7. Health status

A primary barrier to the enhanced participation of Indigenous people in the Pilbara labour market is poor health status and associated high morbidity and mortality. According to the Epidemiology Branch of the Western Australia Department of Health, life expectancy at birth for Indigenous males is just 55 years in the East Pilbara Health District (Port Hedland and East Pilbara SLAs), and 52 years in the West Pilbara (Roebourne and Ashburton SLAs). The equivalent figures for females are 60 and 63 years respectively (Pilbara Population Health Unit 2004: 5–21). According to the same source, the Indigenous population accounted for an average of 12 per cent of the West Pilbara population between 1997 and 2001, but for 44 per cent of all deaths. The equivalent figures in the East Pilbara were 19 and 42 per cent (Pilbara Population Health Unit 2004: 10-111-14). Despite this, self-perceptions of health status and health services can often be positive (see Interview segment 45, p. 127; Interview segment 47, p. 127; Interview segment 48, p. 128).

By these facts alone, the chances of full and prolonged Indigenous participation in the workforce are clearly curtailed. For example, using national life tables, the chances that a newborn Indigenous male will reach workforce age (15 years) have been estimated at 97 per cent (Kinfu & Taylor 2002). For those who do reach workforce age, 19 per cent will be dead by the age of 45, and 25 per cent will not reach 50 years of age. Statistically, more than half of Indigenous males who reach age 15 have no chance of surviving to retirement age at 65 years. Thus, out of an average cohort of 100 Indigenous males aged 15, only 48 would still be alive by age 65 (Kinfu & Taylor 2002: 10). Similar, if not lower, survival probabilities apply in the Pilbara. Equally telling, though, is the morbidity profile that underpins this high mortality. Here we observe the cumulative impact of progressive morbidity that can commence often prior to birth, persist through childhood, and become compounded in adult years. Allied to this are lifestyle factors associated with overcrowded dwellings, risk behaviour, low incomes, and poor nutrition. All this is well documented (ABS & Australian Institute of Health and Welfare (AIHW) 2003; Zubrick et al. 2004) and confirms the importance of social and economic determinants of Indigenous health outcomes.

Information on the health status of Indigenous people is collected as a matter of course in the day-to-day operation of the health care system in Western Australia. For the Pilbara, much of that available from the government-run system has been brought together in summary form by the Pilbara Population Health Unit (2004) and this provides a firm basis for establishing the relative health status of the region's Indigenous population. It also allows for a regional disaggregation

of health status between the East and West Pilbara Health Districts, although the general finding is one of shared characteristics between these regions.

Mortality

Between 1994 and 2003 a total of 470 deaths were recorded among Indigenous residents of the Pilbara SD. Of these, 271 (58%) were male, and 199 (42%) were female. This number of deaths in the Indigenous population was between 6 per cent and 28 per cent higher than expected when compared to the Indigenous mortality rate for Western Australia as a whole (Western Australia Department of Health 2005). As for a comparison with the rest of the population, the Indigenous age-standardised mortality rate for the Pilbara was more than three times higher than the crude death rate than observed in the Australian population as a whole (23.5 deaths per 1000 compared to 6.4) (Western Australia Department of Health 2005).

Cause of death

Cause of death data are coded using the World Health Organisation (WHO) method of disease classification that follows the 9th Revision, International Classification of Diseases (ICD9) up to July 1999, and the ICD10 classification thereafter. In Western Australia as a whole, the highest rates of Indigenous deaths are seen in cancer, diseases of the circulatory system, respiratory diseases, endocrine disorders (especially diabetes) and injury and poisoning. During the 1990s, these disease categories accounted for 75 per cent of all Indigenous deaths in the state (Watson, Ejueyitsi & Codde 2001). As indicated in Table 7.1, this is the same proportion observed for all Indigenous male deaths in the Pilbara between 1994 and 2003, although these categories accounted for only 66 per cent of Indigenous female deaths over the same period.

Table 7.1. Indigenous deaths by cause (ICD9): Pilbara SD, 1994–2003

	Deaths		Proportion of deaths	
ICD 9 disease chapter	Males (no.)	Females (no.)	Males (%)	Females (%)
Infectious and parasitic	5	5	1.8	2.5
Cancer	33	26	12.2	13.1
Endocrine/nutritional	10	26	3.7	13.1
Blood diseases	0	0	0.0	0.0
Mental disorders	12	9	4.4	4.5
Nervous system diseases	4	5	1.5	2.5
Circulatory diseases	78	48	28.8	24.1
Respiratory diseases	26	15	9.6	7.5
Digestive diseases	17	17	6.3	8.5
Genitourinary diseases	6	9	2.2	4.5
Complication pregnancy	0	0	0.0	0.0
Skin diseases	1	1	0.4	0.5
Musculoskeletal diseases	2	1	0.7	0.5
Congenital anomalies	6	3	2.2	1.5
Perinatal conditions	3	6	1.1	3.0
Ill-defined conditions	11	11	4.1	5.5
Injury and poisoning	57	17	21.0	8.5
All causes	271	199	100.0	100.0

Source: Western Australia Department of Health 2005.

