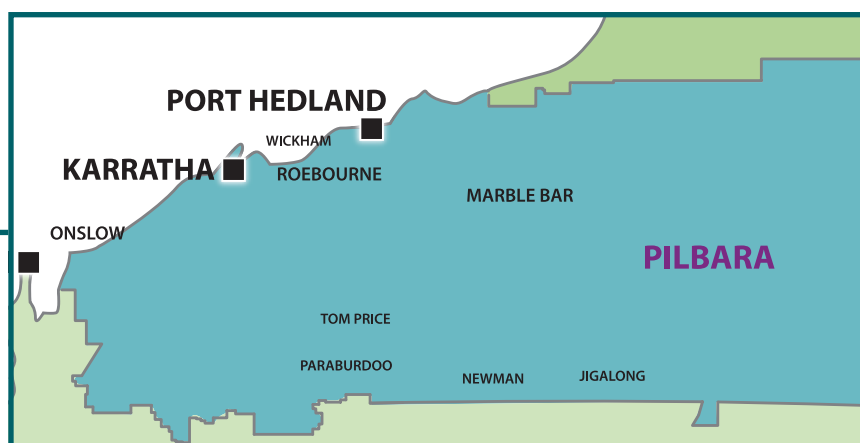


Pilbara – population and health snapshot

The Pilbara region covers 507,896 square kilometres (including offshore islands) and is Western Australia's second most northern region.

The region incorporates two health districts – West and East Pilbara, with the vast majority of the population residing in the west. The main population centres of the Pilbara are Port Hedland, Karratha and Newman.



Population

The estimated resident population in 2013 was 66,298, a growth of 22,209 people since 2006. This represents an increase of 6% per year. Most of the population resides in the mining towns of Karratha, Port Hedland and Newman.

The Pilbara has a younger age structure compared to other regions, with a large concentration of Pilbara residents in the 20-54 year old range. This is attributed to an influx of predominantly males aged between 20 and 44 years that work in the mining and construction industries as residents or fly-in/fly-out workers.

Aboriginal people accounted for 16% of the region's population (State average 3.8%) and has a younger age structure than the non-Aboriginal population.

Planning outreach teams

- ⇒ Consider differing age structure when planning Aboriginal programs and services.
- ⇒ Target low SEIFA score areas, in particular very remote Pilbara communities.



Measure of disadvantage

Socio-Economic Indexes for Areas (SEIFA) measures a broad range of socio-economic indices from a baseline of 1,000. Research shows that a lower SEIFA (<1000) correlates with a lower health status with increased risk factors to ill health.

Based on the 2011 census the lowest SEIFA score for a Pilbara Local Government Area was 962 in the East Pilbara, and the highest was Roebourne with 1,060. However, there is a Statistical Area Level 1 (SA1) within Roebourne with a score of 1,136 and another SA1 within East Pilbara with a score of 496, which is in the lowest 30% of scores in the State. The 2011 SEIFA scores for towns in the Pilbara are¹:

East Pilbara	962
Port Hedland	1,033
Ashburton	1,057
Roebourne	1,060

¹ ABS, 2033.0.55.001 – Socio-economic Indexes for Areas (SEIFA), Data Cube only, 2011.

Major health services

Hospital services	Community and public health services	Mental health and aged care services	Aboriginal Medical Services
<ul style="list-style-type: none"> Nickol Bay Hospital Roebourne Hospital Newman Hospital Hedland Health Campus Tom Price Hospital Onslow Hospital Paraburdoo Hospital 	<ul style="list-style-type: none"> Roebourne Community Health Wickham Health Centre West Pilbara Community Health Service Marble Bar Nursing Post Nullagine Community Health Service Port Hedland Community Health Service South Hedland Community Health Service Ashburton Community Health Centre Onslow Community Health Service 	<ul style="list-style-type: none"> Pilbara Mental Health and Drug Service – Karratha, Tom Price, Newman, South Hedland Karlarra House – Port Hedland Yaandina Frail Aged Care – Roebourne 	<ul style="list-style-type: none"> Mawarnkarra Health Service Puntukurnu Aboriginal Medical Service (PAMS) Wirraka Maya Health Services Aboriginal Corporation

Further health service information can be found at www.myhospitals.gov.au and www.ruralhealthaustralia.gov.au.

Maternal health

Overview of rural maternity services

Community based pregnancy and maternity care services are provided by WA Country Health Service, private general practitioners, Aboriginal Community Controlled Health Services and a range of community based and non-government organisations. Specialist obstetric services are mainly provided at the regional hospitals. In the Pilbara, planned birthing services are available at Hedland Health Campus, and Nickol Bay Hospital².

