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2. Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers (September 2005)

I Title.

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Terms of Reference

The report results from the STAYSAFE Committee's self reference under the joint resolution of the Legislative Assembly and the Legislative Council that:

(1) As an ongoing task, the Committee is to -

(b) review and report on counter measures aimed at reducing deaths, injuries, and the social and economic costs to the community arising from road accidents.
Chairman’s Foreword

Motorcycle deaths in New South Wales have risen sharply in 2005, with fatalities to motorcyclists up by 25% relative to the same period in 2004, and an almost 33% increase compared to the average for the period 2002-2005. In just two weeks in early May 2005, 8 motorcyclists died on New South Wales roads.

Recent fatal motorcycle crashes involved:
- Almost all were male riders;
- Wide range of ages (15 year old pillion passenger to 84 year old rider);
- Crashes occurred across a wide range of areas of New South Wales (Sydney, Wollongong, North Coast, New England);
- Most crashes were on local and minor roads;
- Crashes involved impacts with other motor vehicles or impacts with roadside objects.

There have also been motorcycle rider deaths not classified as ‘road-related’, as they occurred on private property such as farms or in parks and reserves, and these are not included in road trauma statistics.

These observations indicate is that there is not just one subgroup of riders at greater risk. It is a concern for all riders.

Despite active efforts by the Motorcycle Council of NSW and the Motor Accidents Authority to develop a motorcycle safety strategy and promote the wearing of appropriate protective equipment, injuries and deaths of riders are increasing. An action plan for addressing motorcycle and cycle trauma was developed by the Roads and Traffic Authority for the 2002-2004 period, but this program has now lapsed and no review or evaluation has been published.

Recently, a mother wrote to STAYSAFE, and her words show the grief and heartache that a road death brings on family and friends, even two years after the fatal crash where her son died:

“I lost my son on a motorcycle and feel that something should be done to stop this alarming increase in death and injury.

I initially blamed everything – the roads – the bike but eventually I put it down to the thrill and fast acceleration these bikes give young men. My son was two blocks from home and I think he just sped up to go around the corner – there were no streets on the right but a car came out on his left.

I do have concerns about the bike training – I felt it gave Paul a false sense of security – he kept saying – don’t worry mum they told me how to fall in the training. But perhaps as part of the training the quick acceleration should be stressed. Also these young men should be made to attend a video on the dangers involved. Perhaps put a little fear in them so they understand. Yesterday I drove from Seaforth to Wollongong and the bike riders along the way were just doing...
such silly things – weaving in and out of traffic and of course exceeding the speed limit greatly. Watching bike races on the television are not the same – there are no cars to collide with – actually do these riders wear 'better' protective wear – including helmets? I am sure they are more aware of possible accidents as well. Getting inside young men’s heads could be the answer – they just don’t think it will happen to them.

The fact my son rode a motorcycle and was killed has totally destroyed a very happy family and the least times this happens in life the best for all.”

On Friday 3 December 2005, the STAYSAFE Committee and the Australasian College of Road Safety, with the assistance of the Motor Accidents Authority, held a seminar on issues in motorcycle safety. The papers presented at the seminar were not a comprehensive review of motorcycle safety in New South Wales, but did provide an opportunity to bring together Parliamentarians, motorcycle riders and their representative organisations, local government and New South Wales public sector officials, and road safety researchers and consultants to consider issues surrounding motorcycle safety.

On Wednesday 4 May 2005, the Motorcycle Council of NSW and the Motor Accidents Authority held a seminar on motorcycle protective clothing and consumer protection in Australia. The seminar, named ‘Gearing Up: A seminar on Motorcycle Protective Clothing’ was designed for the motorcycle protective clothing industry and complemented an earlier project to produce a web-based consumer’s guide to promote the use of protective clothing by motorcycle riders.

This report brings together and publishes much of the proceedings of these two seminars. As well, the STAYSAFE Committee has included relevant papers on motorcycle safety strategies, including:

- the Roads and Traffic Authority’s 2002-2004 action plan for motorcyclist and bicyclist safety;
- the Motorcycle Council of NSW’s 2002-2005 ‘Positioned for Safety’ motorcycle safety strategic plan;
- the evaluation of the Motorcycle Council of NSW’s 2002-2005 ‘Positioned for Safety’ motorcycle safety strategic plan conducted by David Riches & Associates; and
- the United Kingdom’s 2005 motorcycling strategy.

The STAYSAFE Committee has also included a number of research papers that either relate specifically to New South Wales, or which have been conducted by New South Wales research and policy organisations.

The STAYSAFE Committee hopes that the release of such a compendium of research and analysis will foster and facilitate the development of a coherent motorcycle safety strategy in New South Wales that is adopted and supported by government as well as the motorcycling community.

Acknowledgements

I am grateful for the assistance of my colleagues on the STAYSAFE Committee as we tackle the task of examining and reviewing road safety in New South Wales. I would like to note, in
particular, the contribution of the Hon. Rick Colless MLC, who gave the welcome address to the seminar on Friday 3 December 2004.

The STAYSAFE Committee also thanks Ms Kate McMahon, of the United Kingdom Department for Transport, for bringing the United Kingdom motorcycling strategy to its attention.

Mr Ian Faulks, Committee Manager, who organised the conference on Friday 3 December 2004, and Ms Liz de Rome, of LdeR Consulting, who organised the seminar on Tuesday 3 May 2005, edited this report. Mr Faulks is assisted by his very capable staff: Mr Jim Jefferis, Senior Committee Officer, and Ms Millie Yeoh and Ms Ashika Cyril, Assistant Committee Officers.
List of Recommendations

RECOMMENDATION 1:
The STAYSAFE Committee conduct an inquiry into motorcycle safety in New South Wales.
Commentary

1.1 Motorcycle deaths in New South Wales have risen sharply in 2005, with 31 motorcyclists dying in road crashes in the first four months of 2005. Up to mid-September 2005, another 15 motorcyclists have died. These deaths are those reported as occurring on 'roads or road-related areas'—a required element for a motor vehicle-related death in New South Wales to be recorded under the formal definition of road trauma. There are a number of additional deaths involving motorcyclists that occurred in areas not considered to be roads or road-related areas.

1.2 STAYSAFE is very concerned at the rapid rise in motorcycle deaths. Recent fatal motorcycle crashes involved:
- Almost all were male riders;
- Wide range of ages (15 year old pillion passenger to 84 year old rider);
- Crashes occurred across a wide range of areas of New South Wales (Sydney, Wollongong, North Coast, New England);
- Most crashes were on local and minor roads;
- Crashes involved impacts with other motor vehicles and impacts with roadside objects.

These observations indicate is that there is not just one subgroup of riders at greater risk. It is a concern for all riders.

1.3 Despite active efforts by the NSW Motorcycle Council and the Motor Accidents Authority to develop a motorcycle safety strategy and to promote wearing of appropriate protective equipment, injuries and deaths of riders continue to increase.

1.4 The Federal Chamber of Automotive Industries has reported that retail figures for the first quarter of 2005 show that motorcycle sales in Australia continue to grow rapidly. The motorcycle market in Australia appears to be experiencing a long term revival, with the expected total 2005 market reaching 100,000 motorcycles—a total volume of sales not seen since the early 1970s. The growth in sales of new motorcycles is primarily driven by the road bike market, and includes segments such as super sports, scooters, and cruisers. Sales of off-road motorcycles also increased. A total of 21,336 road bikes, dirt bikes and all-terrain vehicles (ATVs) were sold to the end of March 2005 - an increase of 13.3% over the same period last year. The increase follows a record year in 2004, when total motorcycle sales grew by 21.3% to 89,374—the highest in more than two decades.

