poisoning, pregnancy and childbirth, digestive diseases and respiratory diseases.

Potentially preventable hospitalisations

In the Pilbara, the rates of potentially preventable hospitalisations (PPH) was significantly greater across all categories (vaccine preventable, acute and chronic conditions) and accounted for 6% of all hospitalisations in the 15-64 age group. Table 1 represents a list of leading causes of PPH in the period 2011-2015.

Rates of PPH were significantly greater in the Aboriginal population in the Pilbara from 2011-2015 when compared to the non-Aboriginal population. However, the rate of hospitalisation of Aboriginal people was similar to the State rate.

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

Condition	Number	% of total PPH	Rate vs State
Cellulitis	947	19	2.2
UTIs incl. pyelonephritis	508	10	1.2
Diabetes complications	416	8	1.3
Dental conditions	340	7	0.5
Convulsions and epilepsy	333	7	1.2

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].

During the period 2011-2015, the leading cause of death in the Pilbara was ischaemic heart disease, which was experienced at a rate significantly greater than the State rate (1.3 times). Deaths of unknown causes occurred at a rate 2.5 times greater in the Pilbara than the rest of the State.

Table 2 – 2011-2015 Pilbara leading causes of mortality

Condition	% of all deaths	Rate ratio
Ischaemic heart disease	13	1.3
Intentional self-harm	7	0.8
Lung cancer	5	0.9
Transport accidents	5	1.2
Unknown causes	4	2.5

Source: DOH, Health Tracks

During the period 2011-2015, 57% of deaths under the age of 75 in the Pilbara were classed as avoidable. Mortality due to ischaemic heart disease, diabetes, COPD, invasive infections and renal failure occurred at rates significantly greater than the rest of the State.

[1] ABS, Life Tales for Aboriginal and Torres Strait Islander Australians, 2015-2017

Table 3 shows the causes and rate ratios of the top five causes of avoidable mortality in the Pilbara.

Table 3 – 2011-2015 Pilbara leading causes of avoidable mortality

Condition	% of all deaths	Rate ratio
Ischaemic heart disease	24	1.7
Suicide and self-inflicted injuries	14	0.8
Transport accidents	9	1.2
Diabetes	7	2.3
Accidental poisoning	7	0.9

Source: DOH, Health Tracks

OUTREACH SERVICE CONSIDERATIONS

- Screening and prevention activities can help to reduce the rate of avoidable mortality.
- Interventions should target modifiable risk factors for leading causes of avoidable mortality.

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 Pilbara mothers was 1.7%. This is lower than the State proportion of 2%.

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.

Only four local communities within the Pilbara had sufficient data for publishing. These communities, along with their AEDC scores are listed in Table 4. The communities of East Pilbara, Port Hedland and Roebourne had a greater proportion of children vulnerable in at least one domain than the Australian proportion. The total number of responding children that were vulnerable in at least one domain was 225, with 127 described as vulnerable in two or more domains.

Table 4 – 2015 Pilbara AEDC scores

Community	Vulnerable children				Total surveyed
	One or more domains		Two or more domains		
	#	%	#	%	
Ashburton	23	18.1	6	4.7	127
East Pilbara	26	22.8	16	14.0	114
Port Hedland	79	29.8	44	16.6	265
Roebourne	97	28.0	61	17.6	347
Australia		22.0		11.1	

Source: DOH, Health Tracks

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 Pilbara in 2017, the proportion of children vaccinated exceeded the target of 90% in most groups. However, in children under 27 months who were Aboriginal, vaccination coverage was below 90%.

Table 5 illustrates the immunisation status of children in the Pilbara.

Table 5 – Pilbara immunisation rates by age and Aboriginality

Age group	Aboriginal	Non-Aboriginal	All persons
12 to < 15 months	85%	96%	93%
24 to < 27 months	82%	94%	92%
60 to < 63 months	95%	91%	92%

Source: DOH, Health Tracks

OUTREACH SERVICE CONSIDERATIONS

- There is a high need for child development services in areas within the Pilbara, including access to multidisciplinary teams made up of medical services, child health nurses, speech pathologists, physiotherapists and occupational therapists.

Adult health

Chronic disease

Chronic diseases are long lasting conditions with persistent effects [2]. 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 Pilbara residents:

- chronic diseases such as cancer, stroke and osteoporosis were reported less in Pilbara adults compared with the State;
- 26% of adults reported requiring medical treatment for an injury in the previous year;
- 16% of adults reported a current mental health condition;
- 12% of adults reported having arthritis;
- 7% of adults reported having asthma; and
- 7% of adults reported having diabetes.