Aboriginal maternity issues

There is a large body of evidence to demonstrate that Aboriginal women experience poorer maternal health outcomes, higher rates of perinatal and infant mortality and deliver babies with lower average birth weights when compared to non-Aboriginal women.

Birth rates

In 2012, the overall Pilbara age-specific birth rate was 66 per 1000 women which was similar to the State rate. For 2008-2012, the age-specific birth rate for Aboriginal women in the Pilbara was 80 per 1,000 women

which was significantly higher (1.3 times) than the non-Aboriginal rate (63 per 1,000 women).

Teenage pregnancy

In 2012, 5% of Pilbara women who gave birth were aged less than 20 years. The proportion of births to Aboriginal teenage women in the Pilbara was 21%.

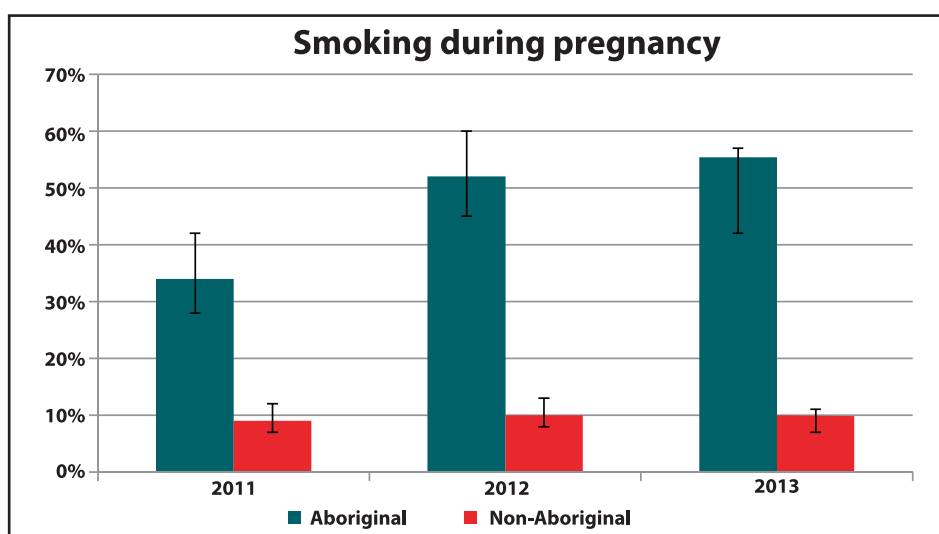
Smoking during pregnancy

Risks associated with smoking during pregnancy include low birth

weight, premature birth, placental complications and stillbirths.

Figure 1 shows the proportion of births to Pilbara women who reported smoking during pregnancy. In 2013, 56% of Aboriginal women, and 10% of non-Aboriginal women who gave birth reported smoking during pregnancy. The reported rate of Aboriginal women smoking during pregnancy increased significantly from 2011.

Figure 1: 2011-2013 proportion of women smoking during pregnancy, Pilbara residents.



Notes: The error bars represent the 95% confidence interval of the proportion: 2013 is preliminary data.
Source: Midwives Notification System

² www.healthywa.wa.gov.au/Articles/F_I/Having-a-baby-in-a-public-country-hospital-in-WA

Alcohol during pregnancy

Fetal Alcohol Spectrum Disorder (FASD), miscarriage and stillbirth are among the consequences of drinking during pregnancy. FASD is a common cause of medical, cognitive and behavioural problems for children including prematurity, brain damage, birth defects, growth restriction and developmental delay.

The FASD birth prevalence has been reported to be 0.26 per 1,000 births within all of the WA population. Of these, 89% were Aboriginal. The FASD birth prevalence was 4.08 per 1,000 within the WA Aboriginal population, significantly higher than non-Aboriginal children (0.03 per 1,000). Table 1 shows the proportion of Australian women drinking during pregnancy.

Gestational diabetes mellitus

Diabetes in pregnancy increases the risk of complications of pregnancy, labour and delivery for mothers and their babies. It is also an indicator of increased risk of developing

Table 1: 2012-2013 levels of drinking during pregnancy, Australian women aged 18-44 years.

	Low risk levels of drinking	High risk levels of drinking
Aboriginal	28.4%	11.6%
Non-Aboriginal	42%	9.5%

Sources: WA Register for Developmental Anomalies and the Midwives Notification System

Table 2: 2005-2007 women who gave birth in Australia and gestational diabetes mellitus status.