Age-standardised death rates for each of these five main conditions have been calculated by the Western Australia Department of Health for the East and West Pilbara, with comparison drawn between Indigenous and non-Indigenous residents. These results are shown in Table 7.2 and 7.3, together with the Indigenous to non-Indigenous rate ratios. Thus, in the East Pilbara, between 1990 and 1999 there were 102 Indigenous deaths due to circulatory disease and this produced an age-standardised rate that was 3.9 times greater than for non-Indigenous residents. As indicated, this difference was statistically significant. Indigenous death rates were also significantly higher than non-Indigenous rates for respiratory disease and injury and poisoning. Deaths rates due to cancer were not significantly different, while diabetes deaths were too few to draw meaningful conclusions. Essentially the same pattern was observed in the West Pilbara.

Table 7.2. Indigenous and non-Indigenous age-standardised mortality rates for selected major health conditions for East Pilbara, 1990–1999

	Indigenous		Non-Indigenous		
Condition	No.	ASR	No.	ASR	Rate ratio
Circulatory Disease	102	647.5	68	164.6	3.9 [H]
Cancer	42	266.7	83	162.4	1.6 [NS]
Respiratory Disease	37	218.5	18	50.4	4.3 [H]
Injury and Poisoning	55	208.0	73	46.7	4.5 [H]
Diabetes	13	91.1	7	25.2	3.6 [#]

Key: [H] = Significantly higher than the non-Indigenous population in the region; [NS] = Not significantly different from the non-Indigenous population in the region; [#] = Number of cases too low to draw meaningful conclusions.
Source: Watson, Ejueyitsi and Codde 2001.

Standardised mortality rate ratios were also calculated for each of the Pilbara health districts to test for any significant internal variation in Indigenous and non-Indigenous rates for each of these conditions. As all of these ratios were very close to 1.0 no significant spatial variation in mortality rates within the Pilbara was evident (Pilbara Population Health Unit 2004: 9-94-96).

Table 7.3. Indigenous and non-Indigenous age-standardised mortality rates for selected major health conditions for West Pilbara, 1990–1999

	Indigenous		Non-Indigenous		
Condition	No.	ASR	No.	ASR	Rate ratio[a]
Circulatory Disease	34	538.6	46	122.9	4.4 [H]
Cancer	18	266.5	64	109.7	2.4 [NS]
Respiratory Disease	13	262.5	10	33.2	7.9
Injury and Poisoning	20	195.6	54	31.4	6.2 [H]
Diabetes	7	87.2	4	11.4	7.6[#]

[a]Age-standardised with the Australian population and expressed per 100 000 population.
Key: [H] = Significantly higher than the non-Indigenous population in the region; [NS] = Not significantly higher than the non-Indigenous population in the region; [#] = Number of cases too low to draw a meaningful conclusion.
Source: Watson, Ejueyitsi, and Codde 2001.

In Tables 7.4 to 7.7, the top 15 causes of death are examined in more detail for Indigenous males and females in the East and West Pilbara Health Districts. Also shown is the standardised mortality rate ratio (SRR) using the state Indigenous data as the standard. This provides an indication of the relative significance of rates observed in the Pilbara regions compared to the state Indigenous rates for males and females. Confidence intervals (CIs) wholly above or wholly below 1.0 (the state rate) indicate that rates in the Pilbara are significantly higher or lower. Quick perusal of these CIs reveals that none of the rates for the detailed top 15 causes of mortality for Indigenous males and females in the East or West Pilbara is significantly different from the equivalent rates observed at the State level. In short, from a Western Australian perspective, there appears to be nothing unusual about the profile of Indigenous mortality throughout the Pilbara.

Thus, as elsewhere in the state, ischaemic heart disease, cerebrovascular disease, transport related accidents, and non-specified cancers are all prominent among the major causes of death for Indigenous males, while for females diabetes, liver disease and other forms of heart disease are also prevalent. This profile of mortality confirms the trend towards 'lifestyle' diseases as the primary cause of death in remote Western Australia first noted by Gracey and Spargo (1987) in their review of the state of Indigenous health in the Kimberley region for the period 1970 to 1985. At the same time, specific mining-related causes are also reported. For example, all known cases of malignant mesothelioma among Indigenous people in Western Australia are reported from the Pilbara (Musk et al. 1995). Most of these cases are due to exposure while involved in the transport of asbestos from the Wittenoom crocidolite operation. According to Musk et al. (2005) the incidence of this disease among Indigenous people in the Pilbara (250 per million for ages 15 and over) is one of the highest population-based rates recorded anywhere in the world, with the likelihood that the risk of mesothelioma resulting from past exposures will continue to rise over time.

