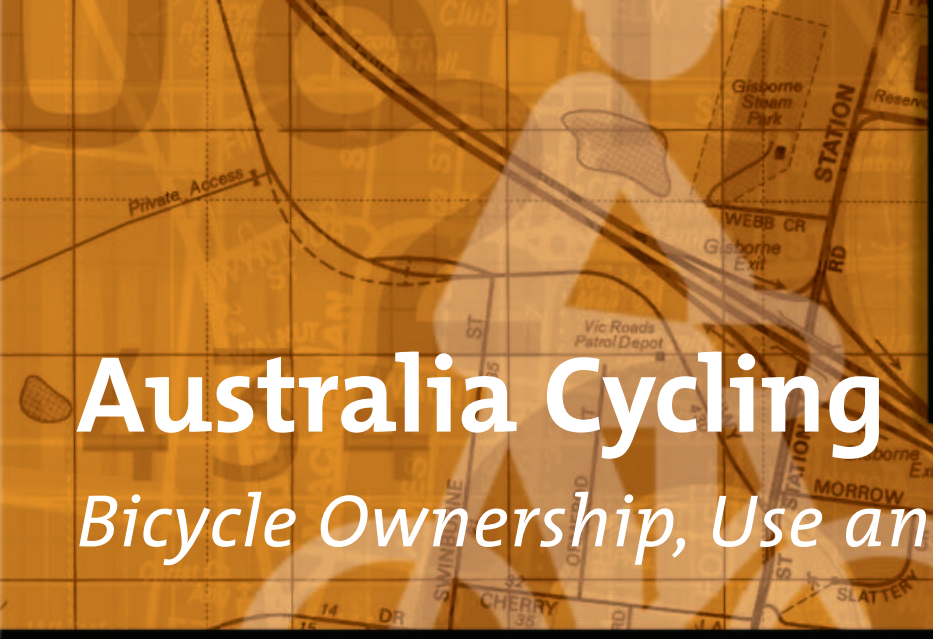
Australia Cycling

Bicycle Ownership, Use and Demographics

July 2004 (Draft)



AUSTRALIAN BICYCLE COUNCIL

Introduction

The more we know about cycling and the needs of cyclists, the better facilities and programs we can provide for cyclists.

Australia Cycling

The National Strategy, *1999 – 2004*

Cycling is an effective, healthy and environmentally friendly form of transport. The more people who ride their bicycles to work, to school and for recreation, the better for everyone.

Australian Cycling – The National Strategy 1999 – 2004 is a national cycling strategy, endorsed by the Australian Transport Council, which provides a framework for the delivery of programs that aim to increase the numbers of people who ride bicycles.

The Australian Bicycle Council

The Australian Bicycle Council (ABC) oversees the advancement of cycling in Australia through the implementation of *Australia Cycling*.

The ABC also functions as the Austroads Bicycle Reference Group and provides advice on cycling matters, research needs, and emerging issues to government. Information on the ABC and a copy of this report can be obtained from www.abc.dotars.gov.au

Cycling Data and Indicator Guidelines

The development of a national set of cycling indicators has arisen from Objective 5.2 of *Australia Cycling*. The purpose of this objective is to "identify data requirements and report comparable state and territory data about cycling to provide a national perspective".

Providing a national set of cycling indicators allows State and Territory agencies, cycling stakeholders and the community to be more aware of trends in cyclists' patterns and how cyclists are being provided for at a national and state level.

The ABC has developed a set of Cycling Data and Indicator Guidelines. This report is part of the first stage of data collection and reporting. It draws upon existing data sources which do not always use complementary methodologies such as different sample sizes and data collection periods. The report therefore represents a selection of data and partial indicators, and it is not strictly possible to use the data to undertake state by state comparisons. The ABC is currently working to further analyse the collected data sets and the questions they provoke.

Bicycle Ownership

People buy bicycles to ride.

Bicycle ownership rates provide an indirect measure of the popularity of cycling in the community and the likely number of bicycle trips.

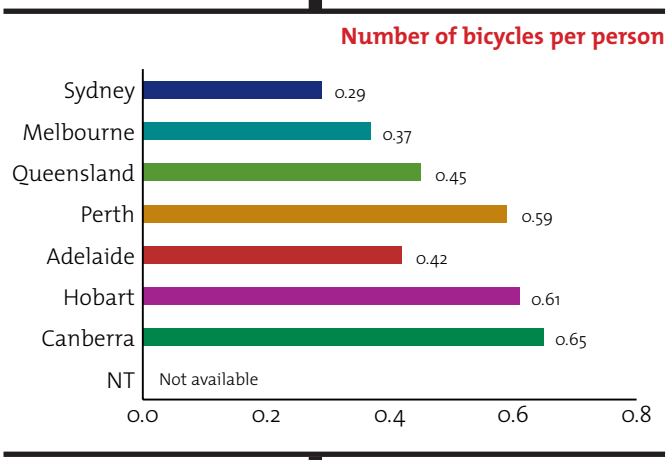
The purpose of this indicator is to provide a measure of how many bicycles are available in the community and the proportion of the population that has access to a bicycle.