	Gestational diabetes mellitus		Births
	Percent	Number	Total
Aboriginal	5.1%	1,562	30,518
Non-Aboriginal	4.7%	37,539	802,175

Source: Australian Institute of Health and Welfare, 2010

type 2 diabetes later in life. The risk is increased for those with pre-existing diabetes prior to pregnancy. Aboriginal mothers and their babies generally experienced the adverse effects of gestational diabetes mellitus (GDM) at higher rates.

7% of Western Australian women who gave birth in 2012 were diagnosed with GDM. Table 2 provides an overview of gestational diabetes mellitus status in Australia during 2005-2007.

Planning outreach teams



- ⇒ Health promotion interventions on smoking and drinking during pregnancy targeting Aboriginal women of child bearing age.
- ⇒ Access to dietitians and nutritional professionals for expectant Aboriginal mothers.
- ⇒ Strengthen partnerships with primary care providers such as local GPs and Aboriginal Medical Services.

Child and adolescent health

Low birth weight

A baby's birth weight is a key indicator of health status. The World Health Organisation defines low birth weight as less than 2,500 grams. Babies born with a low birth weight are more likely to develop significant disabilities and have a greater risk of poor health and mortality outcomes. For 2008-2012, low birth weight rates in the Pilbara was 6%, which mirrored

the State rate. The low birth rate for Pilbara Aboriginal babies was 12%, which was less than the State rate for Aboriginal babies (14%).

Australian Early Development Census

The Australian Early Development Census (AEDC) is a measure of how children are developing upon commencing full-time school for the first time.

In 2012, Australian Bureau of Statistics data classed 22% of Australian children as developmentally vulnerable on one or more domains of the AEDC. In addition, 11% were developmentally vulnerable on two or more domains. Within Pilbara communities, the proportion of children rated as developmentally vulnerable on one or more domains ranged from 5.9% to 47%. The towns with the highest proportion of children classed as developmentally vulnerable are shown in Table 3.

To learn more about the AEDC, visit www.aedc.gov.au/about-the-aedc.

Planning outreach teams

- ⇒ Increase allied health professionals to assist early childhood development. Teams could include speech pathologists, occupational therapists, physiotherapists and child health nurses.



Table 3: 2012 AEDC, Pilbara children vulnerable on at least one domain.

Community	Children vulnerable: 1+ domains		Children vulnerable: 2+ domains	
	Number	% of total surveyed	Number	% of total surveyed
East Pilbara and remote communities	8	47	6	35
Roebourne	6	38	4	25
Nickol/Baynton/Millars Well	45	26	19	11
South Hedland	34	26	16	12

Ear health

Ear diseases, in particular otitis media, and associated hearing loss are highly prevalent among Aboriginal children. In 2012-2013, national prevalence of chronic otitis media causing hearing problems in Aboriginal children aged 0-14 years was double that of non-Aboriginal children (7% as compared to 3.6%)³.

Otitis media begins within weeks of birth and can persist into adolescence with reoccurring episodes. Preventing ear disease is a high priority as it can significantly reduce delays in child learning and development. Risk factors include poor environmental-

household conditions, passive smoking, premature birth and malnutrition⁴.

In the Pilbara, the following ear health trends were observed during 2008-2012 for children aged 0-14 years:

- Ear, nose, and throat (ENT) infections were one of the leading causes of potentially preventable hospitalisations (PPH) in children, accounting for 25% of the region's total PPH.
- The age group most affected by ENT infections were children between 0-4.

- Rate of PPH due to ENT infections was significantly higher for Aboriginal children than for non-Aboriginal children.

Planning outreach teams



- ⇒ Focus on ENT infections and respiratory disease in children especially Aboriginal children.
- ⇒ Increase programs aimed at prevention and management of risk factors.
- ⇒ Identify links with other primary health care services.

Adult health

Chronic disease prevalence

Chronic disease refer to long-term conditions that last for six months or more. Prevalence data within the Pilbara population collected by WA population based surveys between 2009 and 2012 found:

- One in four adults (24%) reported an injury requiring treatment from a medical professional in the previous year.
- One in seven adults (15%) reported a current mental health problem.
- One in ten adults (10%) reported arthritis. This proportion was significantly lower than the State.
- One in eleven (8.8%) adults reported asthma.

In 2008-2012, cancers of the breast, skin (melanoma) and prostate each accounted for 13% of all cancer cases in the Pilbara for residents aged

15-64 years. Other common cancers in the Pilbara included colorectal; lymphoma; lung; bronchus and trachea; and thyroid.