Chronic diseases in Aboriginal people

In 2018-2019, 46% of Aboriginal people report having at least one chronic disease that posed a significant health problem. This represents an increase of 6% since 2012-2013[3].

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.

OUTREACH SERVICE CONSIDERATIONS

- **Culturally appropriate services delivered through ACCHSs are crucial in addressing the disparity in health between Aboriginal and non-Aboriginal people.**
- **Telehealth is a viable way of increasing the frequency of services while keeping costs low.**

[2] AIHW 2020. https://www.aihw.gov.au/reports-data/health-conditions-disability-deaths/chronic-disease/overview
[3] ABS 2019. National Aboriginal and Torres Strait Islander Health Survey, 2018-2019
[4] AIHW 2019. Web report – eye health

Ear health

Hearing problems and ear diseases such as otitis media occur at greater rates in Aboriginal children than non-Aboriginal children (7% and 3.6% respectively). Chronic otitis media is a key concern in the Pilbara because of the consequences of the condition in relation to language, social development and education.

The following trends have been observed in the Pilbara in regarding ear health:

- In 2011-2015, ear, nose and throat infections were the greatest cause of PPH in children aged 0-14 accounting for 26% of all PPH for that age group and occurring at a rate 1.4 times greater than the State.
- Between 2006-2015, the rate of disease of the ear and mastoid process hospitalisations were 1.4 times greater for Aboriginal children than for non-Aboriginal children.

Interagency collaboration is a priority of the Pilbara region with regard to hearing health services. The Pilbara Hearing Interagency Group (PHIG) aims to ensure best practice outcomes in ear and hearing health, deafness educational support and hearing loss rehabilitation services for all persons in the Pilbara. The functions of the PHIG are to:

- enhance collaboration between local and visiting hearing health service providers;
- determine strategic priorities aligned with the Pilbara Aboriginal Health Plan;
- deliver the Pilbara Ear Health Model of Care Work Plan; and
- assist the Pilbara Aboriginal Health Planning Forum to make decisions regarding the planning and delivery of hearing health services in the Pilbara.

OUTREACH SERVICE CONSIDERATIONS

- **Connect with the PHIG prior to planning ear health services to the Pilbara.**
- **Familiarise yourself with the WA Child Ear Health Strategy and ensure that your proposed service aligns with the objectives.**

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[4].

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[5].

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, ACCHSs and a range of community-based and non-government organisations.

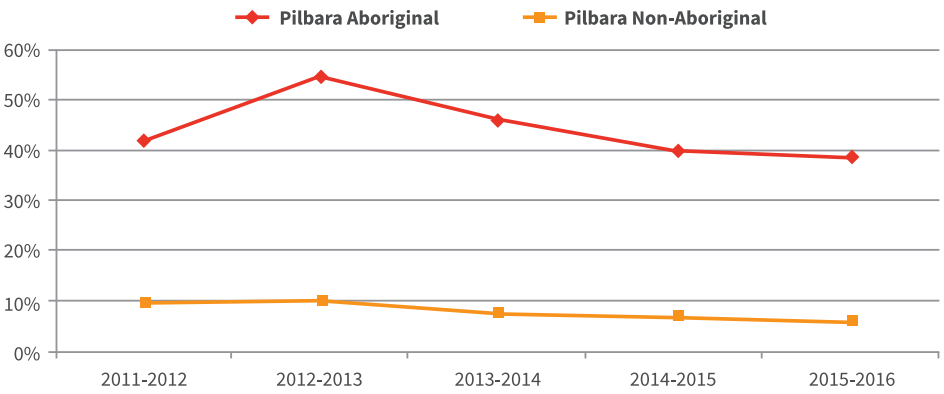
Birth rates

In 2015, the age-specific birth rate of the Pilbara was similar to the State average at 67.8 and 64 per 1,000 women respectively. The birth rate for Aboriginal women in the Pilbara was significantly greater (1.2 times) than the non-Aboriginal rate during the period 2011-2015.

Smoking in pregnancy

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

Figure 1 Proportion of women who smoked during pregnancy 2011-2012 to 2015-2016



Source: DOH, Health Tracks

Figure 1 shows the proportion of women who smoked during pregnancy from 2011-2012 to 2015-2016. Reported smoking during pregnancy amongst both Aboriginal and non-Aboriginal women has experienced a downward trend since 2012-2013. The five-year average proportion of births to Aboriginal mothers who smoked during pregnancy was 44%, compared to 6% for non-Aboriginal mothers.

