

South West – population and health status



Table 1: 2006-2010 South West residents - Leading causes of hospitalisation

| Rank | Cause of hospitalisation | Number | % of total | State rank |
|----------------------|---|---------|------------|------------|
| 1 | Factors influencing health status and contact with health services* | 57,781 | 21.4% | 1 |
| 2 | Digestive diseases | 32,195 | 11.9% | 2 |
| 3 | Musculoskeletal diseases | 20,850 | 7.7% | 4 |
| 4 | Ill defined conditions | 19,467 | 7.2% | 6 |
| 5 | Injury and poisoning** | 18,640 | 6.9% | 5 |
| All hospitalisations | | 270,258 | | |

(WA Morbidity Data System)

*Health services for examination and investigation, reproduction, specific procedures, renal dialysis, potential health hazards related to communicable diseases, socioeconomic and psychosocial circumstances, family and personal history.

**Transport accidents, other external injuries, intentional self-harm, assault, complications of medical and survival care.

Potential preventable hospitalisations

Potential preventable hospitalisations (PPH) refers to those 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 2006 to 2010 the following trends were observed:

- PPH accounted for 20,770 (21%) of hospitalisations. This figure was not significantly different when compared to the rest of the State.
- Diabetes with its complications ranked number one (26% of all PPH's).
- Aboriginal residents had a PPH rate more than three times greater than non-Aboriginal residents.

Population

Of all Western Australian regions, the South West has the highest population. Estimated resident population in 2010 was 162,164. This population grew 17% over the last five years. In the 2009 to 2010 period Capel recorded the highest growth rate of 5.4% in the State followed by Busselton with 4.1%.

The South West has an older non-Aboriginal population with a large number of retirees in the region.

It is estimated that the South West resident population will increase to 198,505 by 2016 and to 221,210 by 2021.

The Aboriginal population represented 3,252 (2%) people in 2010. The Aboriginal population has a much younger age structure when compared to the non-Aboriginal population.

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 South West region has relatively high SEIFA scores, with many statistical local areas in the region scoring above 1,000.

The 2006* SEIFA scores for towns in the South West region are:

- Bunbury 992
- Harvey 1,082

The South West region is the smallest of the seven rural regions in Western Australia, covering 24,000 square kilometres and encompassing 12 local government areas. The major centres are Bunbury, Collie, Busselton, Manjimup and Margaret River.

The South West forms part of the Southern Country Health Service and is within the boundaries of the South West WA Medicare Local.

Busselton has a regional airport which services the fly-in/fly-out workforce to mining and industrial developments in Western Australia. There is also a light aircraft airport in Bunbury. The Bunbury port is situated close to the region's mining, manufacturing, agricultural and pastoral areas. The region has an extensive road network with private vehicles and private buses being the main modes of transport. The Australind rail service between Perth and Bunbury runs daily.

The region has a strong and vibrant tourism industry attracting more visitors than any other Western Australian region outside of Perth. Other industries include mining, agriculture, timber and viticulture.

Leading causes of hospitalisation

Overall, the hospitalisation rate for South West residents was significantly lower than the State in 2006 to 2010. The leading causes of hospitalisation in the South West region related to factors influencing health status and contact with health services, digestive diseases and musculoskeletal disease.

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- Collie 977
- Waroona 1,014
- Manjimup 976
- Busselton 1,028
- Boddington 1,022 (ABS 2006)

*2006 SEIFA is the most up to date data available from ABS, 2011 statistics will be available in 2013



Planning outreach teams

- ✓ Increase services targeting the ageing population
- ✓ Target low SEIFA score areas, in particular remote Aboriginal communities

Leading causes of death

During the period 2003 to 2007, the leading causes of death were diseases of the circulatory system and neoplasms.

