The Crossroads Rural Health Studies

HEALTHIN THE SEYMOUR COMMUNITY



School of Rural Health Department of Rural Health University of Melbourne

Includes Crossroads Household Survey Parts 1 and 2, and the Crossroads Undiagnosed Disease Study

INTRODUCTION

Health research has found that rural people tend to have poorer health than their metropolitan counterparts.^{1,2} Poorer health in the rural population is evidenced by higher mortality and morbidity rates, resulting in a lower life expectancy.^{1,5} Australia's rural population also has a higher hospitalisation rate for some causes of ill health,^{1,3} such as accident and injury, road vehicle accidents, burns and scalds and diabetes.¹ There is, however, limited comprehensive information on the health status of rural Australians, making assessment of the populations health and their health service needs extremely difficult.^{2,4}

Many factors contribute to poorer health of the rural population in Australia. Documented factors include geographic isolation, access to care, shortage of health care providers, lack of health services, socioeconomic differences, a higher probability of accident and injury, poorer road quality and small populations spread over a greater distance. These and most Australian rural health statistics are based on overall statistics collected from states and non-metropolitan regions. Little information exists at a local level that provides a detailed understanding of the health profile of specific rural communities and compares differences between rural communities.

The aim of the Crossroads Rural Health Studies was to collect detailed information about health, health behaviours, lifestyles and access to health services in communities across the Goulburn Murray region. The information will be used to identify the needs of consumers and the local community and thus contribute to health service planning and shaping rural health policy. The Crossroads Rural Health Studies are unique, as they provide the most detailed rural health information in Australian communities.

THE TOWN OF SEYMOUR

Seymour is situated on the Goulburn Valley Highway, some 97 kilometres north of Melbourne. The town is bordered by the Hume Freeway to the north west and by the Goulburn River to the south, and is home to 6,441 people. Before European settlement, the Seymour area was home to the Natrakboolok people. Hume and Hovell were the first Europeans in the area in 1824, followed by Thomas Mitchell and his party in 1836. Overlanders settled with their cattle in 1837 and most of the Seymour area was occupied by 1839. 12

In 1838 an overland mail route was established from Melbourne to Sydney. It followed the previously discovered route which crossed the Goulburn River near Mitchellstown. However it was found that 16 kilometres could have been saved if the route had crossed the Goulburn River at a point to the south. The route was therefore moved and the Seymour township developed around the 'new crossing point'. John Clark, the hotelier at the time, established a punt service and a crude inn at the new crossing point. The new location was considered a more promising town site and in 1843 Thomas Mitchell named the area Seymour, after Lord Seymour, a British parliamentarian. 12

As traffic increased on the road to Sydney a second hotel was established. 1846 saw the opening of the first schoolhouse, which was followed by the opening of a flourmill, general stores and tradesman shops. The Gold Rush in 1851 was very beneficial for the town, as it increased the population and added a number of small farms to the settlement area.¹²

Seymour was declared a town in 1863, bringing about a period of rapid change. Churches, banks and businesses opened and a bridge was built over the Goulburn River. 1872 saw the arrival of the railway, which allowed Seymour to become the goods receival centre for the district. Being an important rail junction, Seymour soon became known as a 'railway town' and was home to a number of workshops and an administrative centre, providing employment and an injection of funds into the local economy.¹²

Seymour has a long association with the army and has been the site of army training camps since 1904. The town in the present day provides a service centre for the army base at Puckapunyal. The rail connection, local terrain, good water supply and "agreeable property owners" made Seymour a convenient assembly point for military trainees. 12

Today Seymour is a large regional centre with 9 full time practicing GP's. The Seymour District Memorial Hospital has 34 acute beds and provides Obstetric/Maternity Services, Nursing Home Care Unit, Domiciliary Care Service, Maintenance Renal Dialysis Unit and a Rehabilitation Unit. Other allied health services in Seymour include Physiotherapy, Chiropractors and Massage Therapists.

METHOD

The Crossroads Rural Health Studies are a collection of population health studies, involving residents of Shepparton and Mooroopna along with the 6 shire capitals in the region, namely Alexandra, Benalla, Cobram, Echuca, Euroa and Seymour. A total of 9,260 people participated in the studies with 1,455 undertaking a health check up.