1.5 At a meeting of the National Road Safety Strategy Panel, formed to monitor the implementation of the National Road Safety Strategy 2001-2010, in February 2005 in Canberra, the issue of motorcycling safety in New South Wales was considered. It was reported that there had been a slight reduction in the number of motorcycle crashes between 1995 and 2003, despite a 34% increase in the number of registered motorcycles over the same period. Between 2000 and 2003 there was an 11% decrease in multi-vehicle motorcycle crashes. This decrease was made up of a 9% reduction in multi-vehicle motorcycle crashes in which the motorcycle rider played the major role, and a 12% reduction in such crashes where the other driver played the major role. It was noted that a motorcycle awareness campaign, funded by the Motor Accidents Authority, was introduced in 2002. It
was also noted that the light truck category of vehicles (which includes 4WDs) are over-represented in motorcycle-into-car crashes.

1.6 The issue of a national motorcycle safety strategy was raised at this meeting of the National Road Safety Strategy Panel in February 2005. The panel noted that this issue had been raised in the past and that the consensus at that time was that it was more effective to address motorcycle safety through the National Road Safety Strategy and Action Plans. The panel considered that this approach continued to be appropriate.

Seminar on issues in motorcycle safety

1.7 On Friday 3 December 2005, the STAYSAFE Committee and the Australasian College of Road Safety, with the assistance of the Motor Accidents Authority, held a seminar on issues in motorcycle safety. The papers presented at the seminar were not a comprehensive review of motorcycle safety in New South Wales, but did provide an opportunity to bring together Parliamentarians, motorcycle riders and their representative organisations, local government and New South Wales public sector officials, and road safety researchers and consultants to consider issues surrounding motorcycle safety.

Seminar on motorcycle protective clothing and consumer protection in Australia

1.8 On Wednesday 4 May 2005, the Motorcycle Council of NSW and the Motor Accidents Authority held a seminar on motorcycle protective clothing and consumer protection in Australia. The seminar, named 'Gearing Up: A seminar on Motorcycle Protective Clothing' was designed for the motorcycle protective clothing industry and complemented an earlier project to produce a web-based consumer’s guide to promote the use of protective clothing by motorcycle riders (de Rome, 2003).

1.9 This report brings together and publishes the proceedings of these two seminars.

1.10 As well, the STAYSAFE Committee has included relevant papers on motorcycle safety strategies, including:

- the Roads and Traffic Authority’s 2002-2004 action plan for motorcyclist and bicyclist safety;
- the Motorcycle Council of NSW’s 2002-2005 ‘Positioned for Safety’ motorcycle safety strategic plan; and
- the United Kingdom’s 2005 motoring strategy.

Roads and Traffic Authority 2002-2004 action plan for motorcyclist and bicyclist safety

1.11 The Roads and Traffic Authority 2002-2004 action plan for motorcyclist and bicyclist safety was developed in late 2001, as part of the whole of government Road Safety 2010 strategy (see STAYSAFE 59, 2002).
1.12 The motorcyclist and bicyclist safety action plan set out objectives, strategies and actions for the 2002-2004 period. Both motorcyclists and bicyclists are considered vulnerable road users, and in 2001 these two categories of road user comprised one in eight road deaths in New South Wales.

1.13 With particular regard to motorcyclists, the 2002-2004 motorcyclist and bicyclist safety action plan noted:
- 94% of motorcycle fatalities were male;
- Younger adults aged under 30 years comprised the largest proportion of motorcycle fatalities (54%) but older riders (aged 30 years or more) were being to account for an increasing proportion (from 23% in 1986-1990 to 45% in 1996-2000);
- Speeding by the motorcycle rider was considered a contributing factor in more than half (56%) of all motorcycle fatalities;
- Around one-quarter (23%) of all motorcycle fatalities involved a motorcycle rider with an illegal blood alcohol concentration;
- One in nine (11%) motorcycle fatalities were not wearing a helmet;
- Nearly half (41%) of all motorcycle fatalities occur on the weekend whilst the great majority (79%) of bicycle fatalities occur on weekdays;
- Motorcyclist safety is a key issue for urban road safety, with 55% of motorcycle fatalities occurring in the Sydney, Newcastle and Wollongong greater conurbation;
- Almost half (45%) of all motorcycle fatalities involve the motorcycle leaving the carriageway or losing control on the carriageway with no other moving vehicle involved;
- Wearing of helmets is compulsory for motorcyclists (including pillion and sidecar passengers), and wearing rates for motorcyclists are around 98%;
- Competency-based compulsory motorcycle rider training for learner riders, related to steps in licence provision, is being expanded across New South Wales.

1.14 The goal of the Roads and Traffic Authority 2002-2004 action plan for motorcyclist and bicyclist safety was:
"To reduce the incidence and severity of road crashes involving motorcyclists and bicyclists"

1.15 To achieve this goal, the stated objectives of the action plan were to:
- Enhance awareness, knowledge and understanding of rider safety;
- Continue to improve attitudes, hazard perception and skills of riders;
- Promote the need for all motorists to travel at appropriate speeds in residential areas and in places where bicyclists are more common;
- Provide for bicyclists and motorcyclists in the design, construction and maintenance of roads;
- Ensure that the design and use of all vehicles leads to improved safety for motorists and bicyclists; and
- Engage the whole community in relation to the safety of bicyclists and motorcyclists.

1.16 The 2002-2004 motorcyclist and bicyclist safety action plan identified future actions to improve the safety of motorcycle riders and passengers. Key actions included:
- Provide further public education to motorcyclists and other road users emphasising factors of key importance in motorcycle crashes;
• Design, construct and maintain roads to standards that recognise the needs of riders in line with the Austroads Guide to Traffic Engineering Practice (part 15) Motorcycle Safety;
• Continue to provide motorcycle rider training;
• Encourage the use of protective and more visible clothing for motorcycle riders.

1.17 An important element of the action plan provided for the development of a problem definition and countermeasure summary document specific to motorcycling. This was eventually published by the Roads and Traffic Authority (2004).

1.18 However, it is unclear as to how many other actions listed in the twenty five specific actions for motorcycle safety under the 2002-2004 motorcyclist and bicyclist safety action plan have been achieved. No evaluation of the outcomes of the action plan have been reported, and the action plan has been removed from the Roads and Traffic Authority’s website.

1.19 What is clear is that the situation regarding road trauma involving motorcyclists and bicyclists has worsened. In the year to date, January-mid September 2005, these two categories of road user comprised one in seven road deaths in New South Wales (of one in eight road deaths in 2001).

1.20 It is also unclear why motorcyclists and bicyclists were included in a common action plan—perhaps it was because both motorcycles and bicycles are two-wheeled vehicles, or because there is mandatory helmet wearing laws for both categories of road user. But the divergences are much greater, including for example:
• Motorcyclists must be licensed, with rigorous compulsory off-road and on-road training, whereas there is no licensing regime for bicyclists;
• Protective clothing used by motorcyclists is radically different in design, construction and functionality from clothing used by bicyclists;
• The speeds achieved by motorcyclists in routine riding are much higher than bicyclists;
• The distances ridden by motorcyclists are often much longer than ridden by bicyclists;
• Bicyclists are better served by separated roadways (bicycle paths), although as Umar (2002) noted, specific provision of motorcycle-only lanes can be a viable countermeasure to motorcycle-related road trauma.

Motorcycle Council of NSW 2002-2005 'Positioned for Safety' motorcycle safety strategic plan

1.21 The Motorcycle Council of NSW is the peak body for motorcyclists in New South Wales. The Council does not have individual members, rather motorcycling clubs send delegates to the Council. The Motorcycle Council of NSW, with funding from the Motor Accidents Authority, developed and released a motorcycle safety strategic plan, 'Positioned for Safety' (de Rome & Stanford, 2002). This appears to be the first major strategic planning approach specific to motorcycle safety developed in Australia. The 'Positioned for Safety' motorcycle safety strategic plan was designed to integrate with, and extend, the Road Safety 2010 strategic planning document.
1.22 The 'Positioned for Safety' motorcycle safety strategic plan incorporated over ninety individual strategies addressing issues to achieve safer roads for motorcyclists, safer riders (and other road users interacting with motorcyclists), safer motorcycles and equipment, and a range of issues associated with general research into motorcycling, crash investigation and reporting, the promotion of consultation and communication, and issues associated with licensing, registration and insurance. These strategies were developed in consultation with all key stakeholder agencies, the motorcycle industry and rider community.