Table 7.4. Top 15 causes of mortality for the Indigenous male population of the West Pilbara Health District, 1993–2002

Condition	no.	% of all cases	SRR	Confidence interval
Ischaemic heart disease	17	17.5	1.2	0.65–1.86
All other cancers	12	12.4	1.8	0.84–3.02
Chronic obstructive pulmonary disease	5	5.2	1.8	0.40–3.74
Diabetes	5	5.2	1.1	0.23–2.15
Cerebrovascular disease	5	5.2	0.9	0.21–1.93
Suicide and self inflicted injury	5	5.2	0.9	0.19–1.74
Transport related accidents	4	4.1	0.6	0.09–1.33
Neurotic, personality, mental disorders	4	4.1	1.8	0.27–3.88
Other infectious & parasitic diseases	4	4.1	3.6	0.55–7.84
Liver diseases	3	3.1	0.9	0.07–1.97
Ill-defined causes	3	3.1	0.8	0.07–1.95
Pneumonia and influenza	3	3.1	0.8	0.06–1.74
Congenital anomalies	3	3.1	2.2	0.18–5.20
Accidental poisoning	2	2.1	1.2	0.01–3.23
Organic psychotic conditions	2	2.1	2.0	0.03–5.58

Source: Pilbara Population Health Unit 2004.

Table 7.5. Top 15 causes of mortality for the Indigenous female population of the West Pilbara Health District, 1993–2002

Condition	no.	% of all cases	SRR	Confidence interval
Diabetes	8	14.5	1.1	0.40–2.03
Ill-defined causes	5	9.1	2.6	0.56–5.28
Liver diseases	5	9.1	2.1	0.46–4.36
Ischaemic heart disease	4	7.3	0.5	0.08–1.14
Transport related accidents	3	5.5	1.1	0.09–2.54
Cerebrovascular disease	3	5.5	0.7	0.06–1.71
Pneumonia and influenza	2	3.6	0.9	0.01–2.37
Other forms of heart disease	2	3.6	0.8	0.01–2.20
Other diseases of digestive system	2	3.6	7.1	0.09–19.65
Neurotic, personality, mental disorders	2	3.6	2.6	0.03–7.19
Congenital anomalies	2	3.6	2.3	0.03–6.27
Lung cancer	2	3.6	1.5	0.02–4.27
Other conditions in perinatal period	2	3.6	2.4	0.03–6.75
Accidents caused by submersion, suffocation & foreign bodies	2	3.6	2.8	0.04–7.89
Other disorders of CNS	1	1.8	1.2	0.00–4.48

Source: Pilbara Population Health Unit 2004.

Table 7.6. Top 15 causes of mortality for the Indigenous male population of the East Pilbara Health District, 1993–2002

Condition	no.	% of all cases	SRR	Confidence interval
Ischaemic heart disease	23	12.8	0.93	0.55–1.34
Cerebrovascular disease	17	9.5	1.62	0.87–2.47
Transport-related accidents	16	8.9	1.88	0.99–2.91
All other cancers	13	7.3	1.1	0.52–1.77
Pneumonia and influenza	9	5.0	1.27	0.49–2.22
Other forms of heart disease	7	3.9	1.21	0.38–2.26
Chronic obstructive pulmonary disease	6	3.4	1.14	0.31–2.22
Diabetes	6	3.4	0.7	0.19–1.36
Ill-defined causes	6	3.4	1.15	0.31–2.23
Liver diseases	6	3.4	1.1	0.30–2.14
Other diseases of digestive system	6	3.4	3.54	0.96–6.89
Lung cancer	5	2.8	1.43	0.31–2.93
Other diseases of respiratory system	5	2.8	2.49	0.54–5.09
Suicide and self inflicted injury	5	2.8	0.77	0.17–1.58
Other accidents	4	2.2	1.74	0.27–3.81

Source: Pilbara Population Health Unit 2004.

Table 7.7. Top 15 causes of mortality for the Indigenous female population of the East Pilbara Health District, 1993–2002

Condition	no.	% of all cases	SRR	Confidence interval
Ischaemic heart disease	18	11.0	1.12	0.62–1.70
All other cancers	16	9.8	1.89	0.99–2.92
Cerebrovascular disease	15	9.2	1.61	0.82–2.52
Diabetes	13	8.0	0.86	0.41–1.38
Other forms of heart disease	10	6.1	1.84	0.76–3.14
Liver diseases	9	5.5	2.4	0.92–4.19
Transport-related accidents	7	4.3	1.62	0.51–3.02
Neurotic, personality, mental disorders	6	3.7	4.35	1.18–8.46
Ill-defined causes	6	3.7	1.71	0.46–3.33
Pneumonia and influenza	6	3.7	1.29	0.35–2.51
Accidents caused by submersion, suffocation & foreign bodies	4	2.5	3.23	0.50–7.09
Organic psychotic conditions	4	2.5	1.89	0.29–4.15
Other infectious & parasitic diseases	4	2.5	3	0.46–6.57
Nephritis, nephrotic syndrome & nephrosis	4	2.5	3.67	0.57–8.04
Renal failure (acute & chronic)	4	2.5	1.67	0.26–3.67

Source: Pilbara Population Health Unit 2004.