Chronic disease amongst Aboriginal people

Available national evidence reports a greater burden and prevalence of chronic disease among Aboriginal people. The demographic factors of remoteness (isolation) and socio-economic disadvantage of the Aboriginal population contribute to the significantly greater burden of disease compared to the non-Aboriginal population. Research collected from 2011-2013 indicates that compared to non-Aboriginal people, Aboriginal people were found to be^{5,6}:

- Half as likely to report excellent or very good health.

- 3.5 times more likely to report having diabetes.
- 1.2 times more likely to report having cardiovascular diseases.
- 2 times more likely to report having asthma.
- 2 times more likely to report kidney disease.

Diabetes: Majority have type 2 diabetes. Risk factors include being overweight/obese, leading a sedentary lifestyle and poor nutritional intake.

Cardiovascular disease: The leading types are ischaemic heart disease and stroke.

Respiratory disease: The two major types are asthma and chronic obstructive pulmonary disease.

Kidney disease: Often develops as a complication of other medical conditions including diabetes, high blood pressure, urinary tract infections and drug use.

Planning outreach teams

- ⇒ Health promotion interventions targeting the prevention and management of modifiable risk factors for chronic disease.
- ⇒ Consider how services can align with the strategic focus areas of the region.
- ⇒ Contact major health care providers and discuss how your team could collaboratively work together in service delivery and coordination.



Strategic focus areas that have been identified for Aboriginal health planning in the Pilbara are maternal and child health, environmental health, chronic disease, and mental health⁷.

³ ABS 2013. Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-2013.

⁴ Closing the Gap Clearinghouse (AIHW and AIFS) 2014. Ear disease in Aboriginal and Torres Strait Islander children. Resource sheet no.35.

⁵ AIHW 2015. Cardiovascular disease, diabetes and chronic kidney disease – Australian facts: Aboriginal and Torres Strait Islander people.

⁶ ABS 2013. Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-2013.

⁷ Pilbara Regional Aboriginal Health Planning Forum data.

Mental health

Health trends

For 2009-2012, one in seven (15%) Pilbara adults aged 16 years and over reported having a current diagnosed mental health problem, with the prevalence nearly twice as high among females than males.

Just 6% of Pilbara adults aged 16 years and over reported having used a mental health care service in the last year.

8% of adults reported psychological distress, while 5% reported a lack of control over their life in general. These figures are similar to the State.

Table 4: 2002-2011 youth suicide rates, Pilbara residents, 15-24 years.

Youth suicides (per 100,000 persons)*	Pilbara Health Region	Metro	State
Males (15-24 years)	20.6	15.6	19.9
Females (15-24 years)	3.2	5.4	6.0

* These rates have been age-standardised to the Australian 2001 population.
Source: DoH, Health Tracks

Youth Suicide: For 2007-2011, the youth suicide rate in the Pilbara region was similar to the State youth suicide rate for males and lower for females. Table 4 shows the Pilbara youth suicide rates by gender during 2002-2011 to preserve confidentiality.

Planning outreach teams



- ⇒ Increase access to mental health services targeting the Pilbara female, male youth and Aboriginal population.
- ⇒ Health promotion interventions for Aboriginal people need to be targeted and culturally appropriate.

Eye health

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

In 2011-12, 53.7% of Australians reported having a chronic eye condition. In 2013-2014, Aboriginal people had a lower rate of hospitalisations for cataract extraction as compared to non-Aboriginals (7.3 compared with 8.9 per 1,000 population).

Disease of the eye was the third leading cause of hospitalisation for Pilbara residents 65 years and over, from 2008-2012.

Hospitalisations

Regional hospitalisations

For 2008-2012, the overall hospitalisation rate of Pilbara residents was significantly higher than that of the State. However, the hospitalisation rate for males in the Pilbara was lower than that of the State rate. Table 5 shows the top five causes of hospitalisation by major category. For 2003-2012, the overall hospitalisation rate of Aboriginal residents of the Pilbara was significantly higher than the State rate for Aboriginal people, whilst the hospitalisation rate for non-Aboriginal residents of the Pilbara was lower than that of the State.

Table 5: 2008-2012 leading causes of hospitalisation by major category, Pilbara residents.