1.23 In 2005, the Motor Accidents Authority funded an evaluation of the 2002-2005 'Positioned for Safety' motorcycle safety strategic plan. The evaluation was conducted by David Riches & Associates (2005) on behalf of the Motorcycle Council of NSW. Findings from the evaluation indicated:

- Almost half of the strategies (48%) had been implemented and achieved outcomes;
- A further 27% were being implemented and longer term outcomes were anticipated;
- High levels of stakeholder awareness of the plan;
- Direct influence on engineering and transport management strategies, as engineers now look to Austroads Guide to Traffic Engineering Practice Part 15- Motorcycle Safety for guidance;
- A strong influence on education and awareness programs, conducted mainly in local government settings;
- Provided a useful “point of reference” for road safety practitioners who are planning motorcycle action and activity in their area;
- Encouraged campaigns directed to encourage protective clothing wearing rates;
- Increased stakeholder awareness of the needs of motorcyclists, through publishing clear statistical analyses of motorcycle crash involvements;
- Contributed to improving the public and professional image of motorcyclists;
- Contributed significantly to improved flow of communication between road safety stakeholders and organisations, with some gaps noted in interaction with the Roads and Traffic Authority;
- Provided a strong foundation to enter a new three-year planning cycle.

1.24 Overall, the results of the evaluation were very positive, with 98% of local councils who responded stated that they were aware of the Motorcycle Council of NSW's Positioned for Safety motorcycle safety strategy. There were substantial levels of action and strategic commitment in local government settings across New South Wales. Sixty percent of local councils who responded indicated that motorcycle road safety initiatives were included in their road safety strategies or action plans, and 73% of respondent local councils were able to cite specific examples of motorcycle project activity.

1.25 The evaluation also showed that the Motorcycle Council of NSW's Positioned for Safety motorcycle safety strategy has achieved a considerable number of outcomes extraneous to the original intent of the strategies. These outcomes have contributed to the organisational growth and professionalism of the Motorcycle Council of NSW to provide a better understanding of motorcycle issues, the political environment and the tactics that are required to achieve road safety benefits and outcomes. These outcomes are:

- Improved communications with the Roads and Traffic Authority, resulting in a more effective two-way flow of information and consultation on motorcycle issues;
- Improved availability of reliable motorcycle crash data providing the basis for informed decision making and planning;
• Reconciliation and recognition of shared objectives for motorcycle safety;
• Establishment of direction and a framework for activity by the Motorcycle Council of NSW, providing clear priorities and objectives within a defined planning time period;
• Direction and framework for partner organizations;
• Raised awareness of motorcycle issues by agencies, including the National Roads and Motorists' Association (NRMA), the Institute for Public Works Engineering Australia (IPWEA), the Australasian College of Road Safety, etc..

Additionally the evaluation found evidence that:
• Effective media approaches have lifted the profile of motorcycle safety issues, and shifted the reporting theme from a negative portrayal of motorcycle riders to provide a positive image of motorcyclists as responsible road users with safety concerns; and
• A level of national prominence has been achieved by the Motorcycle Council of NSW as a leader in advocating and developing strategy for motorcycle safety in Australia.

1.26 It remains unclear as to why the Roads and Traffic Authority's motorcycle safety strategy contains only 25 actions, while the Motorcycle Council of NSW motorcycle strategy contains 91 actions. Such a gross disparity requires, in STAYSAFE's view, investigation and clarification.

1.27 The Motorcycle Council of NSW, working through the Australian Motorcycle Federation, also sought to develop a national strategic approach to motorcycle safety (Australian Motorcycle Federation, 2001). As noted in Paragraph 1.5, this proposal was not accepted by the National Road Safety Strategy Panel. It remained for the first national motorcycling safety strategy to be published elsewhere (United Kingdom Department for Transport, 2005).

United Kingdom 2005 motorcycling strategy

1.28 In February 2005, the United Kingdom Department for Transport released a comprehensive motorcycling strategy. This is a quite broadly based transport strategy which covers environmental, infrastructure and traffic management, motorcycle and rider equipment and behavioural factors.

1.29 The United Kingdom Department for Transport's motorcycling strategy includes the following statement from the Parliamentary Under Secretary of State for Transport:

The [United Kingdom] Government is committed to supporting motorcycling as an important part of the transport mix, working together with the motorcycling community to address the needs of motorcyclists.

For many years the popularity of motorcycling has fluctuated, influenced by changes in the cost of motoring by car, the range and ease of use of the motorcycles and scooters, and changes in lifestyles – such as where we choose to live and work.

Recently we have seen a significant increase in motorcycling, with people turning to motorcycles to beat congestion, and, as we have become more wealthy as a
nation, an increase in biking as a leisure activity with people riding for the sheer fun of it.

In the light of this increase having a national strategy for motorcycling is a clear priority....

The principal aim of our strategy is to ‘mainstream’ motorcycling, so that all the organisations involved in the development and implementation of transport policy recognise motorcycling as a legitimate and increasingly popular mode of transport. We want to see an end to old stigmas and stereotyping—motorcycling can be a modern, practical way of getting around, and we all need to recognise it as such.

The mainstreaming of motorcycling brings with it rights and responsibilities. Motorcyclists have the right to expect both central and local Government to take account of motorcycling in the planning process, when designing and maintaining the road network, when managing traffic and when considering safety. In return, motorcyclists must recognise their responsibilities—to ride sensibly and safely within the law, be considerate to other road users, and to others more generally—for example those who wish to enjoy the peace and tranquillity of our rural areas.

This strategy is a beginning. It encompasses important initiatives including better training to take skills to a higher level; improving rider and driver attitudes and behaviour; improved motorbike design; better designed infrastructure and smarter traffic management. It sets out a clear program of action for us, working with others, and for the motorcycling world itself—the industry and the user groups—building on the excellent co-operative platform developed through the Advisory Group. Together we can take forward this sensible, practical and deliverable package of measures to make a positive difference for motorcycling, and make sure that motorcycling takes its proper place in the transport mainstream as a safe, affordable means of transport.

1.30 The approach adopted in the United Kingdom Department for Transport motorcycle strategy, which states that mainstreaming motorcycling as a form of transport is now government policy, is a quite different approach to that of most Australian governments, who consider motorcycle too dangerous to be encouraged and focus policy on harm minimisation and control.

Other relevant motorcycle safety research papers

1.31 In this report, STAYSAFE has included a number of relevant research papers that either relate specifically to New South Wales, or which have been conducted by New South Wales research and policy organisations. These papers are not a comprehensive review, but rather illustrate the range of research that is conducted.

1.32 It is important to recognise that a significant proportion of work relating to motorcycle safety often remains unreported and unpublished. For example, in 2002 three Northern Sydney local councils—Willoughby, Ku-Ring-Gai, and North Sydney developed a motorcycle
safety program to address the over-representation of motorcyclists in crashes in these three local government areas. The program included:

- education of motorcyclists regarding potential risks and how to avoid them;
- a helmet trade in offer which encouraged the use of protective clothing and safe helmets;
- road safety audits of identified ‘trouble spots’ for motorcyclists (which revealed that the issue at some of the sites was behavioural rather than environmental, and to address this, warnings for both motorists and motorcyclists were displayed at these sites on Variable Message Signs);
- a radio campaign, motorcycle safety brochures and bumper stickers, to raise the awareness of all road users regarding motorcycle safety issues.