Morbidity

Hospital separations data for the Indigenous and non-Indigenous usual resident populations of the East and West Pilbara Health Districts have been compiled by the Pilbara Population Health Unit for the years 1998–2002. These data form the basis for compiling a statistical profile of the health status of the regional population. However, because the focus is inevitably on diagnoses of major morbidity (i.e. conditions serious enough to warrant hospitalisation), they do not provide a full measure of the burden of ill health in the region. For this we would need to add indicators of health status from primary health care providers.

Before considering hospitalisation data in detail, it is important to note that the number of admissions far exceeds the number of individuals admitted. This is obviously because many people are admitted more than once. Although unique patient data are not reported by the Population Health Unit, previous analysis from the East Kimberley (Taylor 2004a) suggests that an average of 1.9 separations per Indigenous patient compared to 1.02 separations per non-Indigenous patient might apply, making the Indigenous hospitalisation ratio twice as high.

Between 1998 and 2002, a total of 32 162 hospital separations were recorded among residents of the East Pilbara Health District population (Pilbara Population Health Unit 2004: 11–127). Of these, 14 731 (46%) were Indigenous separations, even though Indigenous people represented just 19 per cent of the average sub-regional population. In the West Pilbara, the overall number of separations was fewer at 25 142, and Indigenous people accounted for 6755 (27%) of these

despite comprising 12 per cent of the Health District population (Pilbara Population Health Unit 2004: 11–12). In both sub-regions, then, the level of Indigenous hospitalisation was more than double that suggested by their population share.

Hospitalisation diagnoses

In profiling the nature of morbidity as defined by principal disease diagnoses, data for all hospital separations (including repeat separations) are utilised. This is because individuals can, and often are, admitted to hospital more than once, but for quite different reasons. Tables 7.8–7.11 show the distribution of the top 15 causes of hospitalisation for Indigenous males and females separately in the East and West Pilbara Health Districts over the period 1994–2001.

Table 7.8. Top 15 causes of hospitalisation for the Indigenous male population of the West Pilbara Health District, 1994–2001

Condition	no.	% of all cases	SRR	Confidence interval
Other injuries^	641	10.5	1.23	1.13–1.32*
Encounter for dialysis^	593	9.7	0.53	0.49–0.58#
Ill-defined causes	522	8.5	1.82	1.67–1.99*
Diabetes^	479	7.8	5.95	5.44–6.52*
Pneumonia and influenza^	436	7.1	2	1.82–2.20*
Acute respiratory infections^	350	5.7	2.22	2.00–2.47*
Infections of skin & subcutaneous tissue^	247	4.0	1.32	1.16–1.50*
Fractures and sprains	204	3.3	1.03	0.89–1.18
Other factors influencing health and contact with service	192	3.1	1.52	1.32–1.76*
Other disorders of CNS	167	2.7	1.09	0.94–1.28
Bronchitis (acute and chronic)^	162	2.6	4.67	3.99–5.46*
Disorders of the ear^	154	2.5	2.06	1.76–2.42*
Other diseases of respiratory system+	145	2.4	1.42	1.20–1.68*
Neurotic, personality, mental disorders	141	2.3	0.9	0.76–1.06
Intestinal infectious diseases^	135	2.2	1.9	1.60–2.25*

Key: ^ = Showed a significant decrease in the West Pilbara population over the 5 year period 1997–2001; + = Showed a significant increase in the West Pilbara population over the 5 year period 1997–2001; * = Compared to the state Indigenous rate, the number of hospitalisations was significantly greater than expected; # = Compared to the state Indigenous rate, the number of hospitalisations was significantly lower than expected.
Source: Pilbara Population Health Unit 2004.

Table 7.9. Top 15 causes of hospitalisation for the Indigenous female population of the West Pilbara Health District, 1994–2001

Condition	no.	% of all cases	SRR	Confidence interval
Other injuries	645	10.8	1.43	1.32–1.55*
Ill-defined causes	398	6.6	1.39	1.26–1.54*
Pneumonia and influenza^	349	5.8	2.2	1.98–2.45*
Acute respiratory infections^	319	5.3	2.44	2.18–2.72*
Complication related to pregnancy^	317	5.3	0.86	0.77–0.96#
Encounter for dialysis^	236	3.9	0.13	0.12–0.15#
Infections of skin & subcutaneous tissue^	231	3.9	1.56	1.37–1.78*
Other diseases of urinary system^	220	3.7	1.83	1.60–2.09*
Other factors influencing health and contact with service	202	3.4	2	1.74–2.30*
Bronchitis (acute and chronic)	198	3.3	5.19	4.51–5.98*
Asthma	190	3.2	1.41	1.22–1.62*
Fractures and sprains	183	3.1	1.52	1.32–1.77*
Normal delivery and other indications for care	158	2.6	0.68	0.58–0.79#
Other diseases of respiratory system	142	2.4	1.48	1.25-1.75*
Disorders of the ear	135	2.3	1.95	1.64-2.32*

