

## Road Safety Fact Sheet

### Cyclists

December 2007

#### Overview

More people cycle in Western Australia than in any other Australian state. Cyclists are a diverse group, including children, recreational riders, and commuters. All cyclists are particularly vulnerable road users because they have little protection if they are involved in incidents with vehicles. The most effective intervention programs for cyclists focus on avoiding unsafe road-traffic environments, ensuring that the individual's cycling proficiency matches the chosen trip route, being visible, and protecting as much of the body as is practical.

The Road Safety Council is committed to improving road safety for cyclists. The Council has adopted an integrated approach to road safety that encompasses safe roads, safe vehicles, safe drivers and safe travel speeds. This safe system approach has potential benefits for cyclists and other vulnerable road users.

#### Crash Profile

There are significant differences in the data provided by Police (to whom all serious crashes are meant to be reported) and the Health Department (which provides most medical services to those in crashes).

Table One: Fatalities and Serious Injuries, Police and Health Data, 1996 -2006

## Cyclist Fatalities and Serious Injuries, 1996-2005 – Comparison of Police and Health Data

Year	Police Reported Crashes			Health Department 1 <sup>1</sup>					
	Total Fatalities	Cyclist Fatalities		Total Serious Injuries	Cyclist Serious Injuries		Total Hospitalisations	Cyclist Hospitalisations	
	n	n	%	n	n	%	n	n	%
1996	247	10	4.0	2841	142	5.0	2821	122	4.3
1997	196	6	3.1	3099	122	3.9	2737	80	2.9
1998	223	6	2.7	3181	145	4.6	2853	117	4.1
1999	218	2	0.9	2740	85	3.1	2709	150	5.5
2000	212	2	0.9	2349	72	3.1	2522	240	9.5
2001	165	5	3.0	2098	82	3.9	2643	262	9.9
2002	179	6	3.4	3057	127	4.2	2608	309	11.8
2003	179	1	0.6	3054	122	4.0	2778	295	10.6
2004	179	3	1.7	3363	118	3.5	2946	357	12.1
2005	162	4	2.5	3244	123	3.8	2999	371	12.4
2006	202	3	1.5	2962	86	2.9	3240	377	11.6
10 year Average	197	4	2.2	908	111	3.8	2805	44	8.6

1

Data are preliminary.

Data includes those hospitalised but may include those who have died in hospital.

Data selected only for persons with particular external cause codes that indicate a traffic accident.

Traffic accident are those that occurred on a public highway.

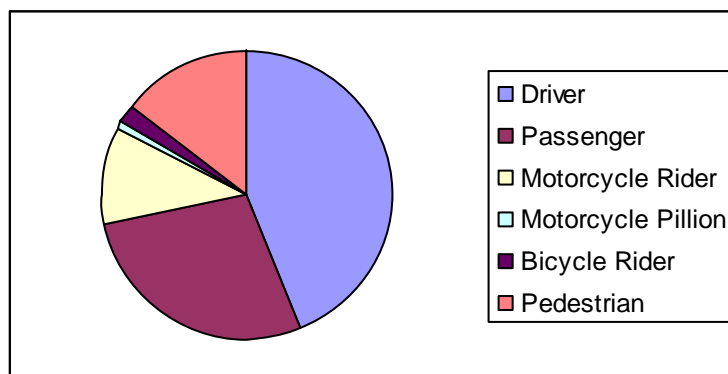
As many persons have more than one hospital episode related to a single traffic accident.

we have counted persons once only (first admission) over each period.

In 1999 there is a break in series for hospital admission data due to a classification change.

Data before and after this time should be compared with caution.

Table Two: Western Australian Fatalities by Vehicle Type, 1995 – 2004



Not all people are equally at danger on the roads. Some groups are overrepresented in crashes. In 2002- 2003 cyclists were 5.6 times more likely to be involved in police reported crashes than the average across all modes of transport. <sup>2</sup>

In the case of cyclists, children are particularly vulnerable riders. Of cyclists admitted to hospital in Western Australia between 1987 and 2000, 50 per cent were boys aged under 16 and 18 per cent were girls aged under 16. Overall, 68 per cent of cyclists admitted to hospital were aged under 16, compared with 32 per cent of pedestrians and 13 per cent of other road users. Young males in the 1316 and 612 age groups had the highest rates of hospital admission.