Table 2: 2003-2007 South West residents - Leading causes of mortality

| Rank | Cause of mortality | Count | % of total |
|------|------------------------------------|-------|------------|
| 1 | Diseases of the circulatory system | 1,338 | 33.3% |
| 2 | Neoplasms | 1,268 | 31.6% |
| 3 | Diseases of the respiratory system | 300 | 7.5% |
| 4 | Injury and poisoning | 259 | 6.5% |
| 5 | Diseases of the nervous system | 185 | 4.6% |

(ABS Mortality Data)

There is still a discrepancy between the life expectancy of Aboriginal people when compared to non-Aboriginal people. Current estimations suggest that non-Aboriginal people live around ten years longer than Aboriginal people.

Avoidable mortality

During 1997 to 2007, nearly two thirds (64%) of South West resident deaths under the age of 75 could have been avoided. More than half (54%) of these deaths could have potentially been avoided through the use of primary care interventions.

Figures 1 and 2 below show a count of the top five causes of avoidable mortality by gender during 1997 to 2007. Ischaemic heart disease was the leading cause of avoidable mortality for males followed by lung cancer. In comparison, lung cancer followed by breast cancer accounted for over one quarter of avoidable female deaths in the 1997 to 2007 period. A greater number of deaths in the male non-Aboriginal population were attributed to suicide and self inflicted injuries, calling for increased mental health access.

Figure 1 Leading cause of avoidable mortality for males 1997-2007

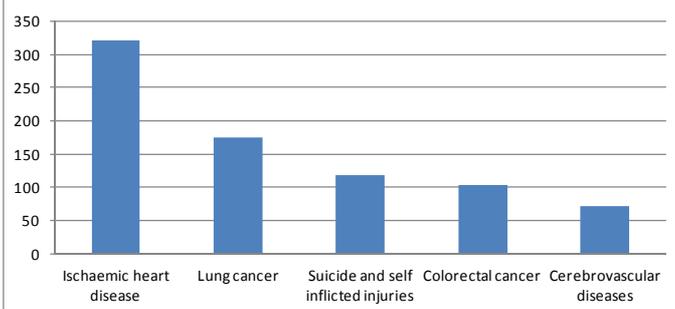
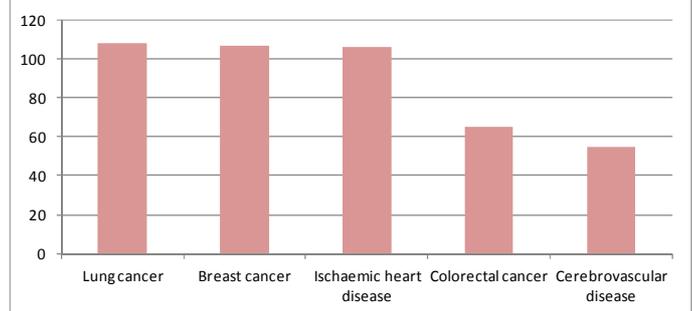