Key: ^ = Showed a significant decrease in the West Pilbara population over the 5 year period 1997–2001; * = Compared to the state Indigenous rate, the number of hospitalisations was significantly greater than expected; # = Compared to the state Indigenous rate, the number of hospitalisations was significantly lower than expected.
Source: Pilbara Population Health Unit 2004

Table 7.10. Top 15 causes of hospitalisation for the Indigenous male population of the East Pilbara Health District, 1994–2001

Condition	no.	% of all cases	SRR	Confidence interval
Encounter for dialysis +	1373	15.9	0.84	0.79–0.88#
Other injuries	824	9.5	91.25	1.16–1.33*
Ill-defined causes	631	7.3	1.54	1.42–1.66*
Pneumonia and influenza	562	6.5	1.79	1.65–1.95*
Infections of skin & subcutaneous tissue	473	5.5	1.89	1.73–2.07*
Fractures and sprains	333	3.9	1.35	1.21–1.51*
Acute respiratory infections^	323	3.7	1.4	1.25–1.56*
Intestinal infectious diseases^	264	3.1	2.54	2.24–2.87*
Other diseases of digestive system +	242	2.8	1.97	1.73–2.24*
Other diseases of respiratory system^	232	2.7	1.5	1.32–1.71*
Other factors influencing health and contact with service	192	2.2	1.03	0.89–1.19
Other disorders of CNS	162	1.9	0.78	0.67–0.92#
Asthma^	157	1.8	1.15	0.98–1.35
Disorders of eye	156	1.8	1.79	1.53–2.10*
Other forms of heart disease	155	1.8	1.39	1.18–1.63*

Key: ^ = Showed a significant decrease in the East Pilbara population over the 5 year period 1997–2001; + = Showed a significant increase in the East Pilbara population over the 5 year period 1997–2001; * =

Compared to the state Indigenous rate, the number of hospitalisations was significantly greater than expected; # = Compared to the state Indigenous rate, the number of hospitalisations was significantly lower than expected.
Source: Pilbara Population Health Unit 2004.

Table 7.11. Top 15 causes of hospitalisation for the Indigenous female population of the East Pilbara Health District, 1994–2001

Condition	no.	% of all cases	SRR	Confidence interval
Encounter for dialysis+	3344	24.8	1.16	1.12–1.20*
Other injuries	1277	9.5	1.8	1.70–1.90*
Ill-defined causes	674	5.0	1.42	1.32–1.54*
Complication related to pregnancy^	550	4.1	0.96	0.89–1.05
Pneumonia and influenza	459	3.4	1.7	1.55–1.87*
Infections of skin & subcutaneous tissue	452	3.4	1.85	1.69–2.03*
Normal delivery	432	3.2	1.2	1.09–1.32*
Fractures and sprains	363	2.7	1.88	1.70–2.09*
Complication in course of labour	279	2.1	1.05	0.93–1.18
Other pregnancy with abortive outcome	268	2.0	1.39	1.23–1.57*
Acute respiratory infections^	266	2.0	1.17	1.04–1.32*
Other diseases of urinary system	261	1.9	1.26	1.12–1.43*
Other diseases of respiratory system^	249	1.8	1.49	1.31–1.69*
Asthma^	249	1.8	1.08	0.95–1.23
Other factors influencing health and contact with service	239	1.8	1.35	1.19–1.54*

Key: ^ = Showed a significant decrease in the East Pilbara population over the 5 year period 1997–2001; + = Showed a significant increase in the East Pilbara population over the 5 year period 1997–2001; * = Compared to the state Indigenous rate, the number of hospitalisations was significantly greater than expected; # = Compared to the state Indigenous rate, the number of hospitalisations was significantly lower than expected.
Source: Pilbara Population Health Unit 2004.

These data highlight emphatically that chronic diseases (cardiovascular, cancer, chronic pulmonary, and diabetes) have become the dominant causes of morbidity and mortality in the Pilbara, as indeed they have for Indigenous people across Australia (ABS & AIHW 2003: 129–51, 193). Of these, the disease that presents the highest (and growing) gap in rates between Indigenous and non-Indigenous populations is diabetes (especially in the West Pilbara). This is a significant observation given that diabetes is a debilitating condition with several co-morbidities including obesity, high blood pressure, high cholesterol, peripheral neuropathy, blindness, and renal disease. From the individual's perspective, and that of the health care system, it involves a high management regime and is costly in terms of management time and resources. For example, a recent paper cited in Rowbottom et al. (2003: 3) estimates the cost to the Australian health system per year of one diabetic person with complications at over $9000. In addition, related government subsidies on pensions and sickness benefits amount to more than $6000 per year. As far as individuals are concerned, they are often out of pocket for 'indirect costs' of non-PBS medication and

equipment, as well as the costs of transport and time away from home or work (Rowbottom et al. 2003: 3; Willis 1995).

