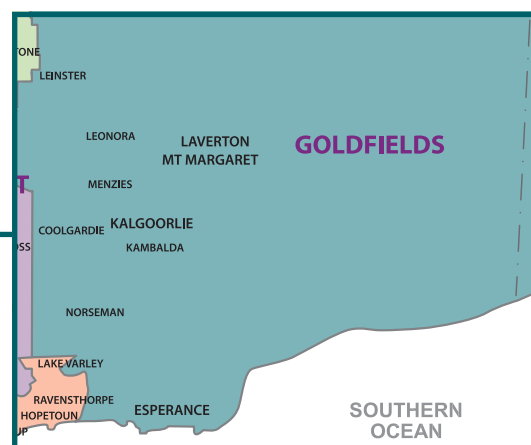


Goldfields – population and health snapshot

The Goldfields region is located in the south east corner of Western Australia and incorporates eight local government areas. It is the largest health region in Western Australia covering one third of the State. Major towns are Kalgoorlie-Boulder and Esperance; smaller towns include Laverton, Leonora, Menzies, Coolgardie, Kambalda and Norseman.

The Ngaanyatjarra Lands are home to twelve remote Aboriginal communities. The Ngaanyatjarra Lands make up the northern part of the Goldfields and extends into South Australia and the Northern Territory. Travel to the Ngaanyatjarra Lands is via gravel roads, including sections of the Gunbarrel Highway and the Canning Stock Route, which are impassable after rain. There is no train or regular bus service and charter flights are limited.



Population

The estimated resident population in 2013 was 59,638, with estimated growth of 0.5% per year between 2016 and 2026.

The age structure differs from the State with a large proportion of children aged 0-14 and young adults aged 20-59, and a lower proportion of people aged 55 and over.

Aboriginal and Torres Strait Islander people represented 12% of the region's population in 2012. The Aboriginal population has a younger age structure than the non-Aboriginal population, with 44% being under the age of 20.

Planning outreach teams

⇒ The number of Goldfields residents aged 65 years and over is projected to rise by 51% from 2016 to 2026.

⇒ Consider how your service can adapt to this changing age structure.



Measure of disadvantage

Socio-Economic Indexes for Areas (SEIFA) measures a broad range of socio-economic indices. The baseline for SEIFA is 1,000. A score above 1,000 indicates an area of socio-economic advantage and a score below 1,000 indicates an area of disadvantage. Research shows that a lower SEIFA correlates with a lower health status with increased risk factors to ill health.

The 2011 SEIFA scores for the major towns in the Goldfields region are¹:

Ngaanyatjarra Lands	672
Menzies	675
Laverton	795
Esperance	980
City Kalgoorlie-Boulder	1,010

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"> • Coolgardie Health Centre • Esperance Hospital (upgrades 2015-2017) • Kalgoorlie Health Campus • Norseman Hospital • Laverton Hospital • Leonora Hospital 	<ul style="list-style-type: none"> • Coonana Health Centre • Esperance Community Health • Kalgoorlie-Boulder Population Health Unit • Kambalda Health Centre • Ninga Mia Health Centre • Norseman Community Health 	<ul style="list-style-type: none"> • Esperance Mental Health Service • Kalgoorlie-Boulder Community Mental Health • Esperance Aged Care Assessment Team • Kalgoorlie Aged Care Assessment Team 	<ul style="list-style-type: none"> • Bega Garnbirringu Health Service • Ngaanyatjarra Health Service • Paupiyala Tjarutja Aboriginal Corporation - Spinifex Health Service • Ngangganawili Aboriginal Health Service

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, regional hospitals, private general practitioners, Aboriginal Community Controlled Health Services and a range of community based and non-government organisations².

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

The following trends were seen within the Goldfields region between 2009-2010 and 2013-2014:

- There was a 5% overall increase in births, with an average annual increase of 1.2% in total number of births.

- The average annual increase was 3.6% in Aboriginal women and 0.8% in non-Aboriginal women.
- In 2012, the age-specific birth rate was 77 per 1,000 women.