This is achieved by providing a measure of the number of bicycles that are in the study area of each survey divided by the population of the study area. This data has been obtained from various surveys undertaken by transport agencies and, in most cases, only include capital cities.

How many people own a bicycle in Australia?

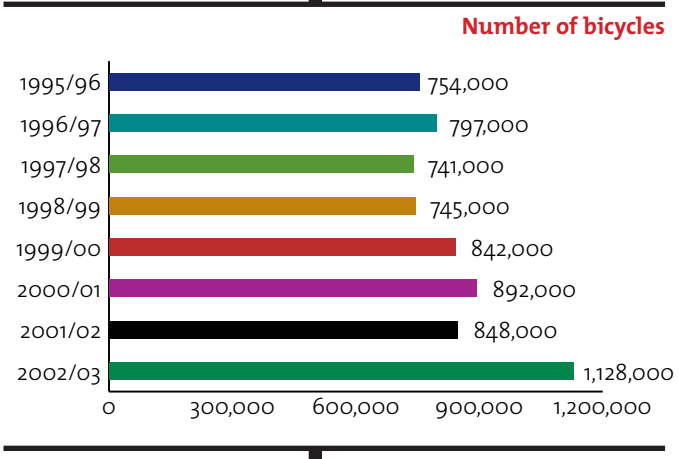
The highest rates of bicycle ownership are in the Australian Capital Territory, Hobart and Perth where more than 60% of people have access to a bicycle.

The lowest rate of bicycle ownership is in Sydney where less than 30% of people have access to a bicycle.



How many bicycles are imported into Australia each year?

There has been a steady increase in the number of bicycles imported into Australia each year since 1995/96 with a 33% increase in 2002/2003.



Bicycle Use

People use their bicycles to ride to work, to school, for recreation and for sport.

This set of indicators provide a measure of how people use their bicycles.

In addition to having a measure of bicycle ownership, this next set of indicators provides measures of the purpose(s) that these bicycles are used for. People may ride their bicycles to get to work or school and/or for recreation.

The following indicators provide measures of the proportion of the population who cycle on an average day, who ride their bicycles to work and who use their bicycles for exercise, recreation and/or sport.

This data has been obtained from:

- Travel and activity surveys undertaken by (or on behalf of) individual transport agencies in each State and Territory in Australia.
- Travel to work data that has been derived from the 2001 Census undertaken by Australian Bureau of Statistics.
- The inaugural Exercise, Recreation and Sport Survey undertaken by the Australian Sports Commission and State and Territory Departments of Sport and Recreation in 2001.

Weather and daylight hours influence the numbers of people who ride bicycles. People are less likely to ride their bicycles when it is wet, cold or dark.

The 2001 census was undertaken nationally on 7 August 2001 when the weather can reduce the numbers of people of ride bicycles in the southern States and Territories.

As a result, the 2001 census may have a bias in terms of the numbers of trips made in the northern States and Territories in comparison to the southern States and Territories.

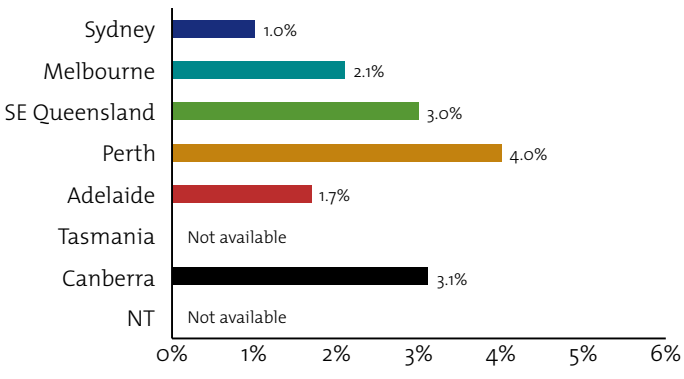
What proportion of the population cycle on an average day in Australia?

The purpose of this indicator is to provide a measure of the proportion of the population in the study areas who cycle on an average day.

The highest proportion of people who cycle on an average day is about 4% in Perth. In other areas of Australia between 2% and 3% of people cycle on an average day.

Cycling is least popular in Adelaide and Sydney where less than 2% of people cycle on an average day. Note however, that there may be some methodological differences in data collection that influence these results.

Proportion of population who cycle



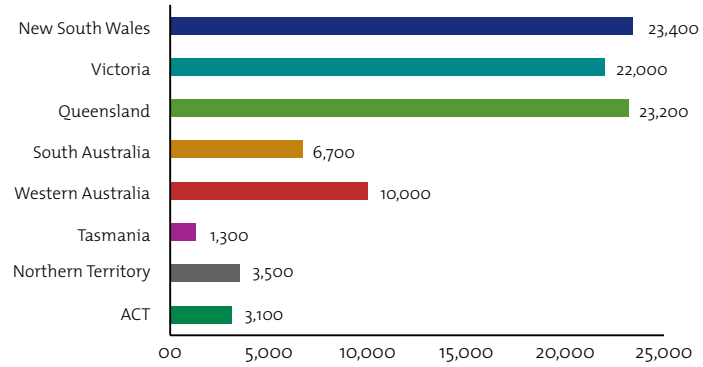
How many trips are made to work by bicycle in each State and Territory?

