

## **Chronic Disease in Banyule and Nillumbik -**

**Overview of risk factors, prevalence and opportunities for intervention**

**Prepared for:**

**Banyule Nillumbik Chronic Disease Collaborative  
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## Demographics

### Population

The total population of Banyule recorded for the 2006 census was 114,866 people.  
The population of Nillumbik is 58,163

### Population density

Banyule: 1,884 persons per square kilometre  
Nillumbik: 133 persons per square kilometre

Banyule covers 63 square kilometres and Nillumbik covers 435 square kilometres.

### Issues

Transport may provide issues for Nillumbik clients in accessing services and contributing to social isolation. Access to public transport for Nillumbik residents is around 39%.

### Age Profile

Year 2004	Banyule		Nillumbik	
Age Group	Total Number	Percentage of total population	Total Number	Percentage of total population
0-14	20,684	17.7	14,016	23.2
15 -24	16,135	13.8	8,973	14.8
25-44	33,258	28.4	16,930	28.0
45-64	29,739	25.4	16,578	27.4
65-74	8,471	7.2	2,338	3.9
75-84	6,731	5.7	1,220	2.0
85+	2,073	1.8	449	0.7

Source: The Public Health Information Development Unit (2004)

### Issues

Nillumbik larger numbers of under 14 year olds  
Banyule larger number of 65+ age group

### Socio-Economic Status & Unemployment

Banyule and Nillumbik both have relatively high levels of social advantage compared to state averages. The catchment area also has relatively low levels of unemployment.

There is significant social and economic disadvantage in pockets across both LGAs. West Heidelberg ranked third in Melbourne and seventh in the state as one of the most disadvantaged localities (Jesuit Social Services 1999). Murrindindi – West in Nillumbik is also an area identified as having significant disadvantage.

## Indicators of social disadvantage

Year	Category	Banyule		Nillumbik	
		Total Number	Percentage of total population	Total Number	Percentage of total population
2001	Single parent families with dependent children	2,934	9.5	1,124	7.1
2001	People born in predominantly non-English speaking backgrounds with poor proficiency in English	2,038	1.9	201	0.4
2001	Indigenous	528	0.4	138	0.2
2001	Participation in full-time secondary school education at age 16	1,375	84.7	967	88.7
2003	Unemployment rate	2,670	4.2	780	2.2
2003	Labour force participation	64,320	80.6	35,563	83.7
2001	Female labour force participation	20,842	71.4	11,934	75.8
2001	Dwellings rented from the government housing authority	1,754	4.1	101	0.5
2001	Dwellings with no motor vehicle	2,038	1.9	201	0.4
2001	People who used a computer at home	54,179	47.7	34,201	59.0
2001	People who used the Internet at home	37,336	32.7	23,430	40.3
2001	Jobless families with children under 15 years	1,371	11.6	428	5.5
2001	Children under 15 years in jobless families	2,430	11.7	735	5.2

Source: The Public Health Information Development Unit

## Country of Birth

% of population	Banyule	Nillumbik
Born in Australia	75	82
United Kingdom	3.2	4.7
Italy	2.4	1.4
China	1.2	-
Greece	1.1	-
New Zealand	0.9	0.8
German	0.6	0.7
India	0.6	
Netherlands	-	0.5

ABS 2006 Census

Detailed information on community demographic can be found on the ABS website under community profiles.

<http://www.abs.gov.au/AUSSTATS/abs@.nsf//web+pages/Census+Data>

### ATSI Residents

Across the Banyule-Nillumbik catchment area, indigenous persons accounted for less than 0.4% of the total population in 2001 - 617 persons, with the vast majority of these living in Banyule. As can be seen in the table below this component of the Banyule population has been steadily increasing<sup>1</sup>.

#### Population Growth

Year	No. of Aboriginal persons
1986	224
1996	381
2001	484

Source: ABS, Census of Population and Housing, 1986, 1996 and 2001

#### Selected indicators of disadvantage

Indicator	Banyule aboriginal	Banyule non-aboriginal
One parent families	32%	15%
Unemployment rate	13.5%	4.9%
Median weekly disposable income	\$332	\$420
Rental housing	55%	19%

Source: Indigenous population and social data. ABS 2001

### Issues

Pockets of significant disadvantage in Banyule and Nillumbik

Growing ATSI population who have may experience social and health disadvantage, and issues associated with providing access to mainstream support services.

Relatively low numbers of non English speaking communities and of the non English speaking groups only small numbers of each which could contribute to social isolation of those that are residing in the area.

<sup>1</sup> See Banyule Municipal Population Snapshot 2006. Briefing paper prepared by Social Planning Unit Banyule City Council. Available on BNPCA Website [www.bnPCA.org.au](http://www.bnPCA.org.au)

## Health & Wellbeing Status

Both males and females in Banyule and Nillumbik have a better than average health status than the Victorian population. Male Life Expectancy for the catchment in 2004 was 80.5 compared with the State average (79.6) and N&WMR average (79.7). Female Life Expectancy although higher at 83.7 is less than that of both the State (84.3) and regional (84.4) averages.

### Burden of disease in Banyule and/or Nillumbik<sup>2</sup>

#### The top 10 most prevalent diseases in Nillumbik are:

1. Diabetes mellitus-NIDDM
2. Depression
3. Asthma
4. Osteoarthritis
5. COPD (emphysema and chronic bronchitis)
6. Benign prostatic hypertrophy
7. Ischaemic heart disease
8. Stroke
9. Epilepsy
10. Rheumatoid arthritis

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<sup>2</sup> Burden of Disease (2001) DHS website available at:  
<https://hns.dhs.vic.gov.au/3netapps/vhisspublicsite/ViewContent.aspx?TopicID=1&SubTopicID=13>

## Disease Prevalence Rates

Note these figures are estimates derived from population prevalence rates and imposed over LGA population data. Numbers less than 5 not counted.