Notwithstanding the potential of diabetes to incapacitate populations, accurate information on the number of diabetics in the Pilbara is difficult to acquire. One attempt to estimate this draws on evidence from a host of previous studies to apply a 30 per cent rate to the Indigenous population of the Pilbara aged 25 years and over (Rowbottom et al. 2003: 23). From this an estimate of 813 Indigenous diabetics is derived for the Pilbara in 2001. It is worth noting that Rowbottom et al. considered the 30 per cent rate to be conservative. If we were to update this estimate by applying the same rate to the projected estimate of the Indigenous population in 2006, then the imminent number of Indigenous diabetics in the Pilbara would be 1016. It is worth noting the implications of this finding in terms of potential labour force numbers since this estimated number of diabetics alone in 2006 (to say nothing of other disabling conditions) is almost equivalent to the projected numbers in mainstream employment in the same year (1378).

Also available using hospital statistics are comparative data on Indigenous and non-Indigenous health status between the Pilbara and health service regions in the rest of Western Australia. These data, compiled by the Western Australian Department of Health using hospital separations for the period 1994–2000, detail the comparative rates of the five conditions that account for 75 per cent of all Indigenous deaths in Western Australia as a whole – circulatory disease, cancer, respiratory disease, injury and poisoning, and diabetes (Watson, Ejueyitsi & Codde 2001).

As indicated in Table 7.12, respiratory diseases, and injury and poisoning, account for the majority of hospitalisations among Indigenous people from the East Pilbara, followed by diseases of the circulatory system. However, according to the SRRs, the hospitalisation rate for respiratory diseases was lower than expected compared to the total Pilbara Indigenous population. The same result was observed for diabetes in the East Pilbara. Rates for all other causes were not significantly different compared to the Pilbara total Indigenous population. In terms of comparative rates with the non-Indigenous population of the East Pilbara, the age-standardised rate ratios indicate significantly higher Indigenous rates for circulatory diseases, respiratory diseases, injury and poisoning, and diabetes – in the latter instance, more than eight times higher.

Table 7.12. Indigenous and non-Indigenous hospitalisation statistics for selected major health conditions for East Pilbara, 1990–1999

	Indigenous			Non-Indigenous			
Condition	no.	SRR[a]	ASR[b]	no.	SRR[a]	ASR[b]	ASRR[c]
Circulatory Disease	557	1.1*	43.1	1041	1.1~	16.1	2.7 H
Cancer	181	1.0*	12.9	1045	1.1*	13.3	1.0 NS
Respiratory Disease	2207	0.8^	108.4	2005	1.0*	20.3	5.3 H
Injury & Poisoning	2190	1.0*	99.4	2588	1.0*	22.7	4.1 H
Diabetes	156	0.4^	10.1	89	1.1*	1.2	8.4 H

[a]Standardised hospitalisation rate ratios.

[b]Age-standardised rate per 100 000 population

[c]Ratio between Indigenous and non-Indigenous age-standardised rate.

Key: * = Not significantly different compared to the total Pilbara Indigenous population; ^ = Significantly lower compared to the total Pilbara Indigenous population; ~ = Significantly higher compared to the total Pilbara Indigenous population; H = Significantly higher than the non-Indigenous population in the region; NS = Not significantly different than the non-Indigenous population in the region.

Source: Watson, Ejueyitsi, and Codde 2001.

Among residents of the West Pilbara Health District, the rate of Indigenous hospitalisation for diabetes is significantly higher than the Indigenous rate for the Pilbara as whole, and as much as 65 times higher than the age-standardised non-Indigenous rate (Table 7.13). Hospitalisation caused by respiratory diseases is also much higher in the West Pilbara than in the East, and significantly higher among Indigenous compared to non-Indigenous residents.

Table 7.13. Indigenous and non-Indigenous hospitalisation statistics for selected major health conditions for West Pilbara, 1990–1999

	Indigenous			Non-Indigenous			
Condition	no.	SRR[a]	ASR[b]	no.	SRR[a]	ASR[b]	ASRR[c]
Circulatory Disease	231	0.9*	34.9	920	0.9^	14.6	2.4 H
Cancer	94	1.1*	17.8	983	0.9*	12.1	1.5 H
Respiratory Disease	2033	1.4~	206.3	2360	1.0*	20.5	10.1 H
Injury and Poisoning	1371	1.1*	118.4	3003	1.0*	23.3	5.1 H
Diabetes	549	2.2~	65.1	87	1.0 #	1.0	65.1 H

[a]Standardised hospitalisation rate ratios.

[b]Age-standardised rate per 100 000 population.

[c]Ratio between Indigenous and non-Indigenous age-standardised rate.

Key: * = Not significantly different compared to the total Pilbara Indigenous population; ^ = Significantly lower compared to the total Pilbara Indigenous population; ~ = Significantly higher compared to the total Pilbara Indigenous population; H = Significantly higher than the non-Indigenous population in the region; NS = Not significantly different than the non-Indigenous population in the region; # Number of cases too low to draw meaningful conclusions.