A questionnaire was designed which included key questions used in many health studies throughout the world, so that comparisons between the Goulburn Murray and other areas could be made. In addition, some questions asked about specific local issues and respondents were given the opportunity to raise issues of concern to them. Residential addresses were randomly selected from household garbage collection/water lists. The household survey was undertaken in two parts with recruitment approaches differing between the first and second parts. All members of the household were invited to participate. Between September 2000 and December 2002 fieldworkers visited each house selected and interviewed each member of the household. For children under 16, interviews were completed by the parent/guardian. A total of 646 questionnaires were completed from residents of Seymour. All this information was entered into the computer database and statistically analysed. The household response rate for the studies were 67%.

Some residents were again asked to attend a free, 2-hour health clinic in their own community. At this clinic, the participants were tested for hearing, eye sight and a range of undiagnosed diseases, including diabetes, heart diseases, respiratory disease, blood pressure, liver function, and cholesterol levels. Participants received a health report with the test results. The response rate for the Undiagnosed Disease Study was 61%. This information was analysed anonymously and collectively to determine the health status of each community.

FINDINGS

A total of 540 adults completed the survey in Seymour. Of these, 43% were male and 57% were female (see Table 1). Of the 540 respondents, 6 in 10 were either married or living in a de facto relationship and 42% had residents under the age of 18 living in the home. Length of residence ranged from less than 1 year to over 80 years, with an average of 20 years.

Table 1: Characteristics of the Seymour samples (Part 1 & Part 2)

Characteristics	Seymour	All participants
Number of Adults Surveyed	540	6,375
% Female	57%	57%
% Married/de facto	60%	67%
% Speak English at home	99%	97%
% Own their Dwelling	62%	70%
Average Length of Residence	20 years	21 years
% With Private Health Insurance	37%	43%
% Completed Secondary School	42%	47%
% Working Part-time in Paid labour	17%	34%
% Working Full-time in Paid Labour	33%	17%
% Retired	20%	19%
Weekly Income	\$544	\$580

Two thirds of the respondents owned their house or unit and 27% were living in rental accommodation. The percent of people who were living in their own home was the same as the national average of 66%. From the 540 respondents, four in ten had private health insurance, similar to the Australian average (45%).

Of the 540 adults who completed the survey in Seymour:

- > 8% had completed a university degree
- ➤ 42% had completed secondary school and/or a trade certificate (including 8% with University degrees)
- > 40% had completed year 9 or more, but not year 12
- > 18% left school before year 9

In Seymour, the employment status of respondents was:

- > 33% of respondents worked full-time
- > 17% worked part-time
- ≥ 20% were retired
- > 7% were not working but not retired
- > 3% were permanently unable to work

Most households in Seymour earned between \$120 and \$999 per week before tax. The median was \$544. In addition, 62% had access to a computer at least weekly and 42% had access to the internet at least weekly.

LIVING IN SEYMOUR

All 540 residents were asked how sorry or pleased they would be to leave Seymour. A total of 70% reported they would be very sorry or somewhat sorry to leave Seymour. Over half (54%) the respondents were members of a local community club, group or organisation, with some being involved in up to seven different groups.

Respondents were asked to indicate how concerned they were about a range of issues in their local area. Respondents were provided with a four-point scale from 'not at all concerned' to 'very concerned'. Table 2 presents the percent of respondents who indicated they were concerned or very concerned. Over half the respondents were concerned about unemployment and crime.

Table 2: Concern about local issues in Seymour

Issue	Concerned	Very Concerned
Unemployment	27%	55%
Crime	26%	52%
Quality of education	19%	25%
Quality of health	20%	23%
Future of farming	23%	16%

Respondents were also asked to rate their satisfaction with local services and facilities (see Table 3). Most respondents (81%) were satisfied with the local hospital and 6 in 10 were satisfied with the local schools.

Table 3: Satisfaction of local services in Seymour

Local Service	Dissatisfied ¹	Satisfied ²
Local Hospital	7%	81%
Local Schools	7%	63%
Local Transport	24%	48%
Access to exercise facilities	25%	40%
Local government	35%	30%
Local entertainment	58%	20%

¹ This includes respondents rating the item as 'dissatisfied' and 'very dissatisfied'

HEALTH

Self reported health status is a commonly used measure of an individual's health. The proportion of respondents in Seymour who rated their health as excellent, very good and good (80%) was similar to the Victorian average (82%). When asked to rate their own health, respondents rated their health in the following ways:

- > 13% as excellent
- > 30% as very good
- > 37% as good
- > 17% as fair
- > 3% as poor

As an indicator of quality of life, respondents were asked to rate their happiness:

- 23% reported being very happy
- > 36% reported being happy
- > 13% were somewhat happy
- ➤ 21% felt mixed (equally happy and unhappy)

A further 4% described themselves as somewhat unhappy and 3% as unhappy or very unhappy.