Prevalent Cases, Nillumbik for Males & Females, 2001			
Disease	Female	Male	Persons
All causes	31382	30953	62335
Diabetes mellitus-NIDDM	461	990	1451
Depression	741	561	1302
Epilepsy	188	80	268
Parkinsons	22	24	46
Other nervous system and sense organ disorders	0	0	0
Ischaemic heart disease	129	150	280
Stroke	167	112	279
Inflammatory heart disease	15	28	43
COPD (emphysema and chronic bronchitis)	187	227	414
Asthma	2171	2030	4201
Other chronic respiratory diseases	0	0	0
Liver cirrhosis	6	12	18
Nephritis/nephrosis	18	23	42
Benign prostatic hypertrophy	0	311	311
Rheumatoid arthritis	123	47	170
Osteoarthritis	350	304	654
Miscellaneous conditions Chronic fatigue/SIDS	27	11	38

Prevalent Cases, Banyule for Males & Females, 2001			
Disease	Female	Male	Persons
All causes	73919	69224	143143
Diabetes mellitus-NIDDM	2065	2871	4936
Depression	1579	1308	2888
Epilepsy	268	123	391
Parkinsons	103	110	213
Other nervous system and sense organ disorders	0	0	0
Ischaemic heart disease	596	589	1185
Stroke	539	355	893
Inflammatory heart disease	46	81	127
COPD (emphysema and chronic bronchitis)	658	750	1409
Asthma	4101	3730	7831
Other chronic respiratory diseases	0	0	0
Liver cirrhosis	15	41	55
Nephritis/nephrosis	41	56	97
Benign prostatic hypertrophy	0	1074	1074
Rheumatoid arthritis	368	134	501
Osteoarthritis	1364	903	2266
Miscellaneous conditions Chronic fatigue/SIDS	48	20	68

Source: Burden of Disease (2001) DHS website available at:  
<https://hns.dhs.vic.gov.au/3netapps/vhisspublicsite/ViewContent.aspx?TopicID=1&SubTopicID=13>

## Disability Adjusted Life Years

Disability Adjusted Life Years (DALY), Banyule, 2001	Female	Male	Person
All causes	8051.4	8169.6	16221
Malignant cancers	1747.9	1781.6	3529.6
Diabetes mellitus	260.9	361.1	622
Mental disorders	1088.6	1082.8	2171.4
- Depression	367.2	341.5	708.7
Neurological and sense disorders	1108.5	916	2024.5
- Dementia	483.1	288.2	771.3
- Epilepsy	49.3	37.5	86.8
- Parkinsons	78.7	90.6	169.4
- Other nervous system and sense organ disorders	91.9	80.7	172.5
Ischaemic heart disease	697.8	854.8	1552.6
Stroke	539.3	376.2	915.5
COPD (emphysema and chronic bronchitis)	225.2	259.6	484.8
Asthma	188.6	185.5	374.1
Musculo-skeletal diseases	326.7	197.7	524.4
- Rheumatoid arthritis	90.9	33.8	124.7
- Osteoarthritis	159.9	117	276.9

Disability Adjusted Life Years (DALY), Nillumbik, 2001	Female	Male	Person
All causes	2889.1	3104.6	5993.7
Malignant cancers	598.1	584.3	1182.4
Diabetes mellitus	71.5	140.2	211.7
Mental disorders	576.2	519.6	1095.9
- Depression	177	150	327
Neurological and sense disorders	319.3	292.6	612
- Dementia	106	66.3	172.3
- Epilepsy	35.5	23.3	58.8
- Parkinsons	19.1	23	42.1
- Other nervous system and sense organ disorders	40.6	30.1	70.7
Ischaemic heart disease	155.5	252.7	408.2
Stroke	147.2	117.6	264.8
COPD (emphysema and chronic bronchitis)	60.8	71.2	132
Asthma	110.6	118.6	229.2
Musculo-skeletal diseases	118.4	84.6	203
- Rheumatoid arthritis	38.4	14	52.4
- Osteoarthritis	49.1	49	98

Source: Burden of Disease (2001) DHS website available at:

<https://hns.dhs.vic.gov.au/3netapps/vhisspublicsite/ViewContent.aspx?TopicID=1&SubTopicID=13>

## Disability

In 2001 it was estimated that approximately 24,126 people living in the BNPCA catchment suffered from some sort of disability.

### Disability Type Nillumbik / Banyule

Type of Condition	No. (Nillumbik)	No. (Banyule)
Acquired Brain Injury	151	433
Psychiatric	543	1054
Intellectual	245	415
Sensory	815	2,295
Physical	5,055	13,120
<b>Total</b>	<b>6,809</b>	<b>17,317</b>

(Source: Department of Human Services, Disability Services June 2001)

## Mental Health

Whilst lower than the Victorian averages, there are still a significant number of people suffering with mental health issues across Banyule and Nillumbik.

### DALY Rates for Males with Mental Disorders and Suicide

Causes	Nillumbik Rate	Banyule Rate	Vic Metro Rate
<b>Mental Disorders</b>			
Alcohol abuse/dependence	39.2	74.5	2661.9
Heroin abuse/dependence	40.2	80.8	2843.4
Schizophrenia	44.5	96.7	3116.6
Depression	150.0	341.5	10484.2
Bipolar disorder	5.3	30.4	1297.5
Social phobia	32.3	59.7	1828.5
Generalised anxiety disorder	51.4	95.6	2929.3
Borderline personality disorder	37.2	88.6	2612.5
<b>Intentional Injury</b>			
Suicide	101.2	199.1	6236.9

(Source: Burden of Disease (2001) Banyule Nillumbik <http://hns.dhs.vic.gov.au> )

### DALY Rates for Females with Mental Disorders and Suicide

Causes	Nillumbik Rate	Banyule Rate	Vic Metro Rate
<b>Mental Disorders</b>			
Alcohol abuse/dependence	16.3	25.9	746.3
Heroin abuse/dependence	9.8	28.2	863.4
Schizophrenia	42.9	77.6	2465.3
Depression	177.0	367.2	12316.5
Bipolar disorder	26.4	35.4	1453.8
Social phobia	40.2	71.1	2223.5
Generalised anxiety disorder	109.7	207.2	6233.4
Borderline personality disorder	48.3	73.4	2835.3
<b>Intentional Injury</b>			
Suicide	43.0	83.0	2364.6

(Source: Burden of Disease (2001) Banyule Nillumbik <http://hns.dhs.vic.gov.au> )