Figure 2 Leading cause of avoidable mortality for females 1997-2007



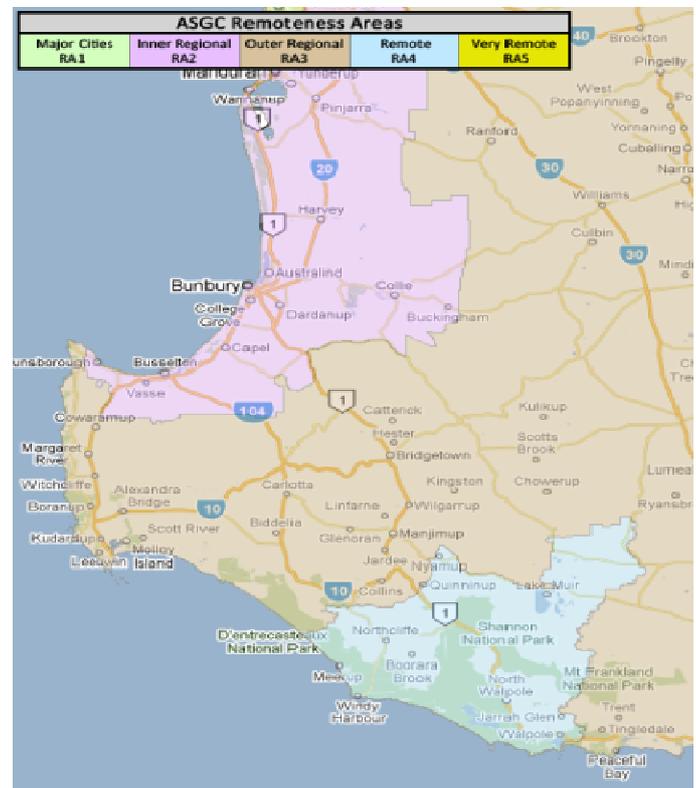
Planning outreach teams

- ✓ Focus on chronic conditions: cardiovascular disease and cancers
- ✓ Need for mental health services targeting the male non-Aboriginal population

Australian Standard Geographical Classification - Remoteness Area

The Australian Standard Geographical Classification (ASGC) - Remoteness Area (RA) uses a five category scale to class remote areas of Australia from major cities to very remote locations.

Graph 1: ASGC-RA South West remoteness areas map1



¹ <http://www.doctorconnect.gov.au/internet/old.Publishing.nsf/Content/locator>



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According to the 2006 ABS Census the following trends for South West residents are:

- 0.7% lived in a remote area
- 14.1% lived in an outer regional area
- 85.2% lived in an inner regional area

Major health service providers

| Hospital services | Community and public health services | Mental health and aged care services | Aboriginal Medical Services |
|---------------------------------|--|--|---------------------------------------|
| Bunbury Hospital | Community Health Service – Bunbury/Harvey, Naturaliste | Bunbury Aged Care Assessment Team | South West Aboriginal Medical Service |
| Busselton Hospital | South West Population Health Unit | Bunbury Mental Health Service | |
| Collie Hospital | Warren Blackwood Community Health Service | South West Mental Health Service – Bridgetown, Margaret River, Busselton | |
| Margaret River Hospital | | | |
| St John of God Bunbury Hospital | | | |

The demographic factors of remoteness (isolation) and socio-economic disadvantage of the Aboriginal population contribute to the significantly greater burden of disease compared to non-Aboriginal people.

The high burden of disease is also reflected in a comparison of admission rates compared to the general population³:

- 12 x greater for renal dialysis
- 8 x greater for diabetes
- 5.62 x greater due to cellulitis
- 6.64 x greater due to respiratory infections/inflammations
- 8.2 x greater due to disorders of the pancreas

Diabetes: Majority is type 2 diabetes. Risk factors for type 2 diabetes include being overweight, leading a sedentary lifestyle and consuming a high calorie diet.

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

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

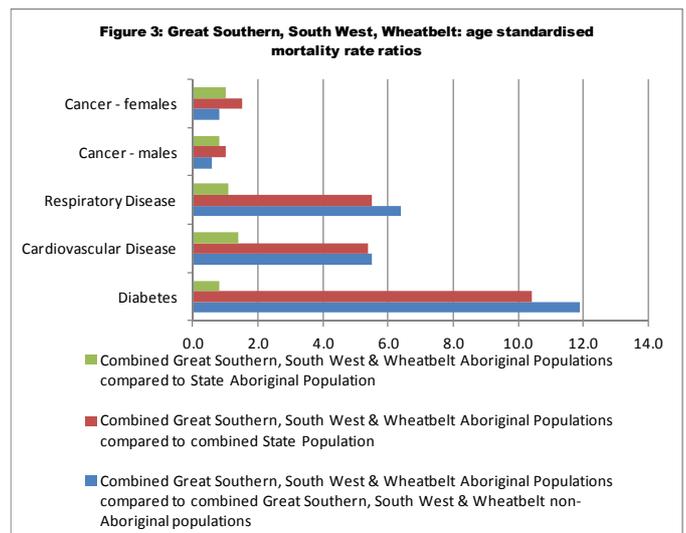
Kidney disease: Often develops as a complication of other medical conditions including diabetes, high blood pressure, urinary tract infections and drug use.

