

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.¹ 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 EUROA

Euroa lies en route from Melbourne to Albury, 130 kilometres north-north-east of Melbourne. The town is situated on Seven Creeks which is a tributary of the Goulburn River,¹² and is home to 2,710 people. James Kirkland was a prominent figure in the history of the region, being the holder of the Urowa pastoral run, which was to become the town and district of Euroa. Urowa, or Euroa as we now know it today, is thought to be derived from an Aboriginal word meaning push or joyful.¹²

In 1854, a bridge across the Seven Creeks was built to improve the route to and from the north-east gold fields, and so began the Euroa township. The town developed at a steady pace with the construction of the Anglican Church in 1856, the Catholic Church in 1867 and a flourmill and railway line in 1873. Euroa's economy began to strengthen as a number of farm selections were taken up in and around the town. All this contributed to Euroa's new role as a supply and railway transport depot. The opening of the National Bank was a milestone for Euroa, however it was not long established when it became the scene of a hold-up by the Kelly Gang on the 10th of December 1878.¹²

The late 1800's and early 1900's was a period of rapid growth for Euroa. The weekly newspaper began in 1884, a butter and an ice factory opened in 1891 and a primary school in 1919. Sport became a favourite pastime of the Euroa townspeople and they soon implemented the development of a number of high quality and diverse range of sporting and recreation facilities. During the 1930's and 1940's there were twice yearly race meetings, as well as polo, swimming, district cricket, golf, cycling, tennis, bowling, croquet, and gun and rifle clubs.¹²

The economic boom time for Euroa was during the 1950's when wool production increased and wool prices began to rise. The butter factory closed in 1951 however Euroa gained several other manufacturing industries. Combined with the planned tourism development of the Seven Creeks run, these saw Euroa on its way to becoming a popular tourist destination.¹²

Today Euroa provides the community with a range of important services. The Euroa Bush Nursing Hospital has 20 overnight beds and 5 day stay beds.¹³ Euroa also has an aged care facility, 5 fulltime equivalent practising GP's, massage therapists, a physiotherapist, a chiropractor and an aroma-therapist.

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 Euroa. 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 528 adults completed the household survey in Euroa. Of these, 45% were male and 55% were female (see Table 1). Of the 528 respondents, two thirds were either married or living in a de facto relationship and 37% had residents under the age of 18 living in the house. The length of residence in Euroa ranged from less than a year to over 90 years, with an average of 24 years.

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

<i>Characteristics</i>	<i>Euroa</i>	<i>All participants</i>
No. of Adults Surveyed	528	6,375
% Female	55%	57%
% Married/de facto	66%	67%
% Speak English at home	100%	97%
% Own their Dwelling	78%	70%
Average Length of Residence (mean)	24 years	21 years
% With Private Health Insurance	56%	43%
% Completed Secondary School	36%	47%
% Working Full-time in Paid Labour	26%	34%
% Working Part-time in Paid Labour	16%	17%
% Retired	36%	19%
Income (median)	\$478	\$580

Most respondents (78%) owned their own house or unit, with 15% living in rental accommodation. The percent of people who were living in their own home was higher than the national average of 66%.⁶

Slightly more than half the respondents (56%) had private health insurance, greater than the Australian average (45%).⁷

Of the 528 adults who completed the interview in Euroa:

- 10% had completed a University degree
- 36% had completed secondary school and/or a trade certificate (including 10% with University degrees)
- 43% had completed year nine or more, but not year 12,
- 20% left school before year 9

In Euroa, the employment status of respondents was:

- 26% of respondents worked full-time
- 16% worked part-time
- 36% were retired
- 3% were not working but not retired
- 3% were unable to work due to illness

Most households in Euroa earned between \$120 and \$999 per week before taxes. The median was \$478. In addition, just over half (56%) the respondents had access to a computer at least weekly and 34% had access to the internet at least weekly.

LIVING IN EUROA

All 528 residents were asked how sorry or pleased they would be to leave Euroa. A total of 79% reported they would be very sorry or somewhat sorry to leave. 7% indicated they would be very pleased or somewhat pleased to leave. Nearly 6 in 10 respondents were members of a local community club, group or organisation, with some being members of up to 7 groups.

Respondents were asked to indicate how concerned they were about a range of issues in their local area. Respondents were shown 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 with these local issues. More than half the respondents were concerned about unemployment, crime and the quality of health care.