## ***Hospital Admissions***

### **All Individual Ambulatory Care Sensitive Conditions 2006-7 Banyule Nillumbik PCP**

	<b>Number of Admissions</b>	<b>Standardised Rate per 1,000 Persons</b>	<b>Average Bed days</b>	<b>Total Bed Days</b>
Diabetes complications	3401	18.85	7.10	24155
Dental conditions	559	3.08	1.12	624
Dehydration and gastroenteritis	549	3.02	2.36	1296
Chronic Obstructive Pulmonary Disease (COPD)	444	2.45	6.32	2808
Iron deficiency anaemia	394	2.15	1.52	599
Pyelonephritis	392	2.13	3.92	1535
Congestive cardiac failure	333	1.81	6.16	2052
Convulsions and epilepsy	280	1.56	3.34	936
Asthma	259	1.49	2.02	524
Angina	245	1.34	1.78	435
Cellulitis	245	1.34	4.74	1161
Ear, nose and throat infections	216	1.24	1.65	356
Gangrene	74	0.43	17.04	1261
Influenza and pneumonia	55	0.31	8.58	472
Pelvic inflammatory disease	48	0.27	2.81	135
Perforated/bleeding ulcer	38	0.20	7.79	296
Hypertension	31	0.16	2.03	63
Other vaccine-preventable conditions	27	0.15	6.44	174

More detailed data for disease prevalence and hospital admissions can be accessed at: <https://hns.dhs.vic.gov.au/3netapps/vhisspublicsite/ViewContent.aspx?TopicID=1>

***Note the dental admission figures for Banyule and Nillumbik above are for dental admissions to any public hospital in Victoria, the dental hospital sees 80% of these admissions, Austin health sees 4% of the state dental admissions. A breakdown of dental conditions is not available.***

### ***Issues***

Diabetes (NIDDM), Depression, Asthma, Osteoarthritis and COPD (emphysema and chronic bronchitis) have the highest prevalence rates in both Banyule and Nillumbik.

Diabetes, Asthma and COPD also feature in the most frequent conditions presenting to ED and requiring hospital bed days. Dental conditions Dehydration and gastroenteritis, Iron deficiency anaemia, Pyelonephritis, Congestive cardiac failure and Convulsions and epilepsy are also significant contributors to Ed presentations and hospital bed days.

Cancer, Depression, Ischemic Heart disease, Stroke, Asthma and COPD contribute most significantly to the burden of disease.

It is estimated that, with the exception of respiratory diseases (including asthma), similar, or smaller proportions, of the population in North East Valley DGP reported having any of the selected chronic conditions than in Australia as a whole. (NEVDGP Population Health Report 2004/5)

## Chronic Diseases and their impact

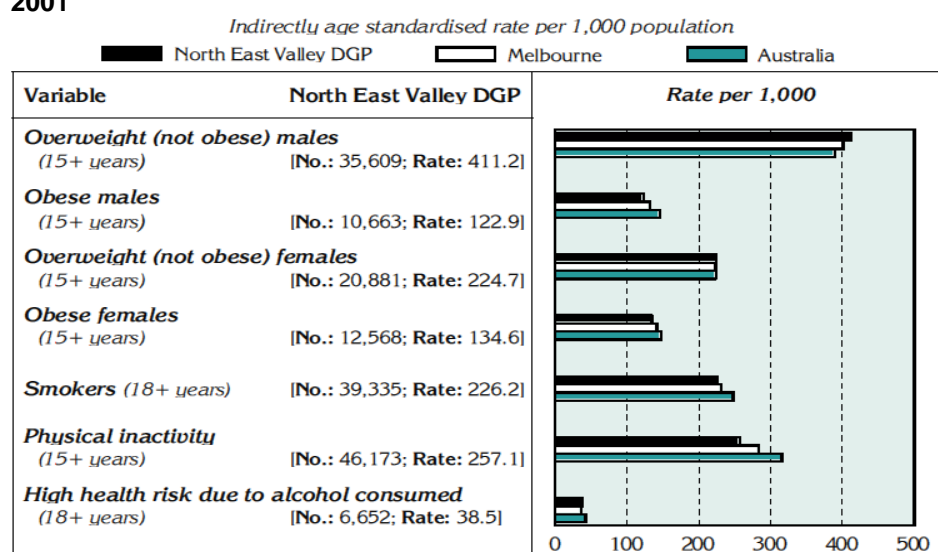
At different life stages, risk factors for chronic diseases and their determinants include genetic predisposition; poor diet and lack of exercise; alcohol misuse and tobacco smoking; poor intrauterine conditions; stress, violence and traumatic experiences; and inadequate living environments that fail to promote healthy lifestyles.<sup>3</sup>

Risk factors are also more prevalent in areas of low socioeconomic status, and in communities characterised by low levels of educational attainment; high levels of unemployment; substantial levels of discrimination, interpersonal violence and exclusion; and poverty. There is a higher prevalence of risk factors among Indigenous communities, and other socioeconomically disadvantaged Australians.<sup>4</sup>

### Risk factors

The relatively lower rates (when compared with the Australian population), for all of the listed risk factors below with the exception of overweight in males and females are consistent with the socioeconomic status profile of the area.

### Estimates of selected risk factors, North East Valley DGP, Melbourne and Australia, 2001



\* 'No.' is a weighted estimate of the number of people in the North East Valley DGP with these risk factors and has been predicted using data from the 2001 NHS and known data for the Division

<sup>3</sup>National Public Health Partnership (NPHP) (2001). Preventing Chronic Disease: A Strategic Framework. Melbourne, Victoria.

<sup>4</sup>ibid

## **Asthma**

The National Health Survey 2004-5 reported the following facts about asthma<sup>5</sup>:

- Overall prevalence of ever having been diagnosed with asthma was similar in females (20.6%) and males (19.7%).
- 10.3 % respondents answered yes to the question “do you still get asthma?” (Females 11.5% and males 8.9%).
- Primary health care is the first point of contact (often sole point of contact) for patients with mild or moderate chronic disease within the Australian health system.
- Prevalence rates are higher among Indigenous Australians compared with other Australians and was also higher among people living in the most disadvantaged localities.
- The gap in prevalence between the most advantaged and most disadvantaged localities widened between the 2001 and 2004–05 surveys.
- Less than one-quarter (23%) of people with asthma possessed a written asthma action plan in 2004–05. However, this was a substantial improvement on the rate in 2001 (17%).
- Only 14% of people with current asthma reported taking inhaled corticosteroids every day or night in the last 2 weeks, despite guidelines recommending that people with persistent asthma use this class of asthma medication twice daily.
- One-quarter of adults with asthma were current smokers and 11% of children with asthma were exposed to passive smoke at home. These rates were no different from those observed for people without asthma, despite the known added health risks to people with asthma.
- Among women, there was also a relationship between the presence of asthma and obesity.
- Compared with people without asthma, people with asthma had worse self-assessed health, higher levels of psychological distress, and more mental and behavioural problems.
- Future health gains could be achieved through interventions that would improve appropriate use of inhaled corticosteroids and written asthma action plans, reduce smoking, exposure to passive smoke and obesity among people with asthma.