While the motorcycle safety program was innovative, and engendered strong community and stakeholder support, and used a wide range of complementary strategies, and targeted different road user groups who have an impact on the safety of motorcyclists, and generated substantial interest from other road safety stakeholders, no substantive report of the program was published.

1.33 The Motor Accidents Authority has been particularly active in funding research and intervention programs for motorcycle safety. The Motor Accidents Authority has developed an injury prevention strategy to:

- meet the Motor Accidents Authority's road safety legislative responsibilities in a strategic and coordinated way;
- give direction and priority to the Motor Accidents Authority's road safety activities; and
- disseminate information about those activities.

The strategy focuses on decreasing serious injury and gives priority to areas including those which have greatest cost impact on the New South Wales compulsory third party (CTP) insurance scheme. A key target group for the Motor Accidents Authority is motorcyclists.

1.34 Recent research studies funded by the Motor Accidents Authority include an exposure study by motorcycle make and type (Christie & Harrison, 2003), and an investigation of motorcycle crash patterns for young riders (Christie & Harrison, 2001). The results of this work have also been published more widely (Harrison & Christie, 2005). The Motor Accidents Authority also funded research and the development of a web based guide on motorcycle protective clothing (de Rome, 2003).

1.35 The George Institute for International Health has commenced a series of research reviews examining the use of helmets by motorcyclists (see, e.g., Ivers, Wells, Blows, Liu, Stevenson, Sing & Norton, 2003; Ivers, Blows, Liu, Lo, Norton, Stevenson & Zhang, 2004; Liu, Ivers, Norton, Blows & Lo, 2003).

1.36 Safety issues associated with motorcycle helmets were also examined by O'Connor (2005), who sought to assess the role of helmets and helmet type in relation to injury to the cervical spinal cord (see also O'Connor, Kloeden & McLean, 2002).

1.38 Finally, it is important to note that motorcycle safety issues arise in off-road contexts, including riding in parks and reserves, and on private property (including farms, see, e.g., Franklin & Davies, 2003).

Concluding comments

1.39 STAYSAFE hopes that the release of such a compendium of research and analysis will foster and facilitate the development of a coherent motorcycle safety strategy in New South Wales that is adopted and supported by government as well as the motorcycling community.

1.40 STAYSAFE believes that it is appropriate to proceed to a formal inquiry into motorcycling safety in New South Wales. STAYSAFE has examined motorcycling safety issues by way of formal inquiry once before, but this work is now two decades old (STAYSAFE 3, 1984). Under the Chairmanship of Michael Knight MP, a comprehensive review of motorcycling safety was conducted, examining areas such as pre-learner's permit training and testing, the conditions of the learner's permit, provisional licensing and testing, requirements for motorcyclists to wear helmets and protective clothing, conspicuity issues (including daytime running lights), and a limited consideration of engineering issues affecting motorcycles. The most notable recommendations from this inquiry supported the establishment of a Rider Training Unit and a Motorcycle Rider Training and Testing Scheme in New South Wales. It was several years before recommendations made in this report were implemented. For example, a recommendation for a side-car passenger to be required to wear a helmet, and a recommendation for the removal of any exemption from helmet wearing, were not effected until 1992.

1.41 STAYSAFE also notes that its Parliamentary counterparts in other Australian jurisdictions have conducted a number of inquiries into motorcycle safety (see, e.g., Road Safety Committee, 1993, 1998; Social Development Committee, 1992).

RECOMMENDATION 1:
The STAYSAFE Committee conduct an inquiry into motorcycle safety in New South Wales.

References


Motorcycle safety in New South Wales in 2004

Liz de Rome
LdeR Consulting

Introduction

Motorcycles
The number of number of motorcycles registered in New South Wales has increased by 24% in just four years from around 85,000 in 2000 to over 105,000 in June 2004. This is an increase of 42% over the past ten years, from 74,000 in 1995 to over 105,000 in 2004.

Motorcyclists
The average age of motorcyclists has also increased due to a substantial increase in the numbers of older riders. The average age of a motorcyclist in New South Wales in 2004 is 41 years. Older riders (40 years +) now comprise 48% of registered owners in New South Wales compared with 31% in 1995. This represents a 135% increase in the numbers of older riders since 1995. This is in sharp contrast to the 14% reduction in the number of young riders under the age of 26 years. The number of riders between these two age groups has remained fairly constant. The graph below illustrates the changing trend in registrations.
More motorcycles but not more crashes
The increase in the number of motorcycles on the road has not led to a comparable increase in crashes. In this paper, crash data is only available up until the end of 2003, but at that time the number of reported motorcycle crashes has reduced slightly from 2,240 in 1995 to 2,154 in 2003.

Fewer multi-vehicle crashes
In just the last four years (2000-2003) the number of multi-vehicle crashes involving a motorcycle has decreased by 11%. This represents a 9% decrease in crashes where the rider was the key vehicle and a 12% decrease in the number of crashes where it was the other driver (from 887 in 2000 to 781 in 2003, see the graph below. The key vehicle is generally the vehicle considered to have played the major role in the accident by the police. However, this does not always mean that they were at fault. For example a driver turning on a green arrow at an intersection, who is hit by a vehicle coming through a red light, would still be classified as the key vehicle because their movement was turning across the flow of traffic. A vehicle that hits a pedestrian is always classified as the key vehicle even though in many cases the accident may have been caused by the pedestrians action.

Most crashes occur in low speed areas
Most crashes (68%) take place on roads zoned 60 km/h or less; only 14% of crashes take place on roads zoned 100 km/h or more. Fatal crashes are relatively more likely to occur in faster speed zones. Forty two percent (42%) of fatal crashes take place on roads zoned 60 km/h or less; 36% take place on roads zoned 100 km/h or more.

Car drivers at fault in collisions with a motorcycle
The other driver was the key or responsible vehicle in 61% of collisions with a motorcycle, but 71% of intersection crashes and 48% of non-intersection crashes.

Cars were the key vehicle in 75% of all crashes with motorcycles, light trucks were the key vehicle in 18% and heavy vehicles in only 4%. Cars were less likely to be the key vehicle in fatal crashes (46%), compared to light trucks (37%) and heavy vehicles (14%).

**Young riders at fault in most fatal crashes**
The motorcyclist was the key vehicle in 61% of fatal crashes with another vehicle. Forty two percent (42%) of the riders who made the fatal errors in these crashes were under 26 years.

**Older riders not high risk**
The rider group most at risk are those under 26. They own 10% of the bikes but are involved in 30% of crashes and 32% of fatal crashes. Older riders (40+) own 48% of the bikes but are involved in only 28% of crashes and 27% of fatal crashes.

Young people are less likely to own a motorcycle, but those who do are relatively more likely to be involved in crashes. If we look at the crash rate, young riders (under 26) have 676 crashes per 10,000 registered vehicles, compared to 228 crashes for riders aged 26-39 and 127 crashes for those over 40 years. Almost two thirds (64%) of young rider crashes involved another vehicle compared to only 53% of older riders. While collisions between a motorcycle and another vehicle is usually the fault of the other driver (64%), young riders were more likely than older riders to be at fault in these collisions (40% vs. 34%).

Some of these young riders (9%) are unlicensed and it is the unlicensed riders who are more likely to be involved in high risk riding. Learners and provisional licence holders represent only a small proportion of the riders who crash (5% & 2%).

**Unlicensed riders are a small group but a big problem**
Unlicensed riders are over-represented in all forms of high risk rider behaviour and associated crashes. Over the past 4 years (2000-03), 545 unlicensed riders have been involved in motorcycle crashes in New South Wales. The majority (59%) were under 26 years of age.

Unlicensed riders comprise 6% of riders involved in crashes but 13% of motorcycle fatalities.

Unlicensed riders accounted for 26% of all riders in crashes who had an illegal alcohol reading. Twenty three percent (23%) of all unlicensed riders involved in crashes had an illegal alcohol level compared to 4% of licensed riders.