The purpose of this indicator is to provide raw data on the number of trips to work that included a bicycle for part of the journey.

The highest number of trips to work by bicycle were made in Queensland, Victoria and New South Wales at more than 20,000 on the day of the 2001 census.

The lowest number of trips to work by bicycle was made in Tasmania at 1,300 on the day of the 2001 census.

Number of bicycle trips to work



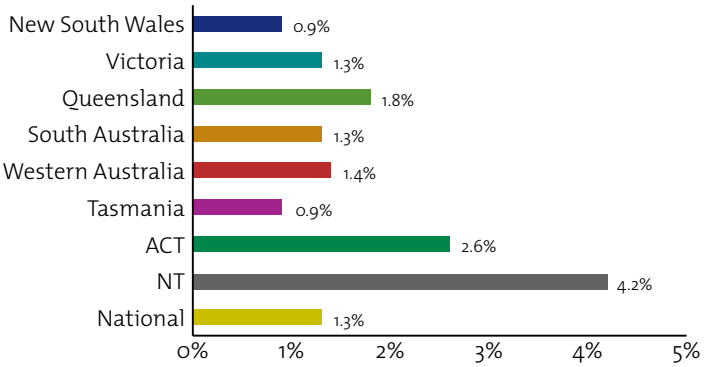
What proportion of trips to work are made using a bicycle?

The purpose of this indicator is to provide a measure of the proportion of trips to work that included a bicycle for part of the journey. This data has been obtained by dividing the total number of trips to work where a bicycle was used by the total number of trips to work - on the day of the 2001 Census.

Cycling to work is most popular in the Northern Territory and the Australian Capital Territory where bicycles where used in 4.2% and 2.6% (respectively) of all trips to work.

Cycling to work is less popular in other areas of Australia, where the proportion of trips to work by bicycle is below 2% and is lowest in New South Wales and Tasmania at 0.9% of all trips.

Proportion of trips to work by bicycle



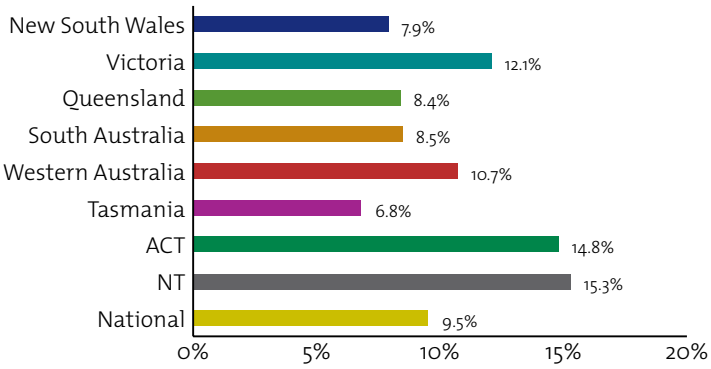
What proportion of the population ride bicycles for exercise, recreation or sport?

The purpose of this indicator is to provide a measure of the proportion of the population that used a bicycle for exercise, recreation or sport. The data indicates the proportion of people who cycled at least once in the 12 months leading up to the date of the survey.

Cycling for exercise, recreation or sport is most popular in the Northern Territory and the Australian Capital Territory where about 15% of people used bicycles for these purposes.

Cycling for exercise, recreation or sport is less popular in South Australia, Queensland and New South Wales where about 8% of people used bicycles for these purposes.

Proportion of people who ride for recreation



Cycling Mode Share

Cycling is a transport option. People can choose to ride their bicycles, drive a car, walk, use public transport or use a combination of these modes.

This indicator provides a comparison of cycling as a transport option to other modes of travel.

The purpose of this indicator is to provide another measure of how much travel is undertaken by bicycle. This indicator provides a measure of the proportion of the total transport task that is undertaken by bicycle in comparison to other modes of transport, including walking.

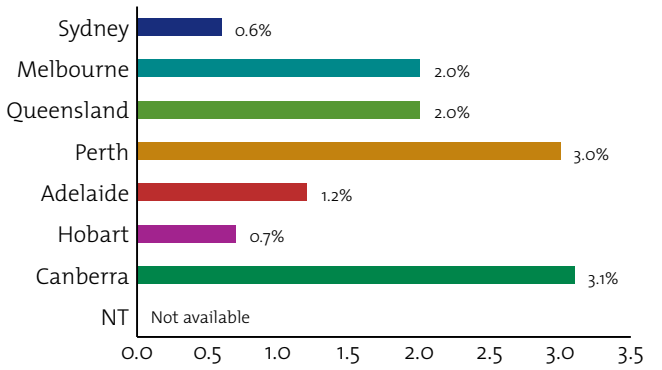
This data has been obtained from various surveys undertaken by transport agencies and, in most cases, only include capital cities.