A Cochrane review of effective interventions for asthma found that asthma self-management which involves self-monitoring by either peak expiratory flow or symptoms, coupled with regular medical review and a written action plan improves health outcomes for adults with asthma<sup>6</sup>.

### **Key elements of best practice care in asthma**

The National Asthma Council Guidelines for the Management of Asthma<sup>7</sup> highlight four key elements in asthma care these are:

- Assessment
- Action plans
- Regular review

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<sup>5</sup> Australian Centre for Asthma Monitoring (ACAM). *Asthma in Australia: Findings from the 2004–05 National Health Survey*. AIHW Cat. No. ACM 10. Canberra: Australian Institute of Health and Welfare, 2007.

<sup>6</sup> Gibson PG, Powell H, Coughlan J *et al*. Self-management education and regular practitioner review for adults with asthma. *Cochrane Database Syst Rev* 2001; CD001117.

<sup>7</sup> National Asthma Council Australia (NAC). *Asthma Management Handbook 2006*. Melbourne: NAC, 2006. Available at: [www.nationalasthma.org.au](http://www.nationalasthma.org.au)

- Self management support

### **Assessment**

Diagnosis and assessment should include:

- Access to spirometry for making the diagnosis and for assessing asthma control in response to treatment (patients 7 years and older), including correct technique and interpretation
- Assessment of trigger factors and avoidance
- Assessment for exposure to environmental tobacco smoke
- Review the patients use of, and access to, asthma related medication and devices
- Assessment for conditions that are related or affect asthma management e.g. obstructive sleep apnoea, gastro-oesophageal reflux disease, comorbid mental illness
- Immunisation according to risk group, based on national guidelines.

### **Action plans**

Asthma action plans should:

- Be individualised and in written format
- Contain information so that a person with asthma can recognise deterioration and respond appropriately
- Be based on symptoms and/or peak flow measurements

### **Regular review**

Systematic monitoring and review has been identified as a key component to improving asthma outcomes.

Regular review should include:

- Asthma control
- Correct use of medicines
- Inhaler technique, self monitoring
- Comorbid issues
- Discussion and updating of asthma action plan

### ***Information on guidelines and consumer information***

More information on best practice guidelines for asthma can be found in the “*Asthma Management Handbook 2006*”. Available at: [www.nationalasthma.org.au](http://www.nationalasthma.org.au)

Assessment and treatment guidelines for paediatric asthma produced by the Monash Medicine available at: <http://www.med.monash.edu.au/paediatrics/resources/asthma.html#plan>

***Critical intervention points for the care and support of people with asthma.***

<b>Intervention point</b>	<b>Strategies</b>
<b>Reduce the risk of asthma</b>	<p>Provide programs that provide the community with access to consistent and evidence based information that enables people to know and understand their risk of developing asthma and opportunities to reduce that risk.</p> <p>Provide programs that enable routine detection of smoking status and provision of smoking cessation advice and effective intervention for all pregnant women, the interventions should be tailored to peoples needs with more intensive interventions developed for at risk women, parents of young children, and disadvantaged groups including Aboriginal and Torres Strait Islander women.</p>
<b>Find asthma early</b>	<p>Develop diagnosis and referral pathways to facilitate asthma diagnosis.</p>
<b>Interventions for long term care</b>	<p>Improve programs to provide a smoking cessation intervention linked to asthma education programs.</p> <p>Improve access to accredited self management education programs to help people with asthma.</p> <p>Develop models of care that identify and effectively manage psychosocial aspects of asthma.</p>
<b>Acute episodes</b>	<p>Develop and implement strategies to ensure national guidelines and policy development in schools, workplaces, sporting organisations for the management of asthma in these settings.</p> <p>Provide training in asthma first aid in schools, workplaces, sporting organisations.</p> <p>Enhance the promotion, availability and maintenance of asthma first aid kits in schools, workplaces and sporting organisations.</p>
<b>Asthma emergencies</b>	<p>Undertake educational programs to help people in the community recognise an asthma attack and deal with their own and others appropriately.</p> <p>Develop and implement strategies of improved care coordination on discharge after emergency care that addresses access to affordable medication and to appropriate community care.</p>

Source: National Health Priority Action Council. (NHPAC) (2006). National Service Improvement Framework for Asthma. Australian Government Department of Health and Ageing Canberra.  
<http://www.health.gov.au/internet/main/publishing.nsf/Content/pq-ncds-asthma>

## Diabetes

Almost 1 in 4 Australians, 25 years and over has either diabetes or a condition of impaired glucose tolerance. For every known case of diabetes there is one undiagnosed case. The number of adults with diabetes has trebled since 1981. It is estimated that by 2010 diabetes will affect 1.23 million Australians.<sup>8</sup>

The prevalence of diabetes in Australia in the population aged over 25 years is 7.5%. Prevalence rates increase with age 17.9% of 64-75 years will have diabetes and in the 75+ years 23.0%.<sup>9</sup>

The prevalence is higher in indigenous populations and certain culturally and linguistically diverse (CALD) populations.<sup>10</sup> Groups with higher prevalence rates include people of Indian, Chinese, Micronesian and Polynesian background.

The majority of people with diabetes have Type 2 diabetes. Type 2 diabetes is strongly associated with lifestyle related risk factors such as obesity and lack of physical activity that are modifiable<sup>11</sup> and there is evidence to suggest that the development of type 2 diabetes and the progression of impaired glucose tolerance to Type 2 diabetes can be prevented.<sup>12, 13, 14</sup>

### Risk Factors for diabetes:

- Over 55 years of age
- Over 45 years of age and have immediate family members with Type 2 diabetes
- Over 45 years of age and have high blood pressure
- Over 45 years of age and are overweight
- Over 35 years of age and from Aboriginal or Torres Strait Islander background
- Over 35 years of age and from Pacific Islander, Indian subcontinent or Chinese cultural background
- Have impaired fasting glucose or impaired glucose tolerance (that is, pre-diabetes)
- Have heart disease or have had a heart attack
- Women who have had gestational diabetes
- Women who have polycystic ovarian syndrome and are overweight<sup>15</sup>

Gestational diabetes occurs during pregnancy in 3-8% of pregnant females. Gestational diabetes increases the risk of developing Type 2 diabetes later in life, with a 30–50% chance of developing diabetes within 15 years of pregnancy.