In 2006, the most common causes of cancers in Western Australia for men were prostate, melanoma, colorectal and lung. For women the most common cancers were breast, colorectal, melanoma and lung.

Mortality – chronic conditions

Between 1997 and 2006, the leading causes of mortality among Aboriginal people from the South West region were ischaemic heart disease, cancer and cerebrovascular disease⁴.

Figure 3 compares the age standardised mortality rate ratios for the combined Great Southern, South West and Wheatbelt Aboriginal populations with the State Aboriginal population, the combined State population and the combined Great Southern, South West and Wheatbelt non-Aboriginal populations for the period 1998 to 2007⁵.





Planning outreach teams

✓ Contact major health care providers and discuss how your team could collaboratively work together in service delivery and coordination

The burden of disease

Aboriginal health

Chronic, non-communicable diseases contribute to over 70% of the total burden of illness and injury in Australia². In Western Australia, chronic disease is largely detected and managed by general practitioners and Aboriginal Medical Services, with specialist care available at WA Country Health Service Regional Resource Centres and from resident and visiting specialists.

The following information about the five chronic health conditions targeted by Medical Specialist Outreach Assistance Program – Indigenous Chronic Disease (MSOAP-ICD) and their impact has primarily been sourced from the Aboriginal Health Planning Forum Data reports prepared by the WA Health Epidemiology Branch and WA Country Health Service, November 2009.

Chronic disease amongst Aboriginal people

65% of Aboriginal people report at least one long-term health condition and approximately 27% of Aboriginal children have one or more long-term health conditions.

² Improving Chronic Disease Services in Country WA: Priority Chronic Disease Models of Care. WA Country Health Service. Oct 2009

³ Ibid. Page 20. Data from 2006/07

⁴ South West Aboriginal Health Planning Forum Data. Page 10

⁵ Ibid. Pages 6-8. Based on ASR per 100,000 persons



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Table 3 below shows the leading causes of mortality that could have been avoided with effective medical interventions. Nearly one in five avoidable deaths for Aboriginal South West residents was ischaemic heart disease. Between 1997 and 2007, 73% of Aboriginal resident deaths under the age of 75 were classed as avoidable.

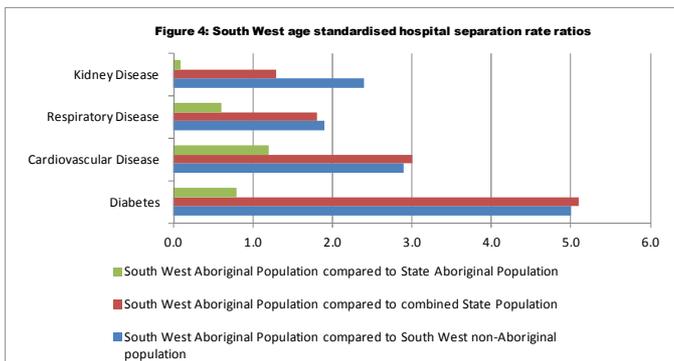
Table 3: 1997-2007 South West residents 0-74 years - Leading causes of avoidable mortality by Aboriginal status

| Rank | Condition | Deaths | Percentage |
|------|---------------------------------------|--------|------------|
| 1 | Ischaemic heart disease | 13 | 18.1% |
| 2 | Diabetes | 8 | 11.1% |
| 3 | Lung cancer | 7 | 9.7% |
| 4 | Chronic obstructive pulmonary disease | 6 | 8.3% |
| 5 | Suicide and self inflicted injuries | 6 | 8.3% |

(ABS Mortality Data)

The Western Australian Hospital Morbidity Data System records all (Statewide) hospitalisations.