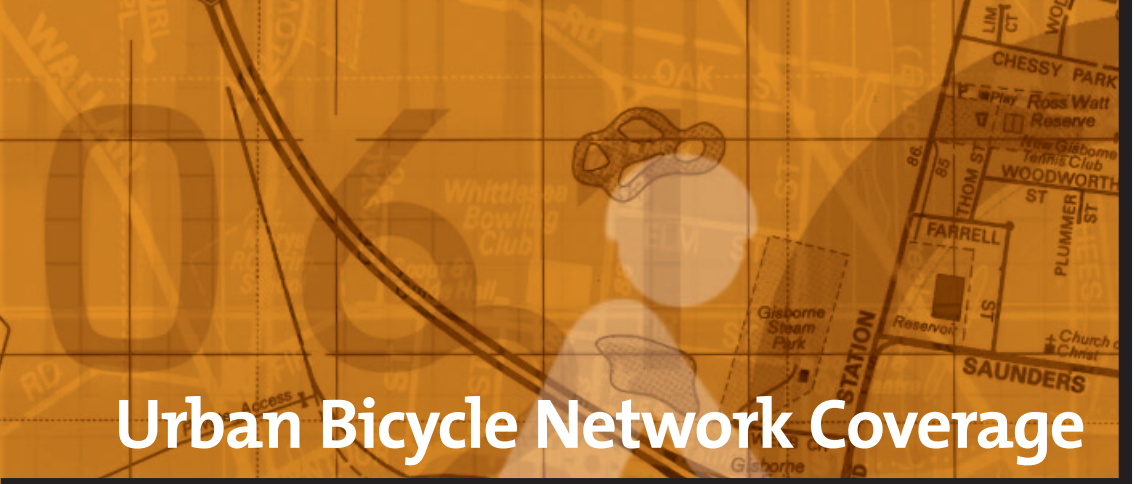
How much travel is undertaken by bicycle compared to other modes of transport?

In comparison to other modes of transport, cycling is most popular in the Australian Capital Territory and in Perth where 3.0% of all trips are made by bicycle.

For other areas in Australia, the proportion of trips that are made by bicycle is about 2% while the lowest is in Sydney at 0.6% and in Hobart at 0.7% of all trips.

Proportion of trips by bicycle





Urban Bicycle Network Coverage

People are more likely to ride their bicycles more often when they are provided with on-road bicycle lanes and off-road bicycle paths.

This indicator provides a measure of the amount of bicycle lanes and paths that have been provided for cyclists to use.

The previous measures indicate that cycling is a popular activity within the community and that people are prepared to ride their bicycles for transportation and for recreation.

To support cycling and to encourage more people to ride their bicycles, transport agencies need to provide appropriate and safe bicycle lanes and paths.

The purpose of this indicator is to compare the length of the urban bicycle network to the length of the urban road network. The indicator provides a measure of the total kilometre length of on-road bicycle lanes and off-road bicycle paths for every 100 km of urban roads.

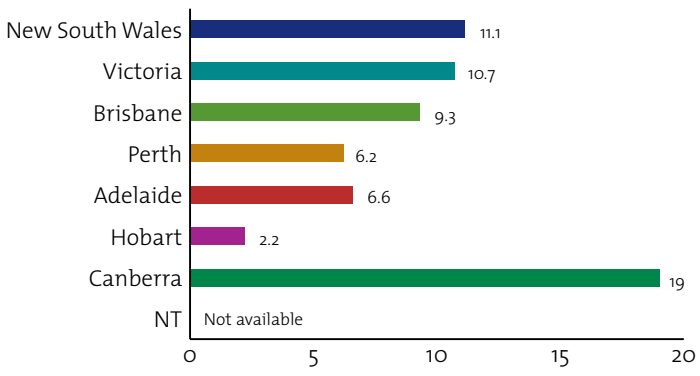
What is the length of the urban bicycle network compared to the length of the urban road network?

The Australian Capital Territory has the highest ratio of urban bicycle network to urban road network in Australia where about 20 km of bicycle lanes and paths has been provided for every 100 km of road network.

This high ratio of bicycle network to road network supports the high level of bicycle ownership and use that occurs in the ACT.

In New South Wales, Victoria and Brisbane, about 10 km of bicycle lanes and paths has been provided for every 100 km of road network. In Hobart 2.2 km of bicycle lanes and paths has been provided for every 100 km of road network.

Length of bicycle network per length of road network



Cyclists' Gender and Age Profile

About 80% of people who ride to work are male.

Most people who ride to work are between 25 and 34 years of age.

This indicator provides a measure of the gender and age profile of cyclists.