Table 2: Concern with local issues in Euroa

<i>Issue</i>	<i>Concerned</i>	<i>Very Concerned</i>
Unemployment	33%	44%
Crime	33%	40%
Quality of health care	26%	32%
Future of farming	26%	19%
Quality of education	20%	14%

Respondents were also asked to rate their satisfaction with local services and facilities (see Table 3). Two thirds of respondents were satisfied with the local schools.

Table 3: Satisfaction with local services

<i>Issue</i>	<i>Dissatisfied¹</i>	<i>Satisfied²</i>
Local schools	6%	66%
Local hospital	33%	47%
Local government	29%	39%
Public transport	38%	36%
Local entertainment	35%	34%
Access to exercise facilities	41%	28%

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

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

HEALTH

Self reported health status is a commonly used measure of an individual's health.⁸ The proportion of respondents in Euroa who rated their health as excellent, very good and good (81%) was similar to the Victoria average (82%).⁸ When asked to rate their own health, respondents rated their health in the following ways:

- 13% as excellent
- 31% as very good
- 37% as good
- 16% as fair
- 3% as poor

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

- | | | |
|---|-----------------------------------|-----|
| ➤ | very happy | 22% |
| ➤ | happy | 45% |
| ➤ | somewhat happy | 13% |
| ➤ | mixed (equally happy and unhappy) | 16% |

A further 2% described themselves as somewhat unhappy, and 2% reported being very unhappy.

When asked about health checks in the past two years, residents in Euroa reported that they generally had more health checks than the Victorian average.⁸

- 87% had their blood pressure checked, higher than the state average of 79%.
- 56% had their cholesterol measured, higher than the state average of 46%.
- 51% were tested for diabetes or high blood sugar, higher than the state average of 45%.
- 63% of women 50 years and over had a mammogram, lower than the state average of 73%.
- 37% had a skin examination, higher than the state average of 25%.
- 51% of men 50 years and over had a prostate check, similar to the state average of 53%.
- 20% had a bowel examination, higher than the state average of 15%.

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. This is similar to the Australian average.⁹ In addition, 12% also indicated an injury had prevented respondents from attending school or work.

Table 4: Self-reported medical conditions for adults in Euroa

<i>Medical Conditions</i>	<i>Percent</i>
Eye problems	43%
High blood pressure	26%
Arthritis	26%
Allergies	18%
Hearing loss	17%
Asthma	15%
Skin conditions	13%
Heart disease	12%
High blood fats	11%
Digestive problems	12%
Depression	11%
Cancer	11%
Other chronic health problems	10%
Diabetes	7%
Respiratory problems	7%
Diabetes	7%
Circulatory problems	7%

Further, 83% had been immunised for childhood diseases, 61% had a tetanus booster in the past 10 years, 19% had a pneumonia vaccine in the past 5 years and 43% had a flu vaccine in the past 12 months. However, 88% of respondents had never donated blood.

USING HEALTH SERVICES

In the past twelve months, respondents reported consulting a GP up to 100 times, but the average was 3 consultations. Most people (93%) consulted a GP in Euroa. Respondents waited between 1 and 45 days for an appointment with a GP, however 65% waited less than 2 days, 28% waited 2 -3 days and 8% waited 4-7 days.

Among the survey participants, 15% had been hospitalised in the past twelve months. Of these, 30% travelled to Shepparton, 23% were admitted to the Euroa Bush Nursing Hospital and 21% travelled to major hospitals in Melbourne for care.

In the past 12 months, 11% of respondents had visited an Emergency Department. Of these, 27% visited Goulburn Valley Health, 14% visited the Euroa Bush Nursing Hospital, 14% travelled to Benalla and another 14% visited other small Victorian hospitals out of the region. Of those who visited an Emergency Department, nearly three quarters (73%) waited less than an hour to see the Doctor, 19% waited 1-3 hours, 6% waited 3-6 hours and 2% waited over 6 hours to see a Doctor.

Participants were also asked if they had visited a Medical Specialist in the past 12 months. In Euroa, 3 in 10 respondents had seen a Medical Specialist. Of these, just under half (45%) had travelled to Melbourne and nearly a third (30%) travelled to Shepparton.

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 percentages of those respondents who visited an:

➤	Optician/Optomtrist	23%
➤	Pharmacist (for advice only)	15%
➤	Hospital outpatients	14%
➤	Chiropractor/Osteopath	10%
➤	Physiotherapist	9%
➤	Hospital day surgery	8%
➤	Used an Ambulance	7%
➤	Acupuncturist or Naturopath	5%
➤	Audiologist/Audiometrist	5%

In the past 12 months, 36% of respondents had consulted a Dentist/Dental professional. For 44% of the respondents, it was 2 or more years since they had consulted a Dentist. The major reasons why respondents did not consult a dentist were 'no need,' 'cost' and 'fear.'