Teenage pregnancy

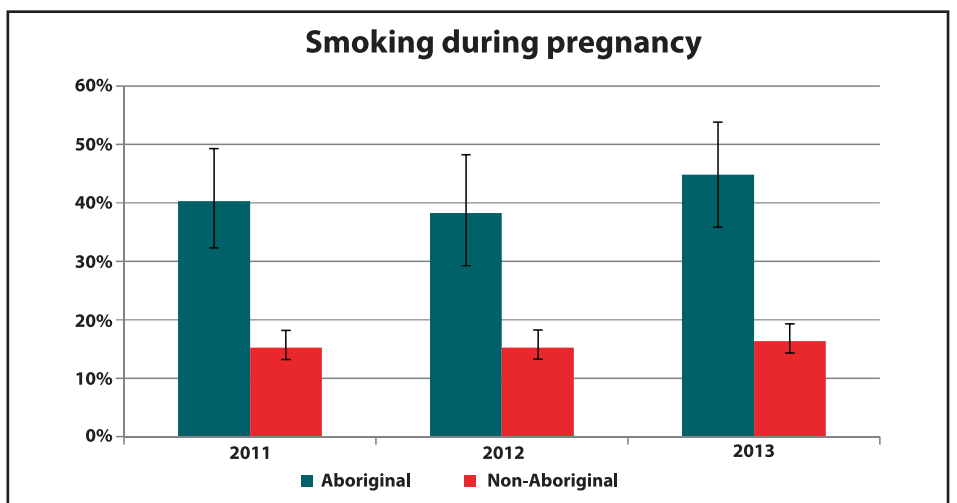
In 2012, 6.9% of births in the Goldfields were to women under the age of 20 years. This proportion was 1.7 times higher than the State average. The proportion of births to teenage Aboriginal women (24%) was higher than non-Aboriginal women (5%).

Smoking during pregnancy

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

Figure 1 shows the proportion of births to women who reported smoking during pregnancy by Aboriginal status. In 2013, the proportion of mothers who reported smoking during pregnancy was 45% for Aboriginal mothers, and 16% for non-Aboriginal mothers.

Figure 1: 2011-2013 proportion of women smoking during pregnancy, Goldfields 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 still birth are among the consequences of drinking during pregnancy. 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).

FASD is a common cause of medical, cognitive and behavioural problems for children including prematurity, brain damage, birth defects, growth restriction and developmental delay.

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.

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
	Per cent	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

It is also an indicator of increased risk of developing 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



- ⇒ Aboriginal women in the Goldfields are more likely to be teenage mothers than non-Aboriginal women.
- ⇒ Culturally appropriate health promotion and antenatal services for Aboriginal women are needed.

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 low birth weight are more likely to develop significant disabilities and have a greater risk of poor health and mortality outcomes. From 2008-2012, the proportion of low birth weight babies born to women in the Goldfields was 12.8%

and 6.4% for Aboriginal and non-Aboriginal people respectively.

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.

In the Goldfields, the proportion of children rated as developmentally vulnerable on one or more domains ranged from 4% to 83%. The proportion rated vulnerable on two or more domains ranged from 0 to 62%. The six Goldfields towns with proportions of children developmentally vulnerable in one or more domains that are above the State average are shown in Table 3.

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

Planning outreach teams

- ⇒ There is a high need for child development services including access to multidisciplinary teams made up of medical services, child health nurses, speech pathology, physiotherapy, and occupational therapy in the Goldfields.



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

Community	Children vulnerable: 1+ domains		Children vulnerable: 2+ domains	
	Number	% of total surveyed	Number	% of total surveyed
South Kalgoorlie	20	23	3	9
Hannans	12	30	9	22
Boulder	28	32	12	14
Kambalda	26	53	16	33
Warburton and surrounds	24	83	18	62

Ear health

Ear diseases, in particular otitis media, and associated hearing loss are highly prevalent among Aboriginal children. In 2012-2013, 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 Goldfields, the following ear health trends were observed during 2008-2012 for children aged 0-14 years:

- Ear, nose and throat infections were the overall leading causes of potentially preventable hospitalisations (PPH), accounting for 23% of all PPH.

- Hospitalisation rates for diseases of the ear and mastoid process were higher in Aboriginal children than non-Aboriginal children (1,183 vs 559 per 100,000).

Planning outreach teams



- ⇒ Focus on ENT infections and respiratory disease in children especially Aboriginal children.
- ⇒ Increase programs aimed at prevention and management 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 Goldfields population collected by WA population based surveys found:

- 22% of adults reported an injury requiring treatment from a medical professional in the previous year.
- 19% reported having arthritis.
- 13% reported a current mental health problem.
- 10% reported a diagnosis of asthma.

The highest cancer incidence rates from 2008-2012 in the Goldfields were for cancers of the prostate; breast; lung, bronchus, and trachea; skin; and colorectal. Of these, the rate of lung cancer in the Goldfields was 2.1 times that of the State.

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:

- 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^{5,6}.

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.

Strategic focus areas that have been identified for Aboriginal health planning in the Goldfields region are mental health, renal health, child and maternal health and ear health⁷.

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.



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 Goldfields Regional Aboriginal Health Planning Forum data.

Mental health

Health trends

For 2009-2012, 13% of Goldfields adults aged 16 and over reported having a current diagnosis of a mental health problem, with the prevalence being twice as high for females.

Despite this, only 5.3% reported as having made use of a mental health service in the last year.

The leading reason for an occasion of service for mental health was serious psychiatric disorder.

Suicide was the second leading cause of death in 15-24 year olds after transport accidents in the Goldfields from 2002-2011.