The purpose of these indicators is to provide information on the proportions of cyclists who are male and female. These indicators also provide information on the age profile of cyclists.

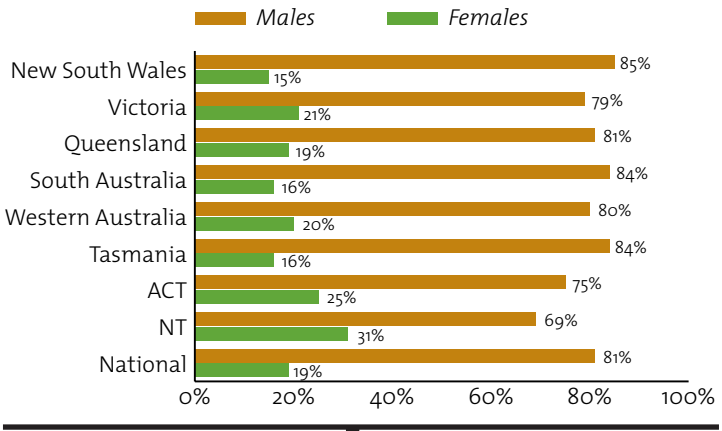
This data has been obtained for those people who ride to work and for those people who ride for recreation. The data has been obtained from:

- Travel to work data that has been derived from the 2001 Census undertaken by Australian Bureau of Statistics.
- The inaugural Exercise, Recreation and Sport Survey undertaken by the Australian Sports Commission and State and Territory Departments of Sport and Recreation in 2001.

What is the gender profile of people who cycle to work?

Cycling to work is much more popular with males than it is with females.

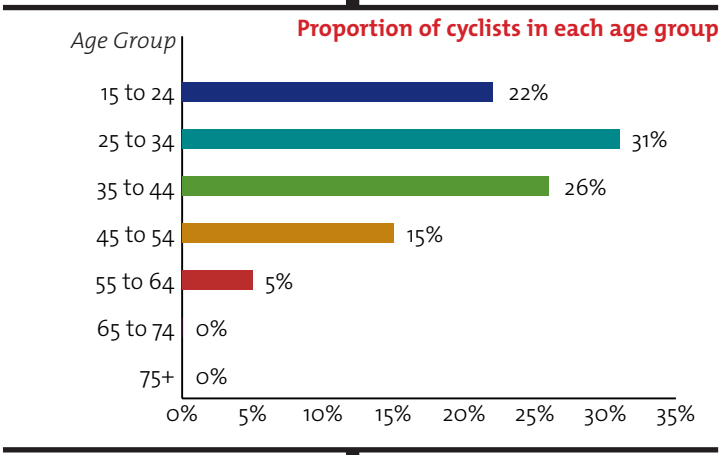
Of the people who do cycle to work, on average, 80% are male and 20% are female.



What is the age profile of people who cycle to work?

Cycling to work is most popular with people aged between 25 to 34 years of age. It is also popular with people aged between 35 and 44 years of age.

Given that most people over 64 years of age are retired, it is not surprising that people in this age group do not cycle to work.



About 70% of people who ride for recreation are male.

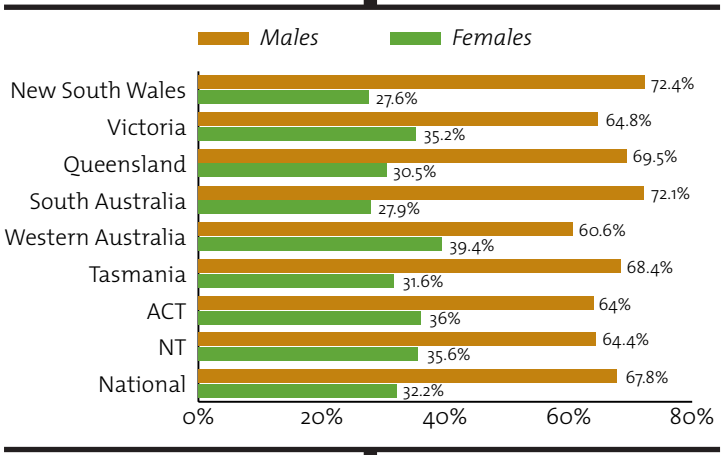
Most people who ride for recreation are between 25 and 34 years of age.

What is the gender profile of people who cycle for recreation?

The purpose of this indicator is to provide information on the gender profile of people who cycled at least once for recreation in the 12 month period leading up to the day of the survey.

A larger proportion of females cycle for recreation than cycle to work.