Over a third of all unlicensed riders were involved in speed related crashes (34%).

More than one in five unlicensed riders (21%) were not wearing a helmet, or wore a helmet that was not correctly fastened, when they crashed. They represented 44% of all unhelmeted riders.
Unlicensed riders were almost twice as likely to have a pillion passenger who was injured when they crashed (11% compared to 6% of licensed riders).

Unlicensed riding is more of a social problem than it is a specific motorcycling problem. The increased incidence of risk taking behaviour amongst unlicensed motorcycle riders also occurs amongst unlicensed car drivers. Although unlicensed drivers are only a small minority amongst drivers, 12% of all speeding drivers in fatal crashes were unlicensed [Roads and Traffic Authority, Speed: Speed Problem Definition and Countermeasures Summary, 2000].

Summary of factors associated with motorcycle crashes in New South Wales

<table>
<thead>
<tr>
<th>Rider factors in crashes</th>
<th>All riders in crashes</th>
<th>Licensed riders in crashes (n=7014)</th>
<th>Unlicensed riders in crashes (n=545)</th>
<th>Unknown license status (n=1513)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All crashes</td>
<td>100%</td>
<td>77%</td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>5%</td>
<td>4%</td>
<td>23%</td>
<td>8%</td>
</tr>
<tr>
<td>Fatigue</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>Speed</td>
<td>24%</td>
<td>24%</td>
<td>34%</td>
<td>12%</td>
</tr>
<tr>
<td>No helmet</td>
<td>3%</td>
<td>1%</td>
<td>21%</td>
<td>8%</td>
</tr>
<tr>
<td>Age under 26</td>
<td>30%</td>
<td>27%</td>
<td>39%</td>
<td>21%</td>
</tr>
<tr>
<td>Age over 40</td>
<td>25%</td>
<td>28%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Pillion casualty</td>
<td>6%</td>
<td>6%</td>
<td>11%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Survey of motorcyclists and their safety initiatives

Liz de Rome
LdeR Consulting

Guy Stanford & Brian Wood
Motorcycle Council of NSW

Almost 800 motorcyclists across New South Wales were surveyed in a project funded by the Motor Accidents Authority. The objectives were to obtain information on crash experience and other issues associated with risk perception and management by motorcyclists, and to develop a profile for designing and delivering motorcycle safety information. Responses suggested that the most effective channels of communication within the motorcycling community are through the club network, motorcycle magazines and the internet. It was apparent that a substantial proportion of respondents were actively involved in ensuring their own safety through post license training, accessing safety information and use of protective clothing. Two thirds had been involved in at least one motorcycle crash during their riding career. Of those who had crashed: 65% reported injury to themselves or to a pillion passenger; 55% had been in crashes with another vehicle and 47% had been in single vehicle crash. There were differences in crash experience according to age and type of motorcycle currently ridden. When asked what they could have done to have avoided the crash, almost one third of all respondents said that there was nothing they could have done. However respondents who had undertaken some form of rider training were less likely to have believed there was nothing they could have done than were those who had no formal training. Over two thirds (69%) of respondents to the survey had undertaken some form of training in the last 4 years and 33% had completed some form of advanced rider training. The results of the survey have stimulated discussion about safety issues and attitudes to riding amongst rider groups. The survey report provides a useful resource of information to guide researchers and road safety authorities in the most effective means by which they can communicate with motorcyclists.

Introduction

In 2001 Australia ranked 9th best for road safety amongst 27 OECD nations, but 9th worst for motorcycle safety. Motorcycle fatalities were almost double the median for OECD nations (6.2 vs 3.6 per 10,000 registered vehicles; Australian Transport Safety Bureau, 2004). By contrast, Australia’s fatality record for all road users was below the OECD median (1.4 vs 1.8; Australian Transport Safety Bureau, 2003). Despite this disparity, motorcyclists were not singled out by road safety authorities for targeted safety programs. There were a number of reasons for this apparent failure of policy but perhaps primarily, it was simply assumed that motorcyclists were adequately covered by general road safety campaigns directed at all
motorists. There was a lack of research and therefore lack of understanding of the issues involved in motorcycle safety. There was also a view that it would be difficult to effectively deliver targeted information to such a relatively small but divergent group of road users.

A survey of 796 motorcyclists was conducted by the Motorcycle Council of NSW to inform the development of a road safety strategic plan for riders in New South Wales. The objectives of the survey were to obtain information relating to road safety and risk management by motorcyclists, and to identify effective channels of communications that could be used for the delivery of road safety information in the future.

Method

Methodology
The survey questionnaire was distributed through four methods. These were through motorcycle club networks, a motorcycle magazine, motorcycle parking areas and through motorcycle retail stores and training facilities.

A total of 3170 surveys were distributed and 796 (25%) returned. The motorcycle club network was the most effective means of distribution and yielded a response rate of 65% (n=470). The response rate for the parking areas was 27% (n=67) and for the motorcycle magazine it was 12% (n=242). Distribution through dealers and trainers was least successful with a return rate of 2% (n=17).

The sample
The majority of respondents were male (86%) with an average age of 43 years, compared to females (13%, n=101) with an average age of 39 years. There was a significant gender difference in the length of time respondents had held their motorcycle license. Males had held their license on average for 20 years compared to 9.4 years for females.

Almost two thirds (64%, n=510) of respondents belonged to a motorcycle club, this is not surprising given the distribution method, however it does raise the question as to whether the sample was representative of motorcyclists in general. Club membership does not necessarily indicate a higher than average level of activity. There are clubs for each of the major brands and some manufacturers provide introductory membership with the purchase of a new bike (e.g. Harley Davidson & Honda). The five largest motorcycle clubs list some 26,200 members in New South Wales, which accounts for 31% of the registered owners in the state (derived from personal communications with Ulysses, Honda Riders Club, Harley Owners Group, Ducati Owners Club, and the United Motorcycle Council).

However, the respondents also tended to be older and to ride larger motorcycles than the general distribution of registered owners in New South Wales (see Tables 1 & 2).
Table 1. Age of survey respondents compared to registered owners in New South Wales, 2003 (Roads and Traffic Authority, 2001).

<table>
<thead>
<tr>
<th></th>
<th>19-24</th>
<th>25-30</th>
<th>31-40</th>
<th>41-50</th>
<th>51-60</th>
<th>61+</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey (n)</td>
<td>31</td>
<td>93</td>
<td>200</td>
<td>240</td>
<td>154</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Survey (%)</td>
<td>4%</td>
<td>12%</td>
<td>25%</td>
<td>30%</td>
<td>19%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>NSW registered (n=85,000)</td>
<td>10%</td>
<td>13%</td>
<td>28%</td>
<td>25%</td>
<td>12%</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Size of survey motorcycles compared to registered owners in New South Wales, 2000 (Roads and Traffic Authority, 2001).

<table>
<thead>
<tr>
<th></th>
<th>0-250</th>
<th>251-500</th>
<th>501-750</th>
<th>751-1000</th>
<th>1001-1250</th>
<th>1251+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey (%)</td>
<td>12%</td>
<td>4%</td>
<td>24%</td>
<td>31%</td>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>NSW registered*</td>
<td>31%</td>
<td>6%</td>
<td>22%</td>
<td>18%</td>
<td>11%</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Excluding Australia Post and registered off road 250 cc motorcycles.

Communicating with motorcyclists

The response rate to the survey demonstrated the effectiveness of working through the club networks to communicate with motorcyclists. Motorcycle magazines provided 31% of respondents, although these represented a relatively poor response rate of 12% for the number of surveys distributed. Perhaps the most surprising result was the high proportion (27%) of riders who completed and returned questionnaires that had been attached to their handle bars in parking areas. Such a positive response may be because the survey was promoted as a rider initiative.