Respondents were also asked if they had a range of medical conditions (see Table 4). Eye problems (which included wearing glasses), high blood pressure, allergies, asthma and arthritis were the most common conditions similar to the Australian average. In addition, 19% of respondents also indicated an injury had prevented respondents from attending work or school.

² This includes respondents rating the item as 'satisfied' and 'very satisfied'

Table 4: Self-reported medical conditions

Medical condition	Percent
Eye problems	38%
High blood pressure	23%
Arthritis	21%
Allergies	17%
Asthma or Chronic Obstructive Pulmonary Disease	17%
Hearing loss	14%
Skin conditions	14%
Depression	13%
Digestive problems	12%
Cancer	11%
Heart disease	10%
Respiratory problems	8%
Other chronic health problems	8%
High blood fats	7%
Major infections	7%
Circulatory problems	6%
Diabetes	6%
Kidney disease	5%

When asked about health checks in the past two years, residents in Seymour reported having slightly more checks than the Victorian average.⁸

- > 86% had their blood pressure checked, higher than the state average of 79%.
- > 54% were tested for diabetes or high blood sugar, higher than the state average of 45%.
- ➤ 49% had their cholesterol measured, similar to the state average of 46%.
- > 71% of women aged over 50 had a mammogram, similar to the state average of 73%.
- > 30% had a skin examination, higher than the state average of 25%.
- > 59% of men aged over 50 had a prostate check, slightly more than the state average of 53%.
- > 15% had a bowel examination, the same as the state average of 15%.8

Further, 82% had been immunised for childhood diseases, 65% had a tetanus booster in the past ten years, 12% had a pneumonia vaccine in the past five years and 34% had a flu vaccine in the past twelve months. Most respondents (92%) had never donated blood.

USING HEALTH SERVICES

In the past twelve months respondents had consulted a GP up to 104 times, however the average was 3 consultations. Most (94%) consulted a GP in Seymour. Respondents waited up to 24 days for an appointment. However, 42% waited 1 days or less, 43% waited 1-3 days, 10% waited $3\frac{1}{2}$ -7 days and 2% waited over a week for an appointment with a GP.

Among the survey participants, 18% had been hospitalised in the past twelve months. Of these, half were admitted to the Seymour District Memorial Hospital and a third were admitted to hospitals in Melbourne.

In addition, 15% had visited an Emergency Department in the past twelve months. Two thirds of these were at the Seymour District Memorial Hospital. Half of these attendances waited under an hour for their consultation, 19% waited 1-3 hours, 10% waited 3-6 hours and 3% waited over 6 hours to see a Doctor.

Participants were asked if they had visited a Medical Specialist in the past 12 months. A third of respondents had visited a Medical Specialist. Of these close to a third utilised specialist services in Seymour, however, 50% had travelled to Melbourne.

In addition to questions regarding visits to medical professionals, respondents were also asked about consultations with a wide variety of other health professionals. Listed below are the percent of respondents who visited an:

\triangleright	Optician or Optometrist	18%
	Hospital Outpatients	14%
\triangleright	Chiropractor or Osteopath	13%
\triangleright	Hospital Day Surgery	9%
\triangleright	Physiotherapist	9%
	Used an Ambulance	6%
\triangleright	Psychologist/Psychiatrist	4%
	Audiologist or Audiometrist	4%
	Social Worker or Welfare officer	4%
\triangleright	Acupuncturist or Naturopath	4%

In the past 12 months, 43% of the respondents had consulted a Dentist/Dental professional. For 35% of the respondents, it was 2 or more years since they had consulted a Dentist/Dental professional. The major reasons why respondents did not consult a Dentist were 'cost', 'no need' and 'fear'.

A series of open ended questions were asked to determine what Seymour residents thought were the key issues in obtaining health care in their local community. The first question asked about concerns with the medical care provided in the community. 484 people answered the question, giving 551 responses (some respondents gave more than one answer). From these 551 responses, 248 indicated there were 'no problems' with the local medical service and 43 responded with positive comments.