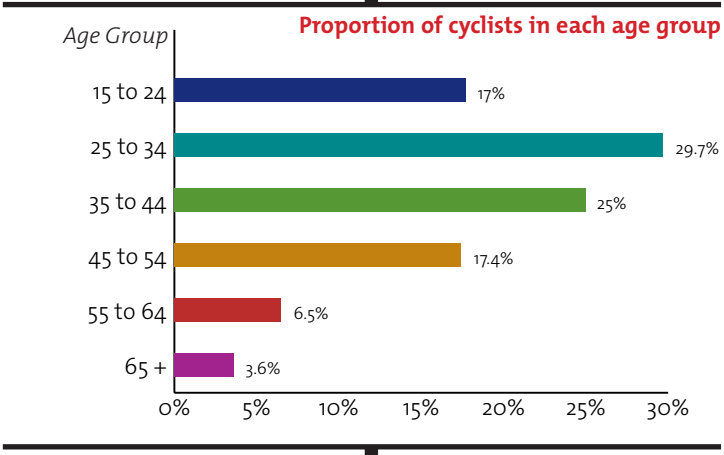
Of the people who do cycle for recreation, on average, 70% are male and 30% are female.



What is the age profile of people who cycle for recreation?

As with cycling to work, cycling for recreation is most popular with people aged between 25 and 34 years of age.

It is also popular with people aged between 35 and 44 years of age.



Cyclist Safety

Cyclist safety is an important issue for cyclists and can influence their decision of whether to ride or not.

Safety is an important issue for cyclists. The purpose of these indicators is to provide a national perspective on the number of cyclist casualties in Australia.

The data for these indicators have been obtained from the Australian Transport Safety Bureau for cyclist fatalities and numbers of cyclists seriously injured and from the National Hospital Morbidity Database on hospital stays in 2000/2001. The data for the population of each State and Territory was obtained from the 2001 Census undertaken by the Australian Bureau of Statistics.

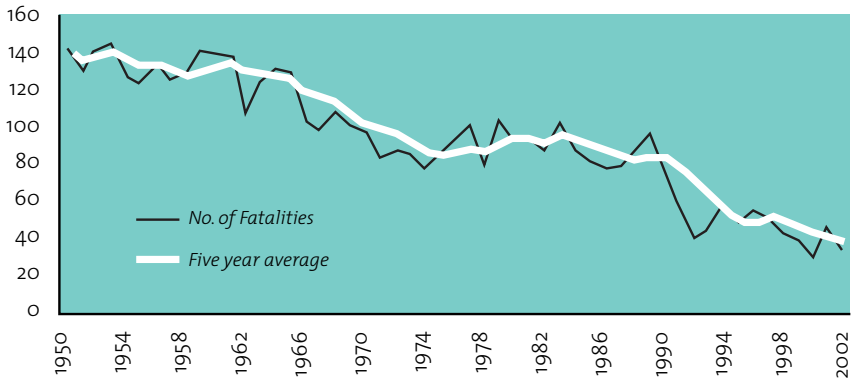
What is the historical trend of cyclist fatalities?

Cyclist fatalities have decreased significantly in Australia over the past 52 years.

In 1950 there were 142 cyclist fatalities compared with only 34 in 2002. This is a reduction of 76 per cent in the numbers of cyclist fatalities in 52 years.

While the number of cyclist fatalities fluctuated substantially from year to year, there has been a steady and continued reduction in cyclist fatalities over the past 10 years.

Number of cyclist fatalities in Australia since 1950



Note: *Five year moving average means the data point for each year is the average of the previous five years.*

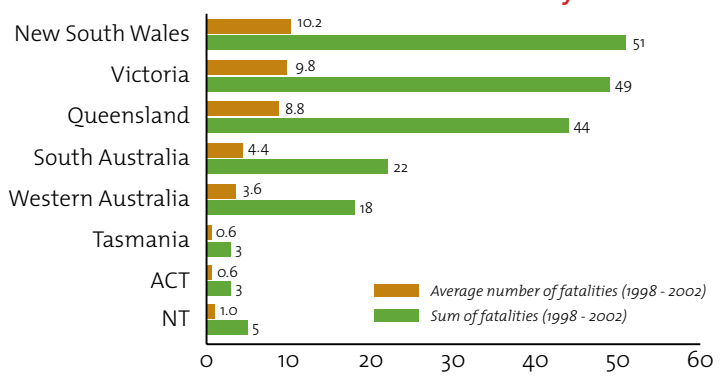
How many cyclists are killed in each State and Territory in Australia each year?

The number of cyclist fatalities fluctuates between each State and Territory and from one year to the next. The data presented for this indicator is for a five year period.

There were a total of 195 cyclist fatalities in Australia between 1998 and 2002 or around 40 fatalities a year.

The highest numbers of cyclist fatalities in the period 1998 to 2002 were recorded in New South Wales, Queensland and Victoria.