Rank	Cause of hospitalisation	Number	% of total (15-64 yrs)	State rank
1	Injury and poisoning	8,411	9	4
2	Pregnancy and childbirth	7,889	9	6
3	Digestive diseases	7,522	8	1
4	Respiratory diseases	5,288	6	9
5	Ill-defined conditions	4,946	6	3
All hospitalisations		88,877	100	

Note: leading causes exclude 'factors influencing health status and contact with health services' and 'attending health services for examination and investigation', reproduction, specific procedures, and other circumstances, and potential health hazards related to communicable diseases, socioeconomic and psychosocial circumstances, family and personal history. This also includes renal dialysis.
Source: DoH, Health Tracks

⁸ www.aihw.gov.au/eye-health/cataract-surgery/#t2

Hospitalisations

There was marked difference between the leading causes of hospitalisation between Aboriginal and non-Aboriginal residents in the Pilbara.

Dialysis accounted for nearly half the hospitalisations of Aboriginal people (47%), while only accounting for 24% for non-Aboriginal residents.

Both of these were above the State rate.

Potentially preventable hospitalisations

Potential preventable hospitalisations (PPH) are hospitalisations which could have been avoided with disease intervention plans and various methods of preventative care.

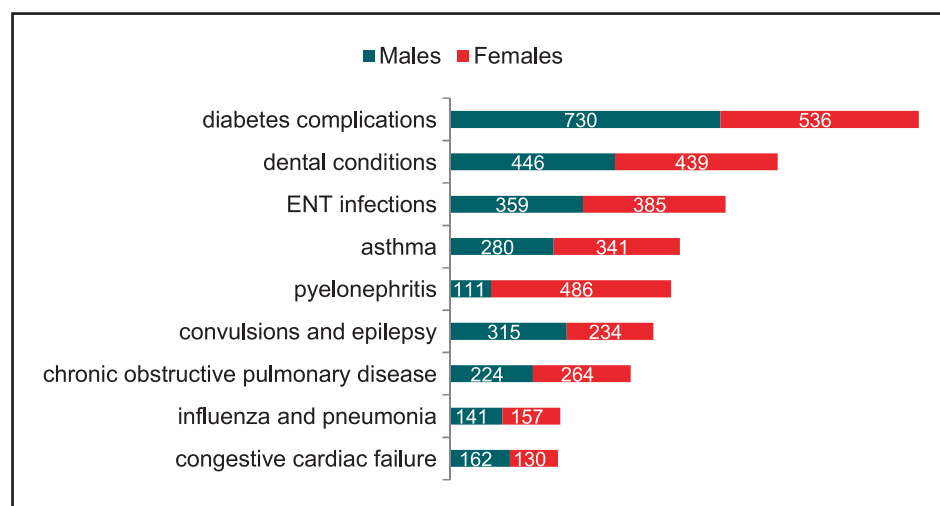
Three categories are identified: acute, chronic and vaccine preventable.

During 2008-2012, the following trends were observed for PPH in Pilbara residents:

- PPH accounted for 4,438 hospitalisations in the 15-64 age range (6% of all hospitalisations) which was significantly higher than the State rate.

- The leading PPH condition for both Aboriginal and non-Aboriginal residents was diabetes complications (24%) which was 2.1 times the State rate. Other conditions are shown in Figure 2.

Figure 2: 2008-2012 leading conditions for potentially preventable hospitalisations, Pilbara residents .



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 primary and community care services to prevent avoidable mortality. There is still a discrepancy between the life expectancy of Aboriginal people when compared to non-Aboriginal people.

The current estimated life expectancy for Aboriginal people is ten years lower than for non-Aboriginal people.

Leading causes of death

During the period 2008-2012, the leading causes of death in the Pilbara region were found to be⁹:

- ischaemic heart diseases, transport accidents, diabetes and impaired glucose regulation, unknown causes of morbidity and mortality, cerebrovascular diseases.

For Aboriginal residents, the leading causes of death were¹⁰:

- ischaemic heart diseases; diabetes and impaired glucose regulation; transport accidents; cerebrovascular diseases; and unknown causes of morbidity and mortality.

Avoidable mortality

During 2007-2011, 56% of Pilbara resident deaths under 75 years could have been avoided through the better use of primary prevention and treatment interventions.

The rates of treatable and preventable avoidable deaths for Aboriginal people in the Pilbara was 5 and 7 times higher respectively than that of non-Aboriginal residents.

The leading cause of avoidable deaths for Pilbara residents was ischemic heart disease (14%) followed by diabetes (10%).

Planning outreach teams



- ⇒ Interventions should consider modifiable risk factors for leading causes of avoidable mortality.
- ⇒ Explore partnerships with existing primary and therapeutic services.

^{9,10} All mortality and avoidable mortality statistics were sourced from the Department of Health, Health Tracks – Epidemiology Branch (PHI) in collaboration with the Cooperative Research Centre for Spatial Information (CRC-SI).