The following chart compares the age standardised hospital separation rate ratios for the South West Aboriginal population with the State Aboriginal population, the combined State population and the South West non-Aboriginal population for the period 2004 to 2008⁶.



Planning outreach teams

✓ Focus on managing chronic diseases; cardiovascular, diabetes and cancer in the Aboriginal population

Maternity

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. GP obstetricians play an important role in maternity care in hospitals where specialist services are often not available. All birthing services are supported by midwives and anaesthetists. Severe

⁶ Ibid. Pages 11-13. Based on ASR per 1,000 persons.

workforce shortages impact across all these professions in rural areas. In Western Australia, planned birthing services are available in 19 public hospitals and at St John of God Geraldton and Bunbury Hospitals.

South West birthing services

Planned birthing services are available at Bunbury Regional Hospital, St John of God Bunbury Hospital and the Busselton, Collie and Margaret River District Hospitals. Bunbury Regional Hospital has level 2 neonate facilities.

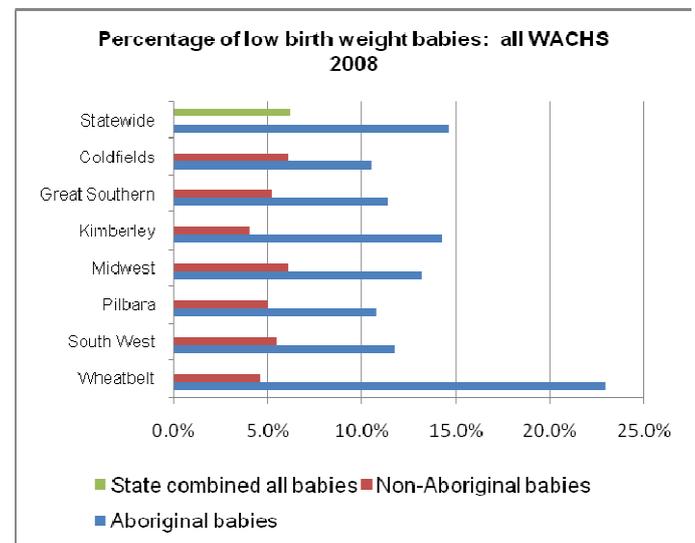
Aboriginal maternity issues

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.

Low birth weight

A baby's 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 have a greater risk of poor health and dying, and are more likely to develop significant disabilities. Statewide from 2000 to 2006, 14.1% of babies born to Aboriginal mothers were of low birth weight, compared to 5.9% of babies born to non-Aboriginal mothers.

Figure 5: Comparison of babies born with a low birth weight between regions and the State



For rural Western Australia in 2008, 6.2% of all babies were born with a low birth weight. For Aboriginal babies, the percentage with low birth weight was significantly higher at 14.6%.

The percentage of low birth weight Aboriginal babies born in the South West ranged from 11.8% in 2008 to 23.1% in 2004.

Birth trends

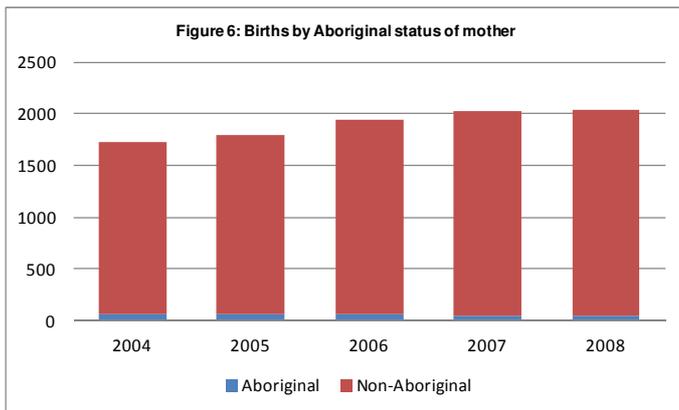
In 2005, women residing in country areas of Western Australia represented 25% of the total number of women who gave birth in Western Australia while 63.9% of births by Aboriginal women were from country regions. More country women are also delivering in the metropolitan area in public and private hospitals.