Number of cyclist fatalities



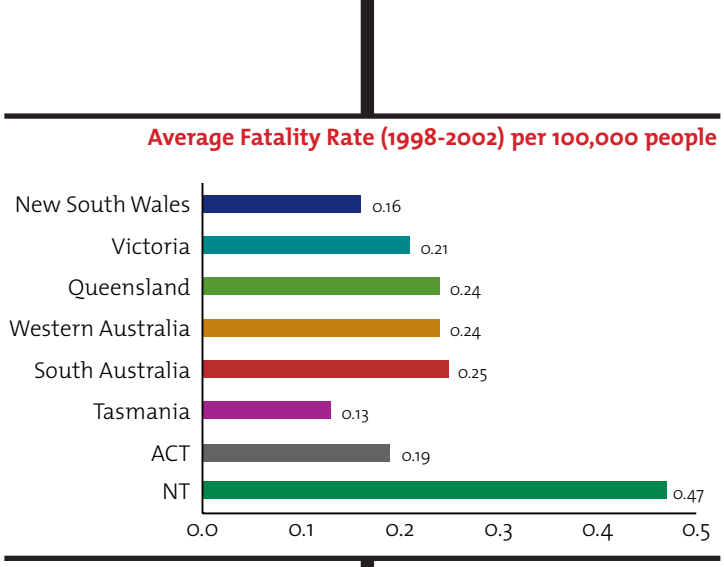
What is the average rate of cyclist fatalities in Australia each year based on population?

It would be expected that the number of fatalities would be the highest in those States and Territories that have the highest population.

This indicator rationalises the number of cyclist fatalities based on the population of each State and Territory.

The highest rate of cyclist fatalities per person was in the Northern Territory at 0.47 fatalities per 100,000 people. However, the Northern Territory averages only 1 cyclist fatality per year and a high proportion of trips are undertaken on bicycle in the Northern Territory.

The lowest rates of cyclist fatalities per person occurred in Tasmania and in New South Wales at 0.13 and 0.16 fatalities per 100,000 people respectively.



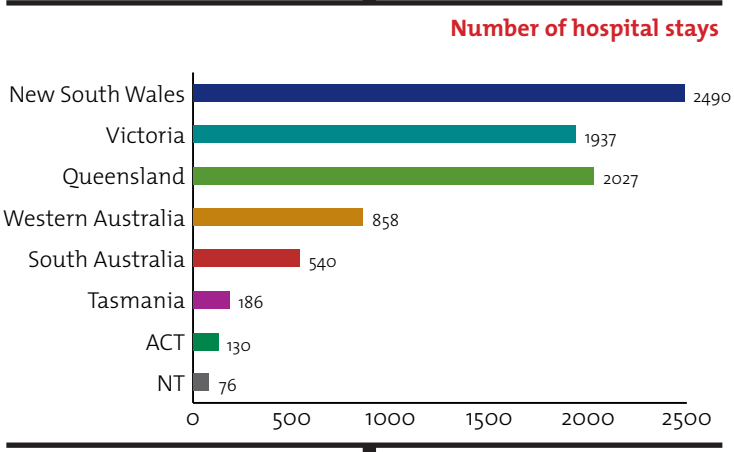
How many hospital stays were recorded for cyclists in Australia in 2000/2001?

The number of hospital stays provides an indication of the numbers of cyclists that are injured each year in Australia.

A 'hospital stay' is an 'episode of care' in a hospital and patients in hospitals often have more than one episode of care following admission.

The highest number of hospital stays in 2000/2001 was recorded in New South Wales with 2,490 hospital stays.

The lowest number of hospital stays in 2000/2001 was recorded in the Northern Territory, Tasmania and the ACT which each had fewer than 200 hospital stays.

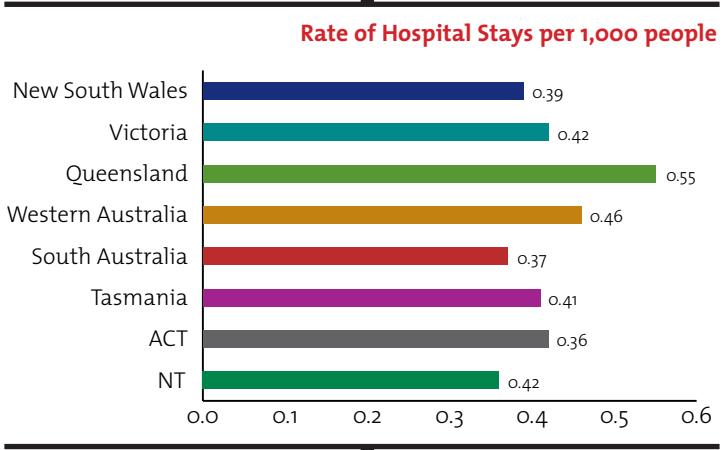


What was the Rate of Hospital Stays in Australia in 2000/2001 based on Population?

It would be expected that the number of hospital stays would be the highest in those States and Territories that have the highest population.

Queensland has slightly more hospital stays per 1,000 people than the other States and Territories at 0.55 stays per 1,000 people.

The rate of hospital stays per 1,000 people is relatively consistent in all other States and Territories.