The incidence of Gestational Diabetes is increased amongst women born in the Indian subcontinent, Africa, Vietnam, Mediterranean nations, Egypt and other Arabic countries and other Asian countries.

The chronic complications of Diabetes Mellitus are a significant cause of morbidity and mortality. The AusDiab 2005 Study undertaken by the International Diabetes Institute found that:

- Over five years, people with previously known diabetes were twice as likely to die as were those with normal glucose tolerance, and
- Over two thirds of all cardiovascular disease deaths occurred in people with diabetes and pre diabetes.<sup>16</sup>

<sup>8</sup> Dunstan D, et al. *Diabetes & Associated Disorders in Australia; the Accelerating Epidemic*. International Diabetes Institute, Melbourne, 2001.

<sup>9</sup> Idib

<sup>10</sup> Australian Institute of Health and Welfare (AIHW). *Australia's Health 2000*. AIHW Cat No AUS19. Canberra: AIHW, 2000.

<sup>11</sup> Colagiuri S, Colagiuri R, Ward J. *National Diabetes Strategy and Implementation Plan*. Diabetes Australia, 1998

<sup>12</sup> Pan X, Guang-Wei L, Ying-Hau, et al *Effects of Diet and Exercise in Preventing NIDDM in People with Impaired Glucose Tolerance*. *Diabetes Care*, 20 (4) : 537-544. 1997.

<sup>13</sup> Tuomilehto J, Lindstrom J, Erikson J, et al. *Prevention of Type 2 Diabetes Mellitus by Changes in Lifestyle Among Subjects with Impaired Glucose Tolerance*. *New England Journal of Medicine*, 344 (18): 1343-1350. 2001

<sup>14</sup> Knowler WC, Barrett-Connor E, Fowler SE, et al. *Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin*. *N Engl J Med*, 346:393-403. 2002

<sup>15</sup> Source: Diabetes Australia (Victoria) *Diabetes Epidemic Affects all Communities* (Media Kit, 22 November, 2006)

The physical and financial burdens of diabetes complications are considerable for the individual and for the health care system.

Research has clearly demonstrated that for people with type 2 diabetes controlling blood glucose levels and blood pressure can reduce the risk of diabetes complications<sup>17</sup>.

### **Information on guidelines and consumer information for diabetes**

#### **National Standards of Practice for Diabetes Educators<sup>18</sup>**

##### **Standard 1 – Client Assessment**

A systematic approach is used to conduct a thorough, individualised assessment with the person with diabetes, their families and others to enable an appropriate education plan to be developed.

##### **Standard 2 – Resources**

The educational setting is conducive to learning, within the context of available resources and with awareness of cultural background.

##### **Standard 3 – Educational Outcomes**

A documented educational plan reflects current diabetes care practices, appropriate teaching/learning principles, a flexible approach to teaching and respect for lifestyle, cultural background and health beliefs.

##### **Standard 4 – Professional Practice**

The diabetes educator is either registered with the appropriate state or territory registration board or, where no such registration board exists, is recognised as being qualified to practise by the appropriate national professional association, assumes responsibility for their professional development and pursues continuing education to ensure their practice remains current, reflects the needs of the community and the ADEA credentialling program.

##### **Standard 5 – Quality Management**

A quality management program, appropriate to the clinical environment is used to monitor and evaluate the practice of the diabetes educator.

##### **Standard 6 – Organisational Structure**

There is an organisational structure with a documented philosophy and objectives that is used as a guide for planning, implementing and evaluating all aspects of diabetes care.

##### **Standard 7 – Policies and Procedures**

Policies and procedures provide the framework that enables the objectives of the diabetes education service to be achieved.

The Australian Diabetes Educators Associations has also developed a number of other guidelines including:

- National Standards for Diabetes Education Programs
- Sick Day Guidelines: Guidelines for Sick Day Management for People with Diabetes

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<sup>16</sup> Barr ELM, Magliano DJ, Zimmet PZ, et al. *AusDiab 2005 The Australian Diabetes, Obesity and Lifestyle Study*. International Diabetes Institute, Melbourne, 2006.

<sup>17</sup> UK Prospective Diabetes Study (UKPDS) Group. Intensive blood glucose control with sulphonylureas or insulin compared with conventional treatment and the risk of complications in Type 2 Diabetes. *Lancet* 1998; 352: 837-53

<sup>18</sup> National Standards of Practice for Diabetes Educators Australian Diabetes Educators Association. 2003 Available at: <http://www.adea.com.au/public/content/ViewCategory.aspx?id=39>

- National Standards for the Development and Quality Assessment of Services Initiating Insulin in the Ambulatory Setting
- Guidelines for the Management and Care of Diabetes in the Elderly

Available at: <http://www.adea.com.au/public/content/ViewCategory.aspx?id=39>

### **Best practice care in diabetes**

Best-practice guidelines for the prevention, diagnosis and management of diabetes that have been developed for health professionals by Diabetes Australia and NHMRC these guidelines can be accessed on the Diabetes Australia website and include:

- Diabetes Management in General Practice
- National Evidence Based Guidelines for the Management of Type 2 Diabetes
- Outcomes & Indicators for Diabetes Education: a National Consensus Position
- Information and Education for People with Diabetes: a 'Best Practice' Strategy

<http://www.diabetesaustralia.com.au/For-Health-Professionals/Diabetes-National-Guidelines/>

Information for consumers is also available on the DA website:

[www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au)

Information and online support for people with Type 1 diabetes is available at:

[http://www.realitycheck.org.au/what\\_is\\_reality\\_check.htm](http://www.realitycheck.org.au/what_is_reality_check.htm)

### **Critical intervention points for diabetes management and considerations for improving access for disadvantaged groups.**