Of the 260 remaining responses, the most common concerns were:

- ➤ Lack of Doctors, Nurses and Medical Specialists (37)
- Concern about the quality/competency of Doctors (26)

Another question asked about concerns with the local Emergency Department. 478 people answered the question, giving 498 responses (some respondents gave more than one answer). From these 498 responses, 308 indicated there were 'no problems' with the Emergency Department and 25 responded with positive comments. Of the 165 remaining responses, the most common concern was that:

There was no Doctor on call 24 hours (33)

The Crossroads Rural Health Studies asked local residents what they perceived to be the issues in accessing health care, or the 'barriers to care.' Participants were asked what they thought were the issues around accessing health care. 457 people answered the question, giving 509 responses (some respondents gave more than one answer). From these 509 responses, 265 indicated there were 'no problems' with accessing medical services and 19 responded with positive comments. Of the 225 remaining responses, the most common concerns were:

- ➤ Long waiting time to get an appointment with the Doctor (25)
- ➤ Lack of Doctors, Nurses and Medical Specialists (20)

LIFESTYLE

Lifestyle is related to health, so respondents were asked about their health behaviours, including diet. Table 5 presents how often respondents in Seymour ate takeaway food as a main meal:

Table 5: Takeaway food as a main meal in Seymour

How often?	Percent
Never	9%
Less than once a month	29%
2 to 3 days a month	35%
1 to 3 days a week	25%
4 to 6 days a week	2%

Respondents were asked how many serves of fruit, vegetables and diary products they consumed each day (see Table 6). In Seymour, 28% of respondents were eating the recommended amount of vegetables, 47% were eating the recommended serves of fruit and 68% were consuming the recommended amount of dairy products. On the other hand, 72% of respondents were not eating the recommended serves of vegetables, 54% were not eating the recommended amount of fruit, and 32% were not consuming the recommended amount of dairy products.

Table 6: Fruit, vegetable and dairy product consumption for adults in Seymour

	Recommended serve	Number of serves eaten	
		1-3serves 71%	D D
Vocatables	5 serves ¹⁰	4-5 serves 24%	ó
Vegetables		6 and more 4%)
		Don't eat veggie's 1%	
	Fruit 2 serves ¹⁰	1 serve or less 49%	
Fruit		2-3 serves 36%	
		4 and more serves 11%	,
		Don't eat fruit 4%)
		1 serve or less 32%	ó
Dairy	2-5 serves ¹⁰	2-5 serves 66%	,
		6 and more serves 2%)

Respondents had approximately 5 drinks of alcohol in an average week. The most common alcoholic drinks were full strength beer (30%), wine (27%) and spirits (25%).

Of those surveyed, 22% did not currently smoke and 53% of respondents had never smoked cigarettes, cigars or pipes. The remaining 25% smoked between 1 and 75 cigarettes per day. This was the same as the Victorian average, 25% identifying themselves as current daily smokers.⁸

A total of 60% of respondents participated in physical activity and exercise and on average 4 times per week. The average length of time for an exercise session was 1¼ hours. The most popular form of exercise was walking (46%).

When asked how often respondents deliberately took protective measures when out in the sun, 34% 'always' took protective measures, an additional 29% reported 'usually' while 5% 'never' took protective measures. Close to three quarters of respondents wore a hat for protection, 6 in 10 used sunscreen and 6 in 10 wore sunglasses.

CHILDREN

In Seymour, parents or guardians completed a survey on behalf of 106 children. The survey was completed for all children living in the household aged between 1 year and 15 years inclusive. Of these, 45% were male and 55% were female. Three quarters of the children had access to a computer at least weekly and 47% had access to the internet at least weekly. In Seymour, the immunisation rates for the child respondents was 98%.

Of national concern are the eating patterns of children. In Seymour, 84% were not eating the recommended serves of vegetables, 32% were not eating enough fruit, however the majority were eating the recommended amount of dairy products (see Table 7).

Table 7: Fruit, vegetable and dairy product consumption for children in Seymour

	Recommended serve	Number of serves eaten	
		1 –3 serves	83%
Vegetables	5 serves ¹⁰	4-5 serves	12%
		6 and more	4%
		Don't eat veggie's	1%
Fruit	2 serves ¹⁰	1 serve or less	30%
		2-3 serves	49%
		4 and more serves	19%
		Don't eat fruit	2%
		1 serve or less	7%
Dairy	3-4 serves ¹¹	2-5 serves	86%
		6 and more serves	5%
		Don't eat dairy	2%

Parents/guardians were also asked to indicate if their children had any medical conditions. Asthma was the most common condition reported for children in Seymour, which is comparable with other towns in the study. Eye problems (9%), skin conditions (8%) and allergies (8%) were the other most common reported conditions.