A series of open ended questions were asked to determine what Euroa 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. 489 people answered the question, giving 632 responses (some respondents gave more than one answer). From the 632 responses, 95 indicated there were 'no problems' with the local medical service and 24 responded with positive comments.

From the remaining 370 responses the most common concerns were:

- No Doctor on call after hours (186)
- The hospital only had private beds (61)
- Travelling long distances to access health care (35)
- Long waiting times to get an appointment with a GP (35)

Another question asked about concerns with the local Emergency Department. 478 people answered the question, giving 589 responses (some respondents gave more than one answer). From the 589 responses, 164 indicated that they had no concerns and 26 noted they were happy with the Emergency Department. Of the 299 remaining responses the most common concerns were:

- No Doctor on call after hours (106)
- Traveling long distances to access health care (84)
- Concern that there was no Emergency Department (80)
- Concern that there was no resident Doctor at the hospital 24 hours (31)

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. 456 people answered the question, giving 537 responses (some respondents gave more than one answer). From the 537 responses, 159 indicated that they had no concern and 12 responded with positive comments. Of the 366 remaining responses, the most common concerns were:

- Concern that there was no doctor on call after hours (62)
- The hospital only had private beds (57)
- Travelling long distances to access health care (47)
- The lack of public transport to other towns in the region (20)

LIFESTYLE

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

Table 5: Takeaway food as a main meal in Euroa

How often?	Percent
Never	11%
Less than once a month	38%
2 to 3 days a month	27%
1 to 3 days a week	23%
4 to 6 days a week	1%

Respondents were asked how many serves of fruit, vegetables and dairy products they consumed each day (see Table 6). 38% of adults ate the recommended serves of vegetables, 55% ate the recommended serves of fruit, and 63% consumed the recommended serves of dairy products. On the other hand, 62% of respondents were not eating the recommended serves of vegetables, 45% were not eating the recommended amount of fruit and 37% were not consuming the recommended amount of dairy products.

Table 6: Consumption of fruit, vegetable and dairy product for adults in Euroa

	<i>Recommended serve</i>	<i>Number of serves eaten</i>	
Vegetables	5 serves ¹⁰	1-3 serves	62%
		4-5 serves	33%
		6 or more	5%
Fruit	2 serves ¹⁰	1 serve or less	40%
		2-3 serves	46%
		4 and more	9%
		Don't eat fruit	5%
Dairy	2-5 serves ¹⁰	1 serve or less	34%
		2-5 serves	62%
		6 and more	1%
		Don't eat dairy	3%

Respondents had approximately 6 drinks of alcohol in a week. The most common alcoholic drinks were wine (30%), light beer (25%) and full strength beer (24%).

Of those surveyed, 27% did not currently smoke and 54% reported they had never smoked. The remaining 19% smoked between 1 and 40 cigarettes per day. This is less than the Victorian average (25%) identifying themselves as current daily smokers.⁸

A total of 7 in 10 respondents participated in physical activity, and on average 3 times per week. The average length of each exercise session was 52 minutes. The most common form of exercise was walking (42%).

When asked how often respondents deliberately took protective measures when out in the sun, 34% 'always' took protective measures, an additional 29% reported 'usually' and 7% 'never' took protective measures. A total of 72% used a hat for protection against the sun, more than half used sunglasses, half used sunscreen and close to 4 in 10 used clothing for protection.

CHILDREN

In Euroa, parents or guardians completed a survey on behalf of 92 children. The survey was completed for all children living in the household aged between 1 and 15 years inclusive. Of these, 49% were male and 51% were female. From the children's surveys, 76% had access to a computer at least weekly and 50% had access to the internet at least weekly. Immunisation rates in Euroa were high with 99% of children being immunised for childhood diseases.

Of national concern are the eating patterns of children. In Euroa, 74% of children are not eating the recommended serves of vegetables, 36% are not eating the recommended serves of fruit and 12% are not consuming the recommended amount of dairy products (see Table 7).

Table 7: Fruit, vegetable and dairy product consumption of children in Euroa.