The internet and motorcycle magazines were communication channels accessed by a majority of respondents. Seventy nine percent (79%, n=625) had access to the internet, and three quarters of them used it to find motorcycle related information (74%, n=478). The proportion with access to the internet was relatively high compared to 54% of the general population in 2001 (Australian Bureau of Statistics, 2004a). The preferred means of accessing motorcycle information was through web sites (80%, n=382) rather then newsgroups (12%, n=57) or e-mail subscriptions (12%, n=55).

A similarly high proportion of respondents read motorcycle magazines (80%, n=638) compared to only 63% of the wider community reading magazines (Australian Bureau of...
Statistics, 2004b). Women riders were less likely than men to read motorcycle magazines (59% vs 84%). The magazines named included Two Wheels (52%), Australian Motorcycle News (30%), Road Rider (15%) and Riding On (11%). The high proportion of Two Wheels readers includes 31% of responses from surveys distributed in Two Wheels magazine.

Respondents were asked about the last motorcycle related road craft/ safety or riding skill message they had heard that made them pay attention. More than two thirds (71%) could recall such a message and 83% said that it had been of value to them.

Motorcycle magazines were by far the most frequently cited source of safety messages (35%).

Rider training courses (20%), television advertisements (11%) and motorcycle clubs (10%) were the next most frequently mentioned sources. The television advertisements mentioned were those designed and funded by motorcyclists through the Celebration of Australian Motorcycling Committee. At the time of this survey there had not been any State funded motorcycle safety campaigns in New South Wales.

A few slogans (e.g. Look Bike, n=11 and Don’t Ride Us Off, n=25) were mentioned but most respondents referred to more complex messages conveyed at a personal level rather than to media campaigns.

Crash experience and causes

Two thirds of the respondents had been involved in at least one motorcycle crash over their riding life. There were differences in crash experience according to gender and age. Women riders were less likely than males to have crashed (48% vs 69%). Although the numbers of novice riders was small (n=23 learner licences, n=23 provisional licences), it is of concern that over one third (35%) of the learners and almost half (48%) of those with provisional licences had already been involved in a crash.

Just over half (55%) of the respondents had been involved in a crash with another vehicle and 45% had been in single vehicle crashes. This study was particularly interested in aspects of single vehicle crashes in relation to causes and responsibility.

Age and crash experience

While young riders (Under 26) reported proportionately fewer crashes, they were the group most likely to have been involved in single vehicle crashes (77%). The oldest group of riders (60+) also reported more single than multi-vehicle crashes, whereas the middle aged riders (40-59) had fewer single vehicle crashes, see table 3.
### Table 3. Age group and crash experience.

<table>
<thead>
<tr>
<th>Age</th>
<th>All respondents</th>
<th>All crashed</th>
<th>Multi vehicle</th>
<th>Single vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 26</td>
<td>31</td>
<td>43%</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>26-39</td>
<td>277</td>
<td>66%</td>
<td>49%</td>
<td>49%</td>
</tr>
<tr>
<td>40-59</td>
<td>410</td>
<td>68%</td>
<td>59%</td>
<td>40%</td>
</tr>
<tr>
<td>60+</td>
<td>75</td>
<td>64%</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>Total</td>
<td>796</td>
<td>66%</td>
<td>55%</td>
<td>45%</td>
</tr>
</tbody>
</table>

### Type of motorcycle and crash experience

Crash experience also appears to be related to type of motorcycle. Those currently riding light commuters or scooters and cruisers were less likely than other riders to have ever been involved in a crash. However, where they had been in a crash, the cruiser riders were more likely to have been involved in a single vehicle crash than the riders of any other machine. Light commuter and scooter riders were most likely to have been involved in a multi-vehicle crash (67%).

### Table 4. Type of motorcycle currently ridden and crash experience.

<table>
<thead>
<tr>
<th>Type of motorcycle</th>
<th>Ever crashed</th>
<th>Multi-Vehicle</th>
<th>Single Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruiser (n=126)</td>
<td>52%</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>Sports (n=278)</td>
<td>67%</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>Trail (n=21)</td>
<td>67%</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Touring (n=279)</td>
<td>71%</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>Light commuter/ Scooter (n=27)</td>
<td>44%</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>Other (n=55)</td>
<td>75%</td>
<td>46%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Loss of traction (70%, n=167) was the most commonly cited circumstance of single vehicle crashes, followed by avoiding the action of another vehicle (24%, n=56), excessive speed (16%, n=38), cornering error 14% and slow speed manoeuvring (12%, n=29), as shown in Table 5.
Table 5. Circumstance of single vehicle crashes

<table>
<thead>
<tr>
<th>Loss of traction</th>
<th>Other vehicle</th>
<th>Excess speed</th>
<th>Cornering error</th>
<th>Slow speed manoeuvre</th>
<th>Rider impaired</th>
<th>Unfamiliar motorcycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>167</td>
<td>56</td>
<td>38</td>
<td>32</td>
<td>29</td>
<td>13</td>
</tr>
<tr>
<td>%</td>
<td>70%</td>
<td>24%</td>
<td>16%</td>
<td>14%</td>
<td>12%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Respondents were also asked to nominate—from a range of specified options—what they could have done to avoid these single vehicle crashes (see Table 6).

Table 6. What riders could have done to avoid single vehicle crashes (Note: Rows do not add to 100% due to multiple responses.)

<table>
<thead>
<tr>
<th>All crashes</th>
<th>Nothing</th>
<th>Better braking</th>
<th>Better observation</th>
<th>Slowed down</th>
<th>Better cornering</th>
<th>Not ridden</th>
<th>Slow speed skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27%</td>
<td>16%</td>
<td>29%</td>
<td>28%</td>
<td>17%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Loss of control</td>
<td>32%</td>
<td>15%</td>
<td>32%</td>
<td>26%</td>
<td>14%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>Other vehicle</td>
<td>36%</td>
<td>20%</td>
<td>32%</td>
<td>20%</td>
<td>11%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Excess speed</td>
<td>5%</td>
<td>26%</td>
<td>30%</td>
<td>79%</td>
<td>50%</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Cornering</td>
<td>9%</td>
<td>31%</td>
<td>34%</td>
<td>59%</td>
<td>59%</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td>Slow speed</td>
<td>31%</td>
<td>24%</td>
<td>31%</td>
<td>28%</td>
<td>28%</td>
<td>7%</td>
<td>55%</td>
</tr>
<tr>
<td>Impaired</td>
<td>8%</td>
<td>15%</td>
<td>54%</td>
<td>31%</td>
<td>23%</td>
<td>69%</td>
<td>8%</td>
</tr>
<tr>
<td>Unfamiliar</td>
<td>13%</td>
<td>27%</td>
<td>47%</td>
<td>40%</td>
<td>47%</td>
<td>13%</td>
<td>47%</td>
</tr>
</tbody>
</table>

On the whole responses indicated a degree of awareness of their own contribution to the incident. Twenty eight percent said it could have been avoided if they had slowed down earlier, this included 59% of those who crashed due to a cornering error, and 79% of those who crashed due to excessive speed. Twenty nine percent thought better observation could have helped.

Relatively few believed that operational skills, such as better braking (16%), cornering (17%) or slow speed manoeuvring skills (9%), would have enabled them to avoid the crash.
However, 27% reported that there was nothing that they could have done to avoid the crash. These were principally those riders whose crashes were due to loss of traction (32%) or attempting to avoid a situation created by another vehicle (36%).

There were few difference between age groups in their assessment of what they might have done to avoid their crash, however older riders were more likely to say that there was nothing they could have done.