Alcohol in pregnancy

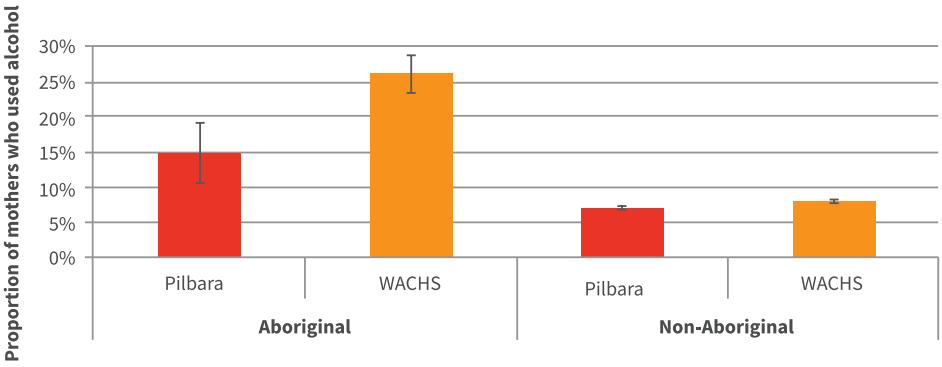
The effects of alcohol consumption during pregnancy are well documented. The prevalence of Fetal Alcohol Spectrum Disorder (FASD) in Western Australia has been estimated at 0.26 per 1,000 births with a disproportionate amount being observed in Aboriginal children (89%).

It has been estimated that the prevalence rate has doubled over the last 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 2 shows an indication of alcohol use in pregnancy in the Pilbara. Ninety-one per cent of responding mothers in the Pilbara reported not consuming alcohol while pregnant. Of the respondents, 78% (n=181) of Aboriginal women reported not consuming alcohol during pregnancy. Of the 51 respondents who reported drinking during pregnancy, 33 reported consuming more than one standard drink per week.

Figure 2 2014-2015 proportion of mothers* who used alcohol during pregnancy



Source: DOH, Health Tracks

* Proportion of mothers who responded to the question. Response rate in the Pilbara was 75%.

I Indicates 95% confidence interval.

[5] 2019 Australian HealthInfoNet. Overview of Aboriginal and Torres Strait Islander health status in Western Australia

Teenage mothers

The average maternal age for Pilbara residents was 24.9 years for Aboriginal women and 29.7 years for non-Aboriginal women. The proportion of births to teenage mothers was similar to the State proportion (3.0% and 2.8% respectively). The proportion of births to teenage women who were Aboriginal was 13% from the period 2006-2015.

Gestational Diabetes Mellitus

Between 2011-2012 and 2015-2016, it was reported that 8.5% of Pilbara Aboriginal women who gave birth had a diagnosis of GDM.

This is compared to 6.8% in non-Aboriginal women. Percentages of Aboriginal and non-Aboriginal women with GDM across the WACHS catchment was 7.1% and 5.9% respectively.

OUTREACH SERVICE CONSIDERATIONS

- **High rates of smoking and alcohol use during pregnancy amongst Aboriginal women highlight the need for culturally appropriate antenatal and health promotion services in the Pilbara.**
- **Consider tailoring and distributing health promotion resources targeting smoking during pregnancy whilst providing outreach health services.**

Mental health

Rates of youth suicides were significantly greater in the Pilbara when compared to the State and metropolitan Perth (Table 6). The youth suicide rate was 1.9 times greater than the State rate, being 1.2 times greater for males and 2 times greater for females.

Between 2013 and 2016, one in six (16%) of Pilbara adults aged 16 and over reported having a current diagnosis of a mental health problem. Only 8% reported using a mental health care service in the last year.

From 2011 to 2015, Pilbara residents aged 15-64 accessed mental health services at a rate significantly lower than the State, accounting for over 78,400 occasions of service. The leading occasions of service for a mental health condition were schizophrenia, schizotypal and delusional disorders (37%), followed by affective mood disorders (10%).

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

Gender	Pilbara	Metropolitan	State
Males (15-24 years)	22.9	15.1	19.6
Females (15-24 years)	15.1	6.4	7.7

Source: DOH, Health Tracks

OUTREACH SERVICE CONSIDERATIONS

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