<b>Critical intervention point</b>	<b>Improving access for disadvantaged groups.</b>
Reduce Risk	<p>Provide culturally appropriate information on lifestyle factors that may help mitigate the risk especially to high risk groups.</p> <p>Provide specific information and risk reduction programs to people from lower socioeconomic, culturally and linguistically diverse and Aboriginal and Torres Strait Islanders backgrounds.</p>
Diagnose early	<p>Provide culturally appropriate access to high quality early detection and case detection services for high risk groups especially Aboriginal and Torres Strait Islanders and people from culturally and linguistically diverse backgrounds.</p> <p>Provide appropriately tailored information about the manifestations of diabetes and the importance of early diagnosis for people from disadvantaged groups, Aboriginal and Torres Strait Islander peoples and people from culturally and linguistically diverse communities.</p>
Best Care and support in early stages	<p>Provide information that is tailored to the cultural, language and literacy needs of people with diabetes their families and carers.</p> <p>Provide access to affordable equipment to aid self management of diabetes.</p> <p>Develop appropriate referral pathways and to support community based screening for the complications of diabetes to improve access for people from disadvantaged groups, Aboriginal and Torres Strait Islander peoples and people from culturally and linguistically diverse communities.</p>
Best long term care and support	<p>Provide access to acceptable accountable and appropriate care, irrespective of linguistic or cultural background.</p> <p>Develop appropriate referral pathways to ensure access to services that enable avoidance of unnecessary hospitalisations.</p> <p>Provide information about self management and complications tailored to the cultural, language and literacy needs of people with diabetes their families and carers.</p>
Best care and support for acute episodes	<p>Provide information to assist people with diabetes identify and respond to impending deterioration in diabetes management, take appropriate action access appropriate support services that is tailored to their cultural, language and literacy needs.</p>

Source: National Health Priority Action Council. (NHPAC) (2006). National Service Improvement Framework for Diabetes. Australian Government Department of Health and Ageing, Canberra.

<http://www.health.gov.au/internet/main/publishing.nsf/Content/pq-ncds-diabetes>

## ***Ischemic Heart Disease***

Ischaemic heart disease is also known as coronary heart disease (CHD) and includes heart attack and angina. It is the most common form of heart disease.

### **Risk factors**

Risk factors for CHD include<sup>19</sup>:

- tobacco smoking
- high blood pressure
- high cholesterol
- physical inactivity,
- excess body weight
- poor diet
- diabetes

It is estimated that in 2005 there were more than 47,700 CHD events for those aged 40–90 years. This equates to 511 CHD events per 100,000 population.

More CHD events were experienced by males than females, with 706 CHD events per 100,000 population for males compared with 339 per 100,000 for females.

There are no currently endorsed indicators for the prevalence of ischaemic heart disease in Australia.

From the 2004–05 National Health Survey, it is estimated 3% of the adult population have ischaemic heart disease.

In 2005, 11,200 males and 8,200 females died after experiencing a coronary heart disease event.

Ischaemic heart disease is a major cause of death, claiming 25,439 lives in 2003 (19.2% of all deaths).<sup>20</sup>

Death rates from heart, stroke and vascular diseases for Indigenous Australians are 2.6 times higher than for other Australians.<sup>21</sup>

People from lower socioeconomic groups are more likely to die from heart, stroke and vascular diseases than people from higher socioeconomic groups.<sup>22</sup>

### ***Information on guidelines and consumer information for IHD***

The National Heart Foundation of Australia has a selection of guidelines and publications that cover issues relevant to heart disease management including hypertension and exercise recommendations and cardiac rehabilitation programs. The website also has resources for consumers to learn about their condition and about research and treatment trends including Managing my heart health (MMHH) – A resource for people with or a high risk of coronary heart disease

Managing My Heart Health is an interactive self-management resource for patients with or at high risk of coronary heart disease. It mirrors the content of the newly updated Reducing Risk in Heart Disease 2008 guidelines (see Resources below) and provides patients with lifestyle, medical and psychosocial strategies on how they can reduce their risk of further heart problems. Key features of this valuable resource include:

- comprehensive evidence-based risk factor information in a concise format;

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<sup>19</sup> Australian Institute of Health and Welfare 2008. Indicators for chronic diseases and their determinants, 2008. Cat. no. PHE 75. Canberra: AIHW.

<sup>20</sup> Australian Government Department of Health and Ageing, Canberra. Website - Conditions and Diseases section, accessed on 26/3/09. <http://www.health.gov.au/internet/main/publishing.nsf/Content/pq-cardio-overview-stats>

<sup>21</sup> *ibid*

<sup>22</sup> *ibid*

- Self-management tools including action plans, a Medicines List card and a summary self-monitoring record (MMHH At A Glance) to help patients keep on track, and help facilitate discussion with their health professionals.

For summary version of MMHH and HP guidelines are available on the Heart Foundation website: <http://www.heartfoundation.org.au>

### Critical intervention points for the care and support of people with heart disease.

Critical intervention points	Strategies
<b>Reduce Risk</b>	Establish systems and tools to enable absolute risk estimation in people without overt cardiovascular disease ( including early detection and management of high blood pressure and dyslipidaemia).
<b>Early detection, care and support</b>	<p>Promote awareness of the need for regular monitoring of pressure blood, cholesterol and the symptoms of diabetes.</p> <p>Promote awareness of the early symptoms heart disease and emergency response.</p> <p>Develop systems that include absolute risk measurements that help people understand their individual risk.</p> <p>Provide people with appropriate information about the disease, treatment options and expected outcomes, follow up and support services to facilitate self management and the physical and psychological and economic impacts on their lives.</p> <p>Improve access to self management education programs and support groups to help people develop the knowledge and skills and confidence to self manage.</p> <p>Establish systems of care to reinforce the importance of risk reduction in people with established heart disease.</p>
<b>Best Care and Support for Acute Episodes</b>	<p>Develop systems to improve the coordinated multidisciplinary care, including appropriate care plans, referral pathways and designated coordinators of care.</p> <p>Improve access to treatment services for all Australians including Aboriginal and Torres Strait Islanders.</p>
<b>Best Long Term Care and Support</b>	<p>Develop and implement strategies to support a multidisciplinary team approach which promotes continuity of care.</p> <p>Implement policies to encourage safe and quality use of medicines.</p> <p>Ensure that the psychological needs of people with heart disease are met across the patient journey.</p> <p>Support access to rehabilitation services for people with heart disease.</p> <p>Improve access to culturally appropriate information care and support in particular for Aboriginal and Torres Strait Islanders and people with diverse language and literacy needs.</p>
<b>Best Care in the Advanced Stages</b>	<p>Services will adequately inform people and caregivers for the future course of the illness and pathways of care.</p> <p>People will be informed about advance directives and receive appropriate support.</p> <p>Programs will be in place to provide information and support to caregivers and reduce caregiver and patient health problems.</p>

Source: National Health Priority Action Council. (NHPAC) (2006). National Service Improvement Framework for Heart, Stroke and Vascular Disease Diabetes. Australian Government Department of Health and Ageing, Canberra. <http://www.health.gov.au/internet/main/publishing.nsf/Content/pq-ncds-cardio>

## Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is a serious, progressive and disabling disease in which destruction of lung tissue and narrowing of the air passages obstruct oxygen intake causing chronic shortness of breath.