The same study shows that using the Abbreviated Injury Scale (AIS) cyclists had fewer critical, severe and serious injuries (13%) compared with pedestrians (32%), motorcyclists (24%) and motor vehicle occupants (26%). Cyclists had the highest proportion of moderate injuries (65%). The most frequently occurring injuries to cyclists were upper extremities injuries (29%), followed by head injuries (23%), external injuries (16%) and injuries to the lower extremities (15%).

### Safe System

The Road Safety Council of Western Australia uses a safe system approach that emphasises safer drivers in safe vehicles on safe roads at safe speeds. These elements all offer potential benefits to cyclists.

The safe system approach recognises the vulnerability of the human body and its ability to tolerate force. The aim of this approach is to accommodate human error to ensure that no fatalities will occur and serious injuries will be reduced.

<sup>2</sup> D. Hendrie, Road Injury Rates for Western Australia (Road Safety Council, 2006) vii.

## **Safer Road User Behaviour**

Given the inherent vulnerability of cyclists, it is important that they use caution on the roads. The Road Safety Council offers road safety advice to cyclists through newspaper articles, local media and community activities.

## **Standard Road Rules**

Most rules applying to car drivers also apply to cyclists riding on a road. There are a few rules that only apply to cyclists and not other road users. Cyclists:

- Must have at least one hand on the handlebars while in motion.
- Must wear an approved helmet while in motion (unless exempted).
- Must not ride within two metres of the rear of a motor vehicle, over a distance of more than 200 metres.
- Must not hold onto another moving vehicle or be towed by it.
- Must not be more than two bicycles abreast on a road. When riding abreast, the two bicycles must be no more than 1.5 metres apart.
- Must use the correct hand signals to turn left or right and to stop.
- Can use the left lane of a roundabout when turning right, provided he or she gives way to all exiting traffic.
- Must not ride in a pedestrian mall.
- Cannot overtake on the left side of a motor vehicle if that motor vehicle is moving and indicating to turn left.

## **Dealing with traffic**

On-road cyclists need to ride defensively at all times. Being legally in the right is of little consolation if you are involved in a serious crash with a motor vehicle.

Show caution when nearing a motorist who is intending to turn left across your path. Always assume the motorist has not seen you. If the road you are on has a sealed shoulder in good repair, you should use it. Always use the correct hand signals to indicate when you want to turn left or right and to stop. Allow some space when passing parked cars. A door suddenly opening can be a hazard, so stay about one metre away.

## **Getting Around**

The Department for Planning and Infrastructure produces a variety of free and Lowcost maps and guides for cyclists. These range from the comprehensive Perth Bike Map series that covers all of the metropolitan area, through to individual rides such as Around The Rivers, Kings Park and Along the Sunset Coast. There are also maps that cater for mountain bike enthusiasts.

The Perth Bicycle Network is made up of many routes that travel between two specific points (usually major population or commercial centres). Routes often

join and cross each other. They are a mixture of shared paths and modified on-road sections that offer alternative route selections to high traffic volume (high risk) arterial roads to reduce rider anxiety.

These maps are available from bicycle retailers and some newsagents. A comprehensive range of cycling information is available on the DPI web site: **<http://www.dpi.wa.gov.au/cycling/1518.asp>**

Police data shows that for the period 1987 to 2000, 84 per cent of police reported crashes involving bicycles occurred in the Perth metropolitan region. This information underscores the importance of carefully choosing the safest routes for cycling.

### **Shared Paths**

Children under 12 may ride on any footpath unless a "no bicycles" sign has been erected. Riders 12 years of age and over are not permitted to ride on a footpath. They may, however, ride on shared paths. The following guidelines facilitate the sharing of footpaths and shared paths:

- Riders must keep left on shared paths and footpaths unless overtaking.
- Riders must give way to pedestrians at all times.
- At path intersections you must signal your intention to turn, and give way to motor vehicles entering or exiting an intersection road.
- Riders must only travel in single file on all paths, though they can travel two abreast on a road.
- Animals must not be tied to a moving bike.
- A power-assisted bicycle must not use a path when the power assistance is engaged.
- Slow down when passing pedestrians — remember they are slower and can be unpredictable.
- When approaching pedestrians from behind, always ring your bell about 30 metres before reaching them. If they are aware of your presence with plenty of time to spare, they are less likely to make sudden sideways movements.
- Be particularly careful where a shared path crosses a busy road. Look in all directions before proceeding across the road and onto the path on the other side. Cyclists also need to show caution where a shared path crosses residential and commercial driveways. In some instances, a reversing driver cannot see a person using the path.