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From 2004 to 2008 there were 34,808 births recorded in rural Western Australia, with Aboriginal births being an average of 18.96% of these births.

During the 2004 to 2008 period, there was a 4.7% average annual increase in births each year for non-Aboriginal South West women. For South West Aboriginal women a 5.7% average annual decrease was evident over the same period.

Figure 6 identifies the number of births in the South West region. An increase in births between 2004 and 2007 for the non-Aboriginal population is evident with slight decreases in the Aboriginal population for the same time period.

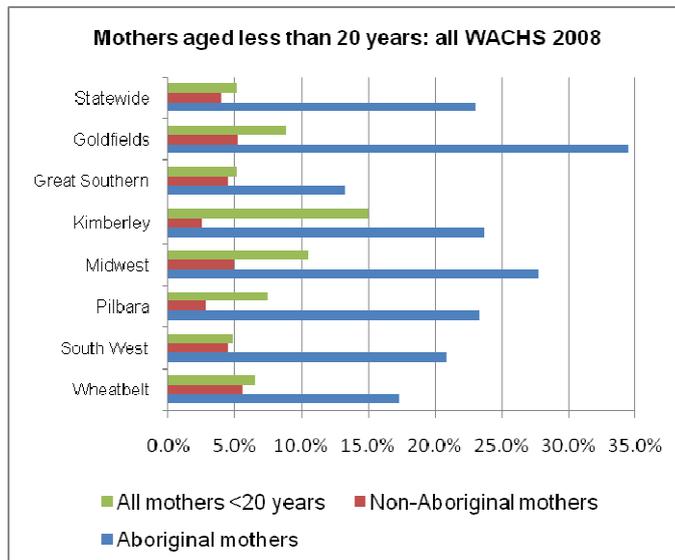


Mothers aged less than 20 years

The following trends were seen between 2004 and 2008:

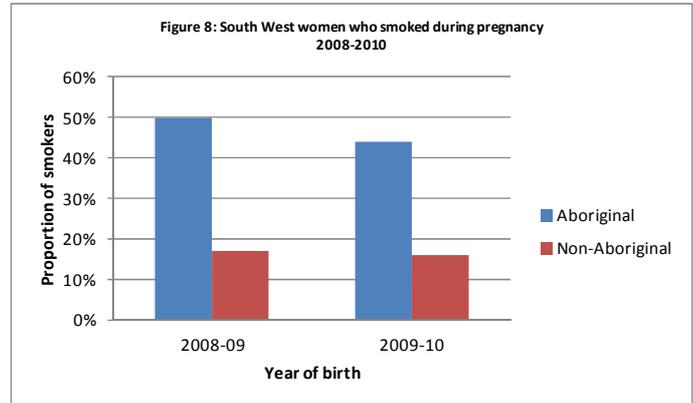
- In Western Australia the proportion of births to women aged less than 20 years was 5.1%. For non-Aboriginal teenage mothers the proportion was 4% compared to 23.1% for young Aboriginal women.
- The number of Aboriginal teenagers in the South West giving birth decreased from 22.4% in 2004 to 15.6% in 2006.
- In 2008, 4.5% of non-Aboriginal women who were under 20 years gave birth compared to 5.4% in 2004.

Figure 7: Comparison of babies born to teenage mothers by Aboriginal status of mother and region



Smoking and pregnancy

Risks associated with smoking during pregnancy include premature births, lower birth weights, organ malfunctions and stillbirths. Figure 8 shows a decrease in the proportion of both Aboriginal and non-Aboriginal women smoking during pregnancy.