Source: Watson, Ejueyitsi, and Codde 2001

Risk factors

A proper understanding of the morbidity profile of the Pilbara would examine the complex of underlying related causes, including the risk-taking behaviour

of the population (see Interview segment 49, p. 128; Interview segment 50, p. 129; Interview segment 51, p. 129). While this is not provided in full, some insight into the nature of the connections here is provided by the application of aetiological fraction methodology to deaths and hospital data to estimate the incidence of mortality, illness and injuries attributable to alcohol consumption (Unwin et al. 1997). These are shown for the Pilbara SD in Table 7.14 using all deaths for the period 1984–1995, and all separations for the period 1993–1995. With an average of around 10 alcohol-related deaths per year, this represented around 10 per cent of all deaths in the Pilbara over this period. As indicated, these deaths were evenly divided between those due to alcohol-related diseases such as liver cirrhosis, and those due to injuries, especially road injuries. As for hospital separations, the majority of those related to alcohol (68%) presented as injuries due largely to assaults, road injuries and falls. If we examine more recent data on the incidence of alcohol-related morbidity for the Pilbara by Indigenous status (Table 7.15), we can see that Indigenous people accounted for two-thirds of these, and separations among Indigenous females were just as high as for Indigenous males.

Table 7.14. Deaths and hospital separations due to alcohol-related conditions: Total population of the Pilbara, 1984–1995

Alcohol-related conditions	No. of deaths (1984–95)	No. of hospital admissions (1993–95)
Liver cirrhosis	17	44
Alcoholism	15	213
Cancers	4	13
Stroke	8	15
Other related diseases	11	95
Road injuries	35	104
Falls	3	195
Suicide	6	15
Assaults	9	456
Other related injuries	2	49
Total	110	1199

Source: Unwin et al. 1997.

Table 7.15. Alcohol-related hospital separations in the Pilbara Population Health Unit area by Indigenous status and sex, 1998–2002.

	Males		Females		Total	
	No.	%	No.	%	No.	%
Non-Indigenous	509	41.2	185	20.9	694	32.8
Indigenous	725	58.8	700	79.1	1425	67.2
Total	1234	100.0	885	100.0	2119	100.0

Source: Pilbara Population Health Unit 2004: Appendix 3.

The importance of these alcohol-related statistics in the context of the present exercise is highlighted by the fact that Indigenous people themselves (at least in Port Hedland) recognise a strong connection between substance misuse and

economic marginalisation (Saggers & Gray 2001: 66), and this is certainly a strong message to emerge from the interviews held with respondents from across the Pilbara as part of the present study (see Interview segment 1, p. 57; Interview segment 11, p. 60; Interview segment 28, p. 93; Interview segment 34, p. 94; Interview segment 49, p. 128; Interview segment 51, p. 129).

Disability

One element of health status that can have a direct impact on the capacity of individuals to participate in economic activity is disability, defined as any continuing condition that restricts everyday activities. Such restriction can be due to an intellectual, cognitive, neurological, sensory or physical impairment or a combination of these; it may also be permanent or episodic in nature. However, with appropriate aids and services the restrictions experienced by many people with a disability may be overcome. Overall, in Western Australia, the most recent measure of the labour force participation rate of adults with a disability indicates that this is surprisingly high at 56 per cent, although this compares to 80 per cent among those without a disability (ABS 1998).

Establishing the number of people in the Pilbara with a disability using public access information is difficult, especially if the aim is to do this by Indigenous status. In 1998, the Western Australia Disability Services Commission (DSC) determined the overall numbers in the Pilbara with a disability. In all, a total of 5305 people (12% of the Pilbara population) were found to have an activity restriction. One-third of these had a profound or severe disability, though the majority (40%) were moderate/mild (DSC 1998). Most of those with disabilities (67%) experienced a physical restriction on their activities.

One way to estimate the extent of disability among Indigenous people in the Pilbara is to refer back to Table 4.8 which indicates that 510 disability payments in 2005 were to Centrelink customers who identified as Indigenous. As a proportion this would represent only 9 per cent of all disabled persons in the Pilbara using the 1998 DSC figures as a guide. As such, this is likely to be a substantial underestimate on the basis of population share and relative health status. Given a current Indigenous population share of 18 per cent, we may confidently double the estimate to at least 1020. Just what the labour force status of this group might be remains unknown. However, if the labour force status data from the 1998 ABS Disability Survey for the whole of Western Australia were applied, then almost half of these (448, or 44%) would be included with those not in the labour force as indicated in Figs. 3.7 and 3.8.

Indigenous perspectives

Interview segment 44

Ten or twenty years ago I used to be into alcohol and being in trouble with police. Whilst in prison I decided, 'what am I doing in here, my family all outside, and my kids?' That was a turning point. I wanted to get my people back to the country, to where I am now on my block. But to do that I had to survive, I had to look for work to keep my family going. I had to look for a job up here. I had a job at a medical centre taking people out for hunting and give them a feed. But there was no place for them to go back to, and they knew they would end up doing the same. What we wanted was an outback alcohol rehabilitation place, which ended up being built. It is still there today but its name changed from being an alcohol rehabilitation community to just a community, and we moved the program back into town. It was better out bush.