In the past 12 months, 5% of the children had been hospitalised. Of these, 22% were admitted to the Seymour District Memorial Hospital. An additional 44% had travelled to Melbourne and 22% had travelled to Shepparton.

In addition, 14% of the children had been to an Emergency Department in the past 12 months. Three quarters of the Emergency Department visits were at the Seymour District Memorial Hospital. Of these, 48% waited less than an hour to see a doctor, 33% waited 1-3 hours and 4% waited over 6 hours.

UNDIAGNOSED DISEASE STUDY

As part of the Crossroads Rural Health Studies, 1,455 randomly selected adults (aged 25 years and over) attended the Undiagnosed Disease Study held in each town. The Seymour clinics were held at the Seymour Football Club Rooms, the Seymour ROAB Hall and the Seymour Tiny TAFE Conference Room. 114 Seymour residents attended.

- Seymour residents had the second highest rate of chronic obstructive pulmonary disease and other lung diseases (defined as reduced spirometry measures: 17%) of the 8 study towns. There were lower rates of hearing loss or using a hearing aid (7%), and the vision impairment or vision requiring correction rate were quite low (13%) compared to the other study communities.
- The rate of high blood pressure for Seymour participants was 18% (with or without diagnosed hypertension, defined as blood pressure of 160+ mm Hg systolic and/or 100+ mm Hg diastolic). This was greater than the national average of 10%.
- ➤ 34% of the study population in Seymour was categorised as obese (defined as body mass index of 30 kgm⁻² or more) and was the third highest amongst the study communities. This was also greater than the national average (17%)⁹ and greater than that found in the Australian Diabetes, Obesity and Lifestyle Study.¹⁵
- Likely mild inflammation of the liver, as indicated by serum liver enzymes, was less common (9%) than most other towns in the study.
- ➤ Renal impairment (as assessed by serum creatinine concentration above the reference range for age, sex and weight, (those with diabetes excluded)) was less common (7%) compared to the 7 other study towns.
- Anaemia and rates of leucocytosis (white blood cells) were relatively low (1% and 1% respectively) in comparison to the towns of the Crossroads Rural Health Studies.

Note: This is based on preliminary data.

CONCLUSION

In Seymour, more women than men completed the survey. Seymour had the same level of home ownership as the average in Australia. The Crossroads Rural Health Studies found that the majority of respondents were happy to be living in Seymour and half the respondents were members of local community clubs, groups or organisations. This could indicate that being actively involved in the community was important to a large portion of the respondents and leads to better health. 16

Seymour respondents were satisfied with local hospitals and local schools, but were less satisfied with local government, access to exercise facilities, and entertainment. Seymour participants were least concerned about the future of farming. Most respondents were satisfied with the services provided by the local hospital.

Happiness is an indicator of quality of life and in Seymour most of the participants rated themselves as happy or very happy. In addition, self reported health status is a commonly used measure of an individuals health. The majority of respondents in Seymour rated their health as good or better, which is similar to the average in Australia. Seymour residents had similar long term medical conditions as the average in Australia, most commonly eye problems, high blood pressure, arthritis and allergies. Seymour respondents tended to have slightly more health checks than the Victorian average. These checks included blood pressure, blood sugar and prostate checks. Although rural health research indicates that rural people tend to have poorer health than their metropolitan counterparts, the Crossroads Rural Health Studies illustrates that residents in Seymour had more health checks and that their health is on a par with the majority of Australians, rural or metropolitan.

The issue of most concern to Seymour respondents was that there were no Doctors on call over 24 hours, along with the 'quality and competency' of local Doctors. Respondents would like the reassurance that a Medical Practitioner is available when needed. A major issue that was also raised was the lack of medical personnel in Seymour and the region. This included a lack of Doctors, Nurses and Medical Specialists. Respondents also reported waiting in the Emergency Department/Doctors surgery and getting an appointment with their GP as key issues. However, when asked specifically about waiting times, consumers did not usually wait for any great length of time. Overall, respondents in Seymour did not have any major issues with local health services as the majority of people responded with 'no problem.'

Being a resident of rural Victoria, it is anticipated that the distance required to travel for health services could reduce peoples access to these services. However, the information from the Crossroads Rural Health Studies did not support this. The distance required to travel to visit health professionals was not documented as a barrier to receiving care for Seymour residents.