Drinking and pregnancy

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

National reported rates per 100,000 children per annum indicate that the Aboriginal rate is significantly higher than the non-Aboriginal rate:

- Children <5 years at diagnosis (total population) 1.14
- Non-Aboriginal population 0.37
- Aboriginal population 14.60

The Western Australian Birth Defects Registry reported rates for 2002 also indicated a significantly higher Aboriginal rate:

- 0.02/1,000 for non-Aboriginal children
- 2.76/1,000 for Aboriginal children

Infant mortality rate

The Statewide infant mortality rate for 1998 to 2007 was 3.8 per 1,000 live births. This comprised a non-Aboriginal rate of 3.2 deaths per 1,000 live births compared with a rate of 12.9 per 1,000 for Aboriginal women.



Planning outreach teams

- ✓ Health promotion interventions on drinking during pregnancy targeting the Aboriginal population
- ✓ Access to dieticians and nutritional professionals for expectant Aboriginal mothers



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Mental health

In 2009 12.2% of adults 16 years and over had suffered from a mental health problem with prevalence higher among females.

Only a slight proportion (5.6%) had accessed mental health care services within the year.

Aboriginal residents have reported higher levels of psychological stress than non-Aboriginals on a national level.

Community mental health services accessed between 2006 and 2010 were at a significantly lower rate when compared to the State.

Child and adolescent health

Vaccinations

The recommended Australian vaccination coverage aims for greater than 90% coverage of children at two years of age and almost 100% coverage at school entry age.

More than 90% coverage is needed to create community immunity against ongoing transmission of communicable diseases.

In the South West region, childhood vaccination coverage is above 90% for the non-Aboriginal 24 month age group with slight decreases over the years. Coverage is lower for Aboriginal children in this age bracket dropping to under 90% in 2008.

Australian Early Development Index

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

2009 ABS data classed 23.5% of Australian children as developmentally vulnerable on one or more domains. A child ranked in the bottom 10% is classed as “developmentally vulnerable” whereas a child ranked 75% and above is classed as “on track”.

In 2009, children surveyed in the South West region on developmental vulnerability scored relatively high. The highest proportion of children vulnerable on one or more domains was in Boddington (50%) however only 21 children were surveyed. High scores were also evident in both Manjimup (42.6%) and Bunbury (33%). Donnybrook-Balingup (10.5%) and Augusta-Margaret River (16.1%) reported a low proportion of children who are developmentally vulnerable on one or more domains.



Planning outreach teams

- ✓ Increase access to mental health services targeting the Aboriginal population and women
- ✓ Increase allied health professionals to assist early childhood development. Teams could include speech pathologists, occupational therapists, physiotherapists and child health nurses

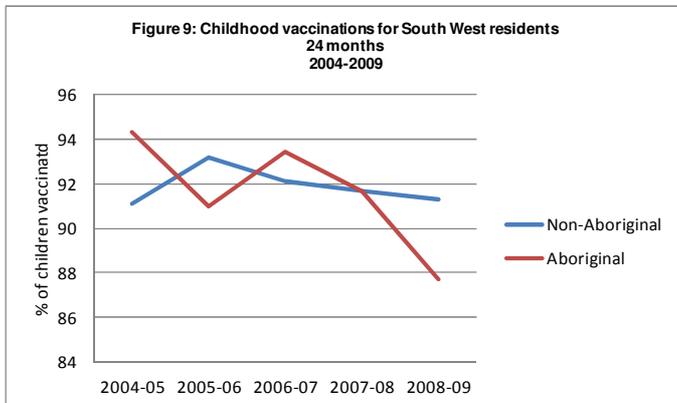


Table 4 below represents the current immunity for Year 7s in the South West. Community immunity is relatively high except for chickenpox.

Table 4: 2009 Year 7 South West vaccinations

| | B1 | B2 | HPV1* | HPV2* | HPV3* | VZV** | DPT# |
|----|-------|-------|-------|-------|-------|-------|-------|
| No | 1,111 | 1,039 | 534 | 516 | 467 | 397 | 1,152 |
| % | 80.0 | 74.9 | 82.2 | 79.4 | 71.8 | 28.6 | 83.0 |

*Cervical cancer **chickenpox #diphtheria, pertussis and tetanus