The term Chronic Obstructive Pulmonary Disease (COPD) covers those long term lung conditions which are characterised by shortness of breath, such as chronic bronchitis and emphysema. Whilst each condition can occur on its own, many people have a mixture of the two problems.

There are currently no nationally endorsed indicators for COPD.<sup>23</sup>

Prevalence of COPD is difficult to estimate largely due to differences in how it is defined.

From the 2004–05 NHS, it is estimated that 590,000 people (3% of the population) had bronchitis/emphysema. Rates increased with age: of those aged under 35 years, less than 2% reported bronchitis/emphysema, whereas 8% of those aged 65 years and over reported the condition.<sup>24</sup>

In 2005, there were almost 4,900 deaths due to COPD in Australia. The age-standardised death rate for males was 31 deaths per 100,000 population and for females, 16 deaths per 100,000. The mean age at death for both males and females was 78 years.<sup>25</sup>

COPD usually occurs in people who have smoked or continue to smoke cigarettes. Exposure to irritants like dust and fumes can also increase the risk of developing COPD, but are not usually the primary cause.

A very small proportion of emphysema cases are caused by an inherited problem called alpha-1-antitrypsin deficiency.

People are encouraged to speak to their doctor if they answer yes to any three of these questions.

- Do you cough several times most days?
- Do you bring up phlegm or mucous most days?
- Do you get out of breath more easily than others your age?
- Are you over 40 years old?
- Are you a smoker or ex-smoker?

### ***Information on guidelines and consumer information for COPD***

A number of useful resources are available on the Australian and New Zealand COPD Reference site including:

- A consumer questionnaire and action plan
- A COPD Checklist with the essential elements of The COPDX Plan: Australian and New Zealand Guidelines for the management of COPD. The simple tool allows general practitioners and other health professionals to follow best practice when diagnosing and managing patients with COPD.

<http://www.copdx.org.au/checklist/index.asp>

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<sup>23</sup> Australian Institute of Health and Welfare 2008. Indicators for chronic diseases and their determinants, 2008. Cat. no. PHE 75. Canberra: AIHW.

<sup>24</sup> *ibid*

<sup>25</sup> *ibid*

## Summary of the COPD guidelines

Source: The COPDX Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease 2003

David K McKenzie, Peter A Frith, Jonathan G W Burdon and G Ian Town

MJA 2003 178(6 Suppl): S1-S40

*Note: A revised version of these guidelines is being developed and will be available at*

<http://www.copdx.org.au/guidelines/index.asp>

<b>C: Confirm diagnosis and assess severity</b>	<p>Smoking is the most important risk factor for COPD</p> <p>Consider COPD in patients with other smoking-related diseases</p> <p>Consider COPD in all smokers and ex-smokers older than 35 years</p> <p>The diagnosis of COPD rests on the demonstration of airflow limitation which is not fully reversible</p> <p>If airflow limitation is fully or substantially reversible, the patient should be treated as for asthma</p>
<b>O: Optimise function</b>	<p>Inhaled bronchodilators provide symptom relief in patients with COPD and may increase exercise capacity</p> <p>Long-acting bronchodilators provide sustained relief of symptoms in moderate to severe COPD</p> <p>Long term use of systemic glucocorticoids is not recommended</p> <p>Inhaled glucocorticoids should be considered in patients with a documented response or those who have severe COPD with frequent exacerbations</p> <p>Identify and treat hypoxaemia and pulmonary hypertension</p> <p>Prevent or treat osteoporosis</p> <p>Pulmonary rehabilitation reduces dyspnoea, anxiety and depression, improves exercise capacity and quality of life and may reduce hospitalisation</p> <p>In selected patients, a surgical approach may be considered for symptom relief</p>
<b>P: Prevent deterioration</b>	<p>Smoking cessation reduces the rate of decline of lung function</p> <p>Treatment of nicotine dependence is effective and should be offered to smokers</p> <p>Pharmacotherapies double the success of quit attempts; behavioural techniques further increase the quit rate by up to 50%</p> <p>Influenza vaccination reduces the risk of exacerbations, hospitalisations and death</p> <p>No medication has yet been shown to prevent the long-term decline in lung function</p> <p>Long-term oxygen therapy (&gt; 15 h/day) prolongs life in hypoxaemic patients</p> <p>Inhaled glucocorticoids are indicated for patients with a documented response or who have severe COPD with frequent exacerbations</p> <p>Mucolytics may reduce the frequency and duration of exacerbations</p>
<b>D: Develop support network and self-management plan</b>	<p>Pulmonary rehabilitation increases patient/carer knowledge base, reduces carer strain and develops positive attitudes towards self-management and exercise</p> <p>COPD imposes handicaps which affect both patients and carers</p> <p>Multidisciplinary care plans and individual self-management plans may help to prevent or manage crises</p> <p>Enhancing quality of life and reducing handicap requires a support team</p> <p>Patients and their family/friends should be actively involved in a therapeutic partnership with a range of professional disciplines</p> <p>Patients should be encouraged to take appropriate responsibility for their own management</p>
<b>X: Manage eXacerbations</b>	<p>Inhaled bronchodilators are effective treatments for acute exacerbations</p> <p>Systemic glucocorticoids reduce the severity of and shorten recovery from acute exacerbations</p> <p>Exacerbations with clinical signs of infection (increased volume and change in colour of sputum and/or fever, leukocytosis) benefit from antibiotic therapy</p> <p>Multidisciplinary care may assist home management Early diagnosis and treatment may prevent admission</p>

## Depression

Depression (including depressive disorders) is a common mental disorder that can occur regardless of people's sex, age and background. It presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. Problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities.<sup>26</sup>

Depression is more common in some families than in others, and this may indicate a genetic vulnerability to the condition.