A study of bicycle crashes in Western Australia between 1987 and 2000 shows that 82 per cent of bicycle crashes that resulted in a hospital admission were non-motor vehicle crashes. That is to say, the bicycle did not collide with a car. Indeed, 59 per cent of crashes that resulted in the riders being

hospitalised did not occur on roads. This underscores the importance of careful riding on shared paths and footpaths as well as roads.

## **Helmets**

It is compulsory to wear helmets in Western Australia.

The wearing of helmets significantly decreases the chances of serious injury in the event of crashes. Despite this, failure to wear helmets continues among some groups. The Road Safety Council views these deaths and injuries as preventable.

Further information on the benefits of wearing helmets is available from the World Health Organization: <http://www.whohelmets.org/>

## **Safer Vehicles**

Safer vehicles can make a significant difference to road safety. Vehicles can be designed to have features that protect the occupants and others involved in crashes. If all vehicle designs were equivalent to the safest model, the number of fatal and disabling injuries would be significantly reduced.

Australian cars are subject to crash tests which rate them on their ability to protect vehicle occupants. They are also tested on injuries they inflict on pedestrians. However, there is no standardised crash test regime to inform the public of the likely impact of particular cars on cyclists.

## **Safer Roads**

The Road Safety Council's strategy for improving road safety includes a program of improvements to roads that offers benefits to cyclists.

Regardless of other factors, improving the safety of roads has the potential to reduce the incidence and severity of crashes with benefits for all road users. In particular, separating vulnerable road users such as cyclists and pedestrians from vehicles has a proven impact on road trauma.

## **Black Spot Programs**

The State Government remains committed to ensuring that proceeds raised from speed and red light cameras are allocated towards road safety initiatives, including improving the safety of roads through black spot programs. Black spot programs identify high-risk road sites and the factors contributing to crashes and then find cost-effective solutions.

Metropolitan programs include the installation of traffic lights, better lane marking and the separation of traffic turning and moving through intersections.

## **Cycling Facilities**

The Government has encouraged cycling by building a comprehensive network of safe facilities. Since 2000 the Government has built 184km of bike paths in the metropolitan area and 183km of bike paths in regional areas. More than 350km of on-road bike facilities have also been created across the State.

Additionally, the Government has provided bicycle-parking facilities that relieve the pressure on park'n'ride facilities and provide alternative access by improving the integration of bikes with public transport.

The discussion paper for the new road safety strategy for Western Australia, 2008–2020, recommends providing more share paths throughout the State.

## **Safer Travel Speeds**

Even small reductions in travel speed can have a significant impact on road related harm, particularly for vulnerable road users such as cyclists and pedestrians. The default 50km/h built-up area speed limit was introduced in Western Australia on December 1, 2001.

The impact of the 50km/h default built-up area speed limit has been positive with respect to vulnerable road user groups. Pedestrians experienced a 51 per cent reduction in crashes, resulting in 432 fewer crashes involving pedestrians. While no statistically significant findings were recorded for cyclists, the analysis of the impact of the speed reduction shows clear decreases in the average crash frequency on 50 km/h roads for all crashes involving bicycles.

## **Summary**

Most crashes involving bicycles occur off the roads. This means the best way for cyclists to ensure their safety is to wear helmets, and stick to the guidelines provided for riding on shared paths and footpaths.

When riding on the roads, cyclists also have to know the road rules, be vigilant against motorists who make mistakes or do the wrong thing, and make themselves as visible as possible to avoid crashes.

The State Government is doing its part to help keep cyclists safer by providing alternative routes away from high volumes of traffic. Through its safe system strategy the Road Safety Council is taking an holistic approach to improve the safety features of roads and cars, as well as introducing safer travel speeds and encouraging better road user behaviour, to benefit users of all modes of transport.