Data Sources

The data for the indicators presented in this report has come from the following sources:

- Travel and activity surveys undertaken by (or on behalf of) individual transport agencies in each State and Territory in Australia.
- Travel to work data that has been derived from the 2001 Census undertaken by Australian Bureau of Statistics.
- Bicycle import data was provided by Bicycle Industries Australia Pty Ltd from the Australian Customs Service.
- The inaugural Exercise, Recreation and Sport Survey undertaken by the Australian Sports Commission and the State and Territory Departments of Sport and Recreation in 2001.
- The Australian Transport Safety Bureau on cyclist fatalities in 2001.
- The National Morbidity Data Base on cyclist injuries in 2000/2001.

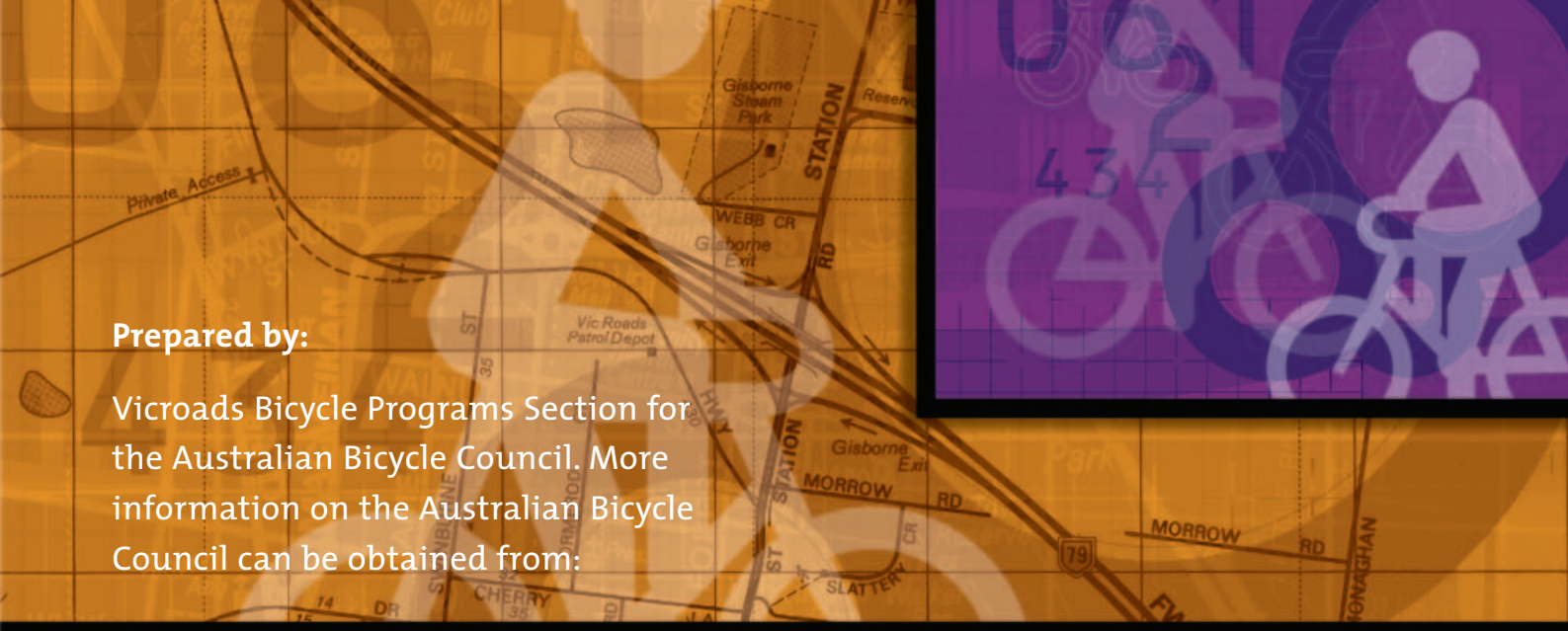
In most cases, data relating specifically to cycling that is collected as part of Travel and Activity Surveys is mainly collected in capital cities in Australia. There are also differences in data collection methods, sample sizes and the years in which this data has been collected.

To address these issues, the data that is available from the Australian Bureau of Statistics travel to work survey and the Australian Sports Commission recreation surveys has been included in this report. This data provides an indication of cycling patterns outside capital cities and overcomes the inconsistencies in data sampling and collection that can occur in other surveys. This data is presented throughout the report.

Data Sources from Each State and Territory

The data for bicycle ownership, the proportion of cycling on an average day, mode share and bicycle network coverage for each location was sourced from the following surveys:

New South Wales	Household Travel Survey, Sydney 2000
Victoria	Cycling In Melbourne, Jan 1999
Queensland	SafeST Research Qld Wave 2 July 1999
Western Australia	Travelsmart Survey 2000
South Australia	Adelaide Metropolitan Household Travel Survey 1999
Tasmania	City of Clarence, 1995
Australian Capital Territory	Telephone survey for 1992 ACT Strategy
Northern Territory	Data not available



Prepared by:

Vicroads Bicycle Programs Section for the Australian Bicycle Council. More information on the Australian Bicycle Council can be obtained from:

www.abc.dotars.gov.au