Stressful factors in a person's environment can also be contributing factors such as

- Poverty
- Unemployment
- child abuse
- exposure to adverse life events (for example, relationship break-ups, trauma and family illness).

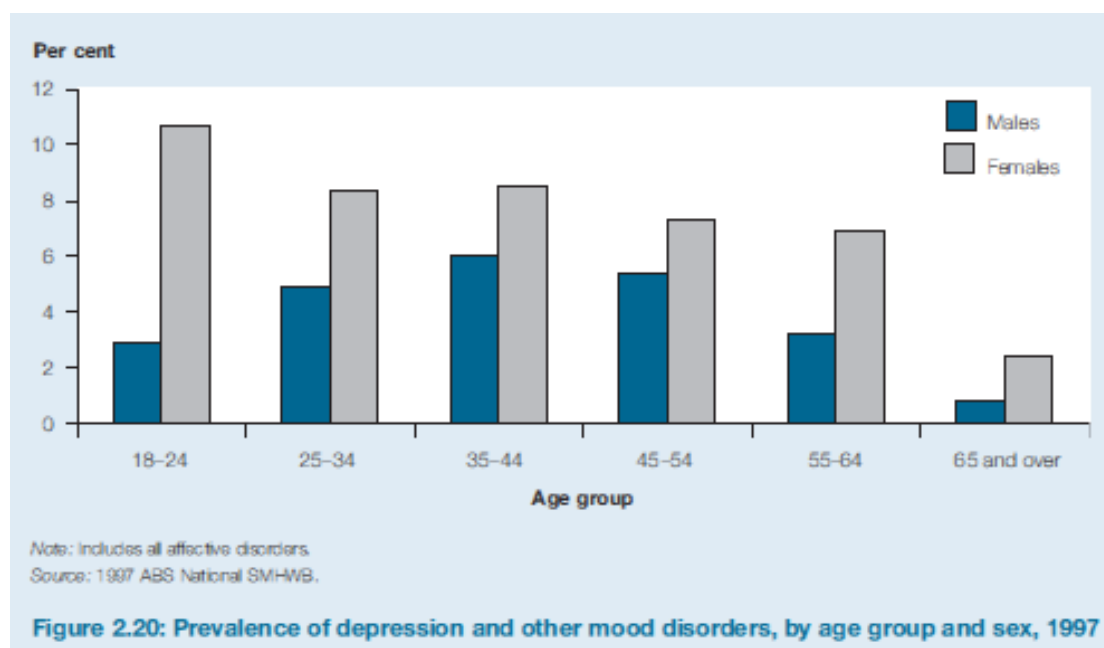
Certain risk behaviours such as illicit drug use, alcohol misuse and dependence, and eating disorders and excess weight often occur in combination with depression.<sup>27</sup>

Depression is often present in people who have been diagnosed with chronic diseases such as cardiovascular disease, diabetes, cancer and rheumatoid arthritis.<sup>28</sup>

The 1997 ABS National Survey of Mental Health and Wellbeing (SMHWB) survey showed that 5% of adults had experienced depression during the 12 months before the survey.

Females reported higher rates of depressive disorders than males for all adult age groups.

For both sexes, those who were aged 65 years and over reported lower rates than other age groups. These figures are similar to self-reported data in the 2004 NHS.<sup>29</sup>



Source: Australian Institute of Health and Welfare 2008. Indicators for chronic diseases and their determinants, 2008. Cat. no. PHE 75. Canberra: AIHW.

<sup>26</sup> Australian Institute of Health and Welfare 2008. Indicators for chronic diseases and their determinants, 2008. Cat. no. PHE 75. Canberra: AIHW.

<sup>27</sup> *ibid*

<sup>28</sup> *ibid*

<sup>29</sup> *ibid*

## Guidelines for treating depression in primary care<sup>30</sup>

- Treatment plans should always be based on thorough assessment, including the type, severity and duration of the depressive episode, and any stressors that contributed to the episode.
  - It is also important to discover the stressors that have contributed to or exacerbated the episode, and to examine the supports and resources the person has to assist with coping. It is also essential to assess the risk of suicide (or self-harm) and risk to others, either through violence or through neglect (eg, care of babies or young children during the postpartum period).
- For mild and moderate depression, meta-analysis shows there is little difference in relative effectiveness of treatments, and continuation of therapy is more important than initial treatment choice.
  - Repeated formal assessment of severity (eg, using the Hamilton Rating Scale for Depression (Licence required to use HAD scale), Center for Epidemiological Studies Depression Scale, or other, similar scales) will assist with the selection of evidence-based treatment(s) and facilitates monitoring of the effectiveness of treatment.
- The best outcomes are likely when a good therapeutic alliance is formed between a healthcare professional and the patient, and adequate treatment is provided over a long enough period. For pharmacological interventions, treatment should continue for:
  - at least one year for a first episode of depression, and
  - at least two years for repeated episodes or where there are other risk factors for relapse.

Full version of guidelines including treatment options available on link below:

[http://www.mja.com.au/public/issues/176\\_10\\_200502/ell10082\\_fm.html](http://www.mja.com.au/public/issues/176_10_200502/ell10082_fm.html)

Center for Epidemiological Studies Depression Scale, can be accessed on the Stanford University website: <http://patienteducation.stanford.edu/research/cesd.html>

The Royal Australian and New Zealand College of Psychiatrists (RANZCP) Clinical Practice Guidelines for depression provide a more detailed outline of clinical management options and can be accessed on the link below. Consumer versions of the guidelines are also available on the link below:

<http://www.ranzcp.org/resources/clinical-practice-guidelines.html>

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<sup>30</sup> Treating depression: the *beyondblue* guidelines for treating depression in primary care." Not so much what you do but that you keep doing it" Pete M Ellis and Don A R Smith MJA 2002; 176 (10 Suppl): S77-S83  
[http://www.mja.com.au/public/issues/176\\_10\\_200502/ell10082\\_fm.html](http://www.mja.com.au/public/issues/176_10_200502/ell10082_fm.html)