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

Youth suicides (per 100,000 person)*	Goldfields Health Region	Metro	State
Males (15-24 years)	28.9	15.6	19.9
Females (15-24 years)	10.6	5.4	6.0

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

For 2007-2011, males and females in the Goldfields had significantly higher rates of suicide than the State youth suicide rate. Table 4 shows the Goldfields youth suicide rates by gender over a longer time period (2002-2011) to preserve confidentiality.

Planning outreach teams



- ⇒ Increase access to mental health services targeting youth and Aboriginal population.
- ⇒ Programs and services 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, over 1 in 2 (53.7%) Australians reported having a chronic eye condition. In 2013-14, 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)⁸.

From 2008-2012, diseases of the eye and adnexa accounted for 5% of hospitalisations for adults aged 65 and over in the Goldfields.

Hospitalisations

Regional hospitalisations

Hospitalisation rates in the Goldfields were significantly higher compared to the State between (1.1 times higher) 2008 and 2012.

Within the Goldfields, hospitalisation rates of Aboriginal people were 4.2 times higher than non-Aboriginal people.

Table 5 shows the top five causes of hospitalisation by major category.

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

Rank	Cause of hospitalisation	Number	% of total (15-64 yrs)	State rank
1	Digestive diseases	9,965	10	1
2	Injury and poisoning	8,060	8	4
3	Pregnancy and childbirth	7,844	7	6
4	Ill-defined conditions	6,302	6	3
5	Respiratory diseases	6,125	6	9
All hospitalisations		104,626	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

Hospitalisations

Potentially preventable hospitalisations

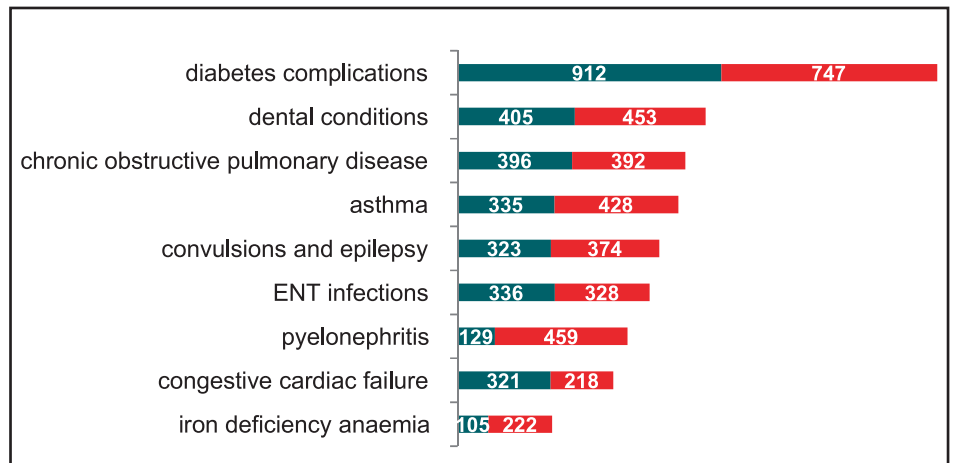
Potential preventable hospitalisations (PPH) are hospitalisations which could have been avoided with disease intervention plans and various methods of preventative care.

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

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

- PPH accounted for 4,522 (6%) of hospitalisations in the Goldfields.
- The PPH rate for 15-64 year olds was significantly higher (1.5 times) than for the State across all categories.
- PPH rates for Aboriginal people in the Goldfields was significantly higher than for non-Aboriginal people in the Goldfields, the State Aboriginal rates, and the State non-Aboriginal rates.

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



Source: DoH, Health Tracks

Planning outreach teams

- ⇒ Identify opportunities with local services aimed at prevention, management and treatment of PPH conditions in the community.
- ⇒ Co-located and collaborative service models between primary and secondary health services, NGOs and GPs would contribute to improved care.



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.

Planning outreach teams



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

There is still a discrepancy between the life expectancy of Aboriginal people when compared to non-Aboriginal people.

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

- ischaemic heart diseases, cerebrovascular diseases, lung cancer, dementia, and chronic obstructive pulmonary disease.

For Aboriginal residents, the leading causes of death were¹⁰:

- ischaemic heart disease, diabetes and impaired glucose regulation, diseases of the liver, chronic obstructive pulmonary disease, and transport accidents.

Avoidable mortality

During 2007-2011, 60% of all deaths of Goldfields residents under 75 years of age could have been avoided through better use of primary prevention and treatment interventions.

During this period, the leading cause of avoidable mortality was ischaemic heart disease followed by cerebrovascular diseases, lung cancer, chronic obstructive pulmonary disease and diabetes and impaired glucose regulation.

The rates of treatable and preventable avoidable deaths in Aboriginal residents were higher than for non-Aboriginal residents (4 and 6 times respectively).

^{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).