Table 7. Age distribution of riders by what they could have done to avoid crashes

<table>
<thead>
<tr>
<th>Age group</th>
<th>Nothing</th>
<th>Better braking</th>
<th>Better cornering</th>
<th>Better observation</th>
<th>Slowed down</th>
<th>Not ridden</th>
<th>Slow speed skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>16%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>25-39</td>
<td>18%</td>
<td>11%</td>
<td>10%</td>
<td>18%</td>
<td>17%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>40-59</td>
<td>24%</td>
<td>12%</td>
<td>9%</td>
<td>15%</td>
<td>16%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>60 +</td>
<td>25%</td>
<td>5%</td>
<td>3%</td>
<td>12%</td>
<td>16%</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>22%</td>
<td>11%</td>
<td>9%</td>
<td>16%</td>
<td>16%</td>
<td>4%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Rider training

Two thirds (65%) of the survey respondents had undertaken some form of training. Twenty three percent had completed compulsory rider training (Compulsory rider training as a part of the licensing process was introduced into New South Wales in 1989), 31% had undertaken post licence, advanced rider training (e.g., Stay Up Right Advanced Course) and 10% had completed high level road based training (e.g., Superbike School). The majority of those with any sort of training (72%) had undertaken some training within the last 4 years.

Respondents overwhelmingly rated training to have been of value to their road craft or safety skills, machine handling and confidence on the road (see Table 8).

Table 8. Perceived benefits of training

<table>
<thead>
<tr>
<th>The course improved:</th>
<th>n</th>
<th>Compulsory</th>
<th>Post license</th>
<th>All training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road craft or safety skills</td>
<td>488</td>
<td>90%</td>
<td>97%</td>
<td>95%</td>
</tr>
<tr>
<td>Machine handling</td>
<td>482</td>
<td>88%</td>
<td>96%</td>
<td>93%</td>
</tr>
<tr>
<td>Confidence on the road</td>
<td>457</td>
<td>84%</td>
<td>91%</td>
<td>89%</td>
</tr>
</tbody>
</table>
The question of post license rider training is of particular interest due to evidence that advanced driver training may contribute to increased crash risk, particularly for young males (Christie, 2001). The essential principle behind discouraging skills based advanced driver training courses is that safe driving is more dependent on attitudinal and cognitive factors than on operational skills. Research with car drivers suggests that training in advanced vehicle handling skills may create a false sense of confidence leading to increased risk taking behaviour.

The same principle may not necessarily apply in the motorcycle environment. This is because there is a substantial difference in the operational skill demands for safe riding compared to safe driving. Advanced rider training courses generally focus on refining essential skills, such as cornering and braking.

There is some evidence to suggest that advanced rider training may be of significant value in reducing crash risk. Haworth, Smith, Brumen and Pronk (1997) found that ineffective braking occurred in 20% and a failure to respond to a threat occurred in 17% of the motorcycle crashes that they examined. They also found that a significant decrease in the odds of crashing was associated with having completed an advanced course.

The proportion of the riders in the current study who had been in a single vehicle crash and reported that there was nothing they could have done to have avoided that crash (27%), raises the issue of externalizing responsibility. It is a basic tenet of any road safety training that there is always something one could have done to avoid a crash.

Responses to that question were crosstabulated with riders' training experience. The results suggest that those who had undertaken some form of rider training were less likely to believe there was nothing they could have done than were those who had no formal rider training. It would appear that rider training may open up options for the rider that are not recognized by those without training (see Table 9).

Table 9. Training and belief about avoiding single vehicle crash (n= 247)

<table>
<thead>
<tr>
<th>Single vehicle crashes</th>
<th>No training (n=79)</th>
<th>Compulsory (n=60)</th>
<th>Post license (n=108)</th>
<th>All riders (n=247)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>38%</td>
<td>15%</td>
<td>25%</td>
<td>27%</td>
</tr>
<tr>
<td>Better braking</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>16%</td>
</tr>
<tr>
<td>Better observation</td>
<td>20%</td>
<td>37%</td>
<td>31%</td>
<td>29%</td>
</tr>
<tr>
<td>Slowed down</td>
<td>23%</td>
<td>25%</td>
<td>32%</td>
<td>28%</td>
</tr>
<tr>
<td>Better cornering</td>
<td>8%</td>
<td>17%</td>
<td>24%</td>
<td>17%</td>
</tr>
<tr>
<td>Not ridden</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Better slow speed skills</td>
<td>3%</td>
<td>8%</td>
<td>15%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Personal protection

Forty three percent of all respondents had been involved in a crash that had resulted in injury to themselves or to a pillion passenger. They accounted for 65% (n=338) of all those who had been involved in a crash (n=522). Four respondents had been involved in crashes that resulted in a fatality. Twenty four percent of those injured had been hospitalized and 29% had sustained broken bones. Sprains, bruises and gravel rash were the most common forms of injury reported.

Table 10. Types of injury for riders and pillions in crashes

<table>
<thead>
<tr>
<th></th>
<th>Damaged gear, pride</th>
<th>Gravel rash</th>
<th>Sprains bruises</th>
<th>Gashes cuts</th>
<th>Broken bones</th>
<th>Hospital admitted</th>
<th>Fatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury crash</td>
<td>107</td>
<td>155</td>
<td>164</td>
<td>77</td>
<td>99</td>
<td>82</td>
<td>4</td>
</tr>
<tr>
<td>(n) 13%</td>
<td>13%</td>
<td>20%</td>
<td>21%</td>
<td>10%</td>
<td>12%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>Respondents</td>
<td>13%</td>
<td>20%</td>
<td>21%</td>
<td>10%</td>
<td>12%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>(n=796)</td>
<td>13%</td>
<td>20%</td>
<td>21%</td>
<td>10%</td>
<td>12%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>All crashed</td>
<td>20%</td>
<td>29%</td>
<td>31%</td>
<td>15%</td>
<td>19%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>(n=522)</td>
<td>20%</td>
<td>29%</td>
<td>31%</td>
<td>15%</td>
<td>19%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>All injured</td>
<td>32%</td>
<td>46%</td>
<td>49%</td>
<td>23%</td>
<td>29%</td>
<td>24%</td>
<td>1%</td>
</tr>
<tr>
<td>(n=338)</td>
<td>32%</td>
<td>46%</td>
<td>49%</td>
<td>23%</td>
<td>29%</td>
<td>24%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Riders were asked to nominate from a list, the types of clothing they and their pillion would usually wear when riding. While protective clothing is unlikely to prevent serious injury from impacts in a collision with another vehicle or fixed objects such as crash barriers or signposts, it can reduce gravel rash, torn or severed ligaments and some broken bones (de Rome & Stanford, 2003).

The head and upper body were generally well protected. All riders and pillions wore helmets and most had some form of eye protection. The majority wore full face helmets (87% & 86%) and motorcycle gloves (89% & 80%). Most riders also wore motorcycle jackets either full leathers (26%), leather jacket (51%) or a non-leather motorcycle jacket (36%). Pillions were less likely to have full leathers (12%) but equally likely to have leather (51%) or non-leather motorcycle jackets (37%). Twenty percent of riders and 9% of pillions also wore body armour.

The legs were less well protected particularly for pillions. Over half the riders (55%) usually wore jeans and 2% reported wearing shorts. The remainder wore either leather pants (20%) or motorcycling pants with armour (21%). Pillions were more likely to wear jeans (64%) and less likely to wear leather pants (13%) or motorcycling pants with armour (13%). Riders were also more likely than pillions to wear motorcycle boots (85% vs. 60%).

In order to develop a means of assessing general levels of protection, all listed clothing items were classified according to the level of protection they afford and the area of the body protected. Table 11 shows the proportion of riders and pillions who were assessed as having...
high protection for each area of the body. On this assessment it is clear that legs and feet, particularly for pillion riders, were least likely to be adequately protected. This is particularly of concern, as the legs are generally agreed to be the area of the body most likely to be injured in a motorcycle crash (European Experimental Vehicles Committee, 1993).

Table 11. Levels of protection of clothing usually worn by riders and pillion riders (The level of protection for heads is less than 100% because although all riders and pillion riders normally wore helmets, they did not all wear some form of eye protection).