Interview segment 45

Health is pretty good here. I go and see the hospital. They used to come around and take old people's blood pressure. There are a lot of old people in the town that need medical attention like medication, you know once a week, what's once a week to go around and check old people's blood pressure, sugar level and see if they got all their medication and pill boxes up to date? They used to come around like that. One of them nurses was really good, she used to come up in the street and say hello and ask how I am. She used to talk to young people too about how they feeling.

Interview segment 46

But don't talk to me about dentist! You got to go to Newman, its free one, or Karratha. They got a dentist coming here to Tom Price from Perth but it costs an arm and a leg, even just for a five-minute visit, even just to peek in your mouth! People just don't go because they can't afford it. When it gets to be a real problem we just go to hospital for dental things. And they send you to Hedland or Newman. My little grand-daughter here, she had a teeth trouble. They told us you gotta' go Hedland or you gotta' go Mt Newman. Sometimes you can get travel assistance if you fill in that form for travel assistance, but sometime it can happen in an off week and people got no money to travel, or for medicine.

Interview segment 47

Education and health doesn't just affect Aboriginal people, it affects everyone in this day and time. Yeah we have a nurse who comes out to our community every week and a doctor who comes out every fortnight and we also got our

own Aboriginal health worker and Gumala are setting up an office for her, that's all starting to happen.

Interview segment 48

We don't have so much of a problem with health – common colds, runny nose, eyesores, and ear problems, just childhood things that affect everyone. We have good health delivery service. The health workers put their heart into it and they get to know the communities, and are really good. We not only have faith and trust and respect in them, but we look forward to when they are going to come again. The health workers are the best. But sometimes we just get to know them and then they are gone somewhere else, and we lose that contact.

But the problems in health are amongst those above them, the policy and management mob who don't want to go down to the grass roots level, they just send the health workers out, and don't visit themselves. I call them the shiny-bums. And the health system is not held accountable, There is so much energy put into it from the funding body and so much energy put into it from the service delivery, but when it gets down to the results it's not achieving those outcomes. It's too much massage, and healthcare is only during 8am and 5pm, but it's all the time for us.

Interview segment 49

A lot of that 20 to 30 year age group think that it is easier to spend their money on grog and live off somebody else. They rely on parents and grandparents and just move house to house. I've been observing this for many years. I don't think that Roebourne is a negative town, I just know where the negative behaviors are. Its the same in every other town. Its about the nature of alcoholism, not the nature of Aboriginal people. When you go back in history, our people used to walk around in the bush, they were 24 hours a day out there, now we are 24 hours a day in town in an urban setting, fast food and processed food, dependency on money to be able to get the food rather than hunting and gathering. Health standard is down, and there is a whole range of reasons. There's not enough clear educational awareness about health and what people mean when they talk about health. Someone might say, 'well I don't go to hospital so therefore I am healthy', but that may not be true. People don't recognise that all the things they do like diet may be impacting them badly and that even if they haven't been yet, they may well be on a one way trip to the hospital and never coming back! There's a lot of knowledge around, but not an educational approach to it. You can go to Centrelink and fill out forms and learn how to get finance. There's no place where you can go and sit down and get advice on your health before it happens. You can go to Community Health but they aren't really doing that either. With the sort of health issues my people have, it's no good to sit back and wait for people to come to you when they are sick, they should be

reaching out to the people and making themselves more available. They should come out and visit. A visit means 'I care', sitting in your office means 'you come and see me if you got a problem, otherwise I'm not really worried about you'.

Interview segment 50

My daughter looks after me and takes me hospital and also Wirraka Maya. I also gotta son live with me. He been come back from hospital in Perth yesterday, he's really sick. He got low sugar, high blood pressure, and he got to take medicine for his head all the time. He was a sniffer, that petrol destroyed a lot of our young people. He's just a young man, but he got old body, can't talk and can't look after himself, he's a walking time bomb. I got to watch watch watch all the time, in case he wanders off, or gets into grog or something. Sometimes he goes crazy and we got to call police. I get little bit of money for him from the trustee, buy him smoke and food, but I got to ask for more if he needs clothes or shoes. He got to go clinic all the time, and I got to take him. We can't walk there, too far, we got no motorcar, so we take taxi. I got that low sugar too, and I can't hardly walk! We living with relative now, because we got kicked out of Homeswest house, too much damage, and now we got to pay $2000. That health mob come around too, they really good.

Interview segment 51

In the community all the problems come from that like domestic violence, this one up here, he's into ganja too. When they are sober, not drugged up, they get agitated. Cigarette smokers are like that too. Getting really tense, makes their imagination go wild, and a lot of them we are starting to see are going into schizophrenia, that's that paranoia, then they get sent away and they get needles. There is drug and alcohol education. I think the youth center is starting to do it, and they do counselling. There is one just for this Ashburton area and she's based in Newman. People here are free to do it, but there are not enough resources in that area at the moment. We could get that program here, but the people gotta be willing to. The only way we can really force them is to start to bring in laws in the community to make people participate in programs. We trying to make this a good community and the only way we can start to force them, cause while the mob sitting down even those people sitting down on the dole and stuff in the community, they should be getting involved.