Our lifestyle is related to our health, hence the Crossroads Rural Health Studies included questions about our diet, alcohol/cigarette consumption and physical activity. The number of Seymour residents that smoke is in the same proportion as the state average. A large number of respondents were not eating the recommended serves of fruit and vegetables. Children in particular were not eating adequate fruit and vegetables according to the recommendations made by the Dieticians Association of Australia.

In conclusion, it appears that the health status among Seymour residents, along with the other towns in the studies (Alexandra, Benalla, Cobram, Echuca, Euroa, Mooroopna, and Shepparton), was not markedly different to the Victoria average, despite previous health research indicating that rural people have poorer health than their metropolitan counterparts. However, when rural people become unwell, access to medical care may become a problem. We believe that the results of the Crossroads Rural Health Studies will provide information that is both useful and meaningful to the people of Seymour and that benefits will come from it.

The Crossroads Team would like to Thank all those who completed a Household Survey and everyone who came along to the Undiagnosed Disease Study. Thank You!

REFERENCES

- Australian Institute of Health and Welfare. *Health in Rural and Remote Australia* Canberra: AHIW, 1998.
- Humphreys JS. Rural health status: What do statistics show that we don't already know? *Australian Journal of Rural Health* 1999; 7: 60-63.
- Dixon J, Welch N. Researching the rural-metropolitan health differential using the 'social determinants of health.' *Australian Journal of Rural Health* 2000; **8**: 254-260.
- Simmons D, Hsu-Hage B. Determinants of Health Disease, and Disability: Differences between Country and City *The New Rural Health*, Edited by David Wilkinson and Ian Blue. South Melbourne: Oxford University Press 2002.
- Wakerman J, Humphreys JS. Rural health: Why it matters? *Medical Journal of Australia* 2002; **176**: 457-458.
- Australian Bureau of Statistics. "2001 Census Basic Community Profile and Snapshot Australia" 2002. Last updated 14/03/2003. URL: http://www.ausstats.abs.gov.au/ausstats/2001maps.nsf/HomePages/AusStats+BCPs: ABS. Date of Access: 12/03/2003.
- 7 Australian Bureau of Statistics. "Year Book Australia 2003", 24/01/2003 URL: http://www.abs.gov.au/Ausstats/abs%40.nsf/94713ad445ff1425ca25682000192af2/c8620ccee76b54 a8ca256cae000fc5b1!OpenDocument :ABS. Date of access: 29/04/2003
- 8 DHS Victoria, "Victorian Population Health Survey 2001 Selected Findings" Melbourne: DHS, 2002
- 9 Australian Bureau of Statistics. "National Health Survey Summary of Results", Catalogue No. 4364.0 2002. URL: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/CAC1A34167E36BE3CA2568A900139364: ABS. Date of Access: 12/03/2003
- Dietitians Association of Australia, "Media Background Statement: Fruits and Vegetables." 29/09/2000

 http://www.daa.asn.au/_util/download.asp?id=23&doc_id=230&view=statement&type=file: DAA. Date of Access; 10/03/2003
- Australian Dairy Corporation. "Dairy Good Food Facts," Melbourne: Foods Advisory Bureau, 1993.
- Walkabout Australian Travel Guide. Seymour (n.d.)URL: http://walkabout.com.au/locations/VICSeymour.shtml Date of access 02-04-03
- State Government Victoria, "Victorian Hospital Information Services", Last updated 04/11/2002. URL: http://aimsinfo.health.vic.gov.au/Hospital%20Listings/pub_hospdetails.asp?id=6675
 Date of access 25th March 2003
- Australian Bureau of Statistics "2001 Census Community Profile and Snapshot UCL200600 Alexandra (Urban Centre/Locality)" 19/11/2002 URL: http://www.abs.gov.au/Ausstats/abs%40census.nsf/4079a1bbd2a04b80ca256b9d00208f92/c42d97f19d2de119ca256c63002c67b6!OpenDocument: ABS. Date of Access: 29/04/
- Dunstan D, Zimmet P, Welborn T, Sicree R, Armstrong T, Atkins R, Cameron A, Shaw J, Chadban S, on behalf of the AusDiab Steering Committee. *Diabesity & associated disorders in Australia* 2000: the accelerating epidemic. Melbourne: International Diabetes Institute 2001
- Young W, Glasgow N. Voluntary social participation and health *Research on Aging* 1998; **20:** 3: 339-363