	<i>Recommended serve</i>	<i>Number of Serves eaten</i>	
Vegetables	5 serves ¹⁰	1-3 serves	72%
		4-5 serves	20%
		6 and more	6%
		Don't eat veggies	2%
Fruit	2 serves ¹⁰	1 serve or less	34%
		2-3 serves	54%
		4 and more	10%
		Don't eat fruit	2%
Dairy	3-4 serves ¹¹	1 serve or less	12%
		2-5 serves	82%
		6 and more	6%

Parents and guardians were also asked to indicate if their children had any medical conditions. Asthma was the most common condition reported for children in Euroa (24%), which is comparable with other towns in the studies. Skin conditions (24%), eye problems (9%), allergies (8%) and respiratory problems (4%) were the other most common reported conditions.

In the past 12 months, 6% of the child respondents had been hospitalised. Of these, 10% were admitted to the Euroa Bush Nursing Hospital and 60% had travelled to Shepparton. In addition, 14% of children had been to an Emergency Department in the past 12 months. Of these, 26% went to the Euroa Bush Nursing Hospital and over half travelled to Shepparton. Most waited less than an hour to see a doctor (58%), 20% waited 1-3 hours and 20% waited 3-6 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 Clinic held in each town. The Euroa clinics were held in the Shire Hall and Council Chambers at the Euroa Shire Offices. 129 residents from Euroa attended these clinics.

- Euroa residents had one of the highest rates of chronic obstructive pulmonary disease and other lung diseases (defined as reduced spirometry measures: 17%) compared to the other 7 study towns, and the highest rate of hearing loss (25%, of whom 7% had a hearing aid). The vision impairment or vision requiring correction rate was also high (20%) in comparison.
- The rate of high blood pressure for Euroa respondents was 31% (with or without diagnosed hypertension, defined as blood pressure of 160+ mm Hg systolic and/or 100+ mm Hg diastolic). This was the highest amongst the study communities and was much greater than the Australian average (10%).⁹
- 24% of the study population in Euroa was categorised as obese (defined as body mass index of 30 kgm⁻² or more). This was the lowest of the study towns but 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 for Euroa respondents, as indicated by serum liver enzymes, was more common than in most other study towns (12%).
- Renal impairment (as assessed by serum creatinine concentration above the reference range for age, sex and weight (those with diabetes excluded)) was the least common amongst the study community (7%).
- Euroa had the highest prevalence of anaemia across the 8 towns (3%). Rates of leucocytosis (white blood cells) were also relatively high (2%) amongst the study towns.

Note: This is based on preliminary data.

CONCLUSION

In Euroa, more women than men completed the household survey. Euroa had a higher level of home ownership and lower numbers of people renting than the average in Australia.⁶ Euroa residents had a slightly higher proportion of people with a University degree than the Australian average⁶ and over a third of participants had completed secondary school or a trade certificate. The Crossroads Rural Health Studies found that the majority of respondents were happy to be living in Euroa and nearly two thirds of respondents were members of local community clubs, groups or organisations. Being actively involved in the community seems to be very important to a large portion of the respondents and leads to better health.¹⁶

Euroa respondents were particularly satisfied with local schools, but less satisfied with the local hospital, local government, access to exercise facilities, public transport and local entertainment. The quality of health care was the issue respondents were most concerned about and the future of farming was the issue that respondents were least concerned about.

Happiness is an indicator of quality of life and in Euroa two thirds of participants rated themselves as happy or very happy. In addition, self reported health status is a commonly used measure of an individuals health.⁸ The majority of respondents in Euroa rated their health as good or better, which is similar to the Australian average.⁹ Euroa residents have similar long term medical conditions as the Australian average, most commonly eye problems, high blood pressure, arthritis and allergies.⁹ Euroa respondents tended to have more health checks than the Victorian average.⁸ These checks included blood pressure, blood sugar, cholesterol, bowel checks and skin examinations. Although rural health research indicates that rural people tend to have poorer health than their metropolitan counterparts,^{1,2} the Crossroads Rural Health Studies illustrates that residents in Euroa had more health checks and their health is on a par with the majority of Australians, rural or metropolitan.

Respondents were concerned about a range of issues that were unique to Euroa. The major concern was the lack of after hours medical services in Euroa. Local GP's were not on-call after hours or on weekends, so there was no medical service at all in Euroa, yet some respondents reported the GP's worked at the Seymour hospital on weekends. Some respondents did note that there was a locum doctor on Saturday mornings in Euroa, but was not their regular Doctor. A further issues was having to travel for medical services. For example, having to travel to Benalla, Shepparton or Seymour for emergencies. In addition, the lack of public transport to and from other towns in the region was also a concern for respondents.

In conclusion, it appears that the health status among Euroa residents, along with the other towns in the studies (Alexandra, Benalla, Cobram, Echuca, Mooroopna, Seymour and Shepparton), is not markedly different to the Victorian 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 Euroa 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!

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