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Head</th>
<th>Body</th>
<th>Hands</th>
<th>Legs</th>
<th>Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rider</td>
<td>796</td>
<td>96%</td>
<td>97%</td>
<td>89%</td>
<td>45%</td>
<td>85%</td>
</tr>
<tr>
<td>Pillion</td>
<td>417</td>
<td>92%</td>
<td>92%</td>
<td>80%</td>
<td>36%</td>
<td>60%</td>
</tr>
</tbody>
</table>

It was also apparent that there are considerable differences in the usage of motorcycle clothing according to the type of motorcycle ridden. Riders of light commuters and scooters were least likely to have any specific motorcycle gear apart from a helmet and gloves. Trail and dirt bike riders were similarly under equipped although they were more likely to have motorcycle boots (71%) and to use impact protectors (29%). Of the three main groups, cruiser riders were relatively less likely than sports bike or tourer riders to wear motorcycle pants (33%), gloves (83%) or body armour (9%) and were more likely to use an open face helmet (45%), as shown in Table 12.

There have been significant developments in the protective quality of motorcycle clothing particularly since the European Union Directive requiring motorcycle protective clothing to comply with established standards (Council of the European Communities, 1989). However new products have tended to focus on injury protection for track racing and off road riding, and weather protection for touring. As a result, the style of gear reaching the market is more acceptable to riders of sports and trail bikes or tourers because it is in keeping with their image. There has been less attention paid to the development of protective clothing for riders of scooters or light commuters, who require multi-purpose clothing that can be worn comfortably at their destination. The issue of image versus protection is even more relevant in the case of cruisers with a tradition of riding in jeans with pull-on boots, a leather jacket and open face helmet.

Table 12. Type of clothing usually worn by type of motorcycle

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>MC gloves</th>
<th>MC boots</th>
<th>MC pants</th>
<th>MC jacket</th>
<th>Full face helmet</th>
<th>Open face helmet</th>
<th>Impact Protectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter</td>
<td>27</td>
<td>89%</td>
<td>41%</td>
<td>19%</td>
<td>81%</td>
<td>74%</td>
<td>22%</td>
<td>19%</td>
</tr>
<tr>
<td>Trail</td>
<td>21</td>
<td>71%</td>
<td>71%</td>
<td>38%</td>
<td>90%</td>
<td>86%</td>
<td>14%</td>
<td>29%</td>
</tr>
<tr>
<td>Cruiser</td>
<td>126</td>
<td>83%</td>
<td>86%</td>
<td>33%</td>
<td>95%</td>
<td>57%</td>
<td>45%</td>
<td>9%</td>
</tr>
<tr>
<td>Sports</td>
<td>278</td>
<td>91%</td>
<td>86%</td>
<td>50%</td>
<td>98%</td>
<td>96%</td>
<td>2%</td>
<td>29%</td>
</tr>
</tbody>
</table>
In order to determine whether crash experience or training might influence riders’ decisions about protective clothing, these factors were cross-tabulated with their choice of clothing.

Riders who had completed post-licence training courses were slightly more likely to wear full protection particularly motorcycle boots and pants. Those who had not progressed beyond learner training were least likely to have motorcycle boots, whereas riders who had never undertaken any formal rider training were least likely to use body armour including back protectors (see Table 13).

Table 13. Protective clothing usually worn by riders and their rider training experience.

<table>
<thead>
<tr>
<th>Training Experience</th>
<th>MC Jacket</th>
<th>MC Pants</th>
<th>MC Boots</th>
<th>MC Gloves</th>
<th>Full Face Helmet</th>
<th>Open Face Helmet</th>
<th>Impact Protectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>No training</td>
<td>96%</td>
<td>39%</td>
<td>81%</td>
<td>85%</td>
<td>83%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Learner training</td>
<td>95%</td>
<td>36%</td>
<td>71%</td>
<td>88%</td>
<td>86%</td>
<td>14%</td>
<td>29%</td>
</tr>
<tr>
<td>Provisional training</td>
<td>94%</td>
<td>30%</td>
<td>78%</td>
<td>88%</td>
<td>83%</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Advanced training</td>
<td>98%</td>
<td>57%</td>
<td>90%</td>
<td>89%</td>
<td>86%</td>
<td>15%</td>
<td>25%</td>
</tr>
<tr>
<td>High</td>
<td>99%</td>
<td>68%</td>
<td>90%</td>
<td>89%</td>
<td>94%</td>
<td>7%</td>
<td>35%</td>
</tr>
<tr>
<td>All riders</td>
<td>96%</td>
<td>46%</td>
<td>84%</td>
<td>87%</td>
<td>85%</td>
<td>15%</td>
<td>22%</td>
</tr>
</tbody>
</table>

There was also an age factor, with young riders being least likely to have motorcycle pants or boots, but more likely to use impact protectors. This may simply be a reflection of the cost of the initial outlay on a machine and gear.

Table 14: Type of clothing usually worn by age group

<table>
<thead>
<tr>
<th>Age under 26</th>
<th>MC Gloves</th>
<th>MC Boots</th>
<th>MC Pants</th>
<th>MC Jacket</th>
<th>Full face helmet</th>
<th>Open face helmet</th>
<th>Impact Protectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 26</td>
<td>89%</td>
<td>65%</td>
<td>26%</td>
<td>96%</td>
<td>91%</td>
<td>93%</td>
<td>28%</td>
</tr>
<tr>
<td>26-39</td>
<td>87%</td>
<td>85%</td>
<td>46%</td>
<td>98%</td>
<td>89%</td>
<td>90%</td>
<td>25%</td>
</tr>
<tr>
<td>40-59</td>
<td>86%</td>
<td>85%</td>
<td>45%</td>
<td>95%</td>
<td>82%</td>
<td>81%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Finally, proportionately fewer riders who had been involved in a crash wore an open face helmet, and more wore motorcycle boots and to used impact protectors (see Table 15).

Table 15: Levels of protection of clothing usually worn by riders compared to their crash experience

<table>
<thead>
<tr>
<th></th>
<th>MC Gloves</th>
<th>MC Boots</th>
<th>MC Pants</th>
<th>MC Jacket</th>
<th>Full face helmet</th>
<th>Open face helmet</th>
<th>Impact protectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never crashed</td>
<td>88%</td>
<td>78%</td>
<td>48%</td>
<td>96%</td>
<td>84%</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Crashed</td>
<td>86%</td>
<td>87%</td>
<td>45%</td>
<td>97%</td>
<td>86%</td>
<td>11%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Conclusion

The response rate to the survey confirmed that well established and effective channels of communication exist within the motorcycling community through the club network, motorcycle magazines, web sites and rider training courses. These channels can be used to deliver motorcycle safety information to riders.

Riders who had completed some form of rider training were more likely to acknowledge their own contribution to crashing. They were also more likely to suggest behavioural factors (slowed down and better observation) rather than skills (braking or cornering) as the means by which the crash could have been avoided. This was evident amongst younger riders who had completed compulsory basic training and older riders who were more likely to have completed post licence training. It was also apparent that many of those without training failed to learn from their crash experiences.

Compulsory rider training is already well established, however research into the current and potential role of post licence rider training may indicate further opportunities for improving rider safety. In particular, consideration could be given to encouraging riders who have been involved in crashes to attend remedial training courses.

Most riders and their pillions used appropriate gear to protect their heads and upper body but it would appear that there is a need to inform motorcyclists about the benefits of also protecting the lower body.

The variable usage of protective clothing according to motorcycle type highlighted the image rather than equipment aspect of motorcycle gear. Consideration needs to be given to the means by which the accessories market can be encouraged to provide protective gear that is viable and acceptable to the wider range of rider groups.
It is apparent that a high proportion of respondents were actively engaged in strategies to manage and reduce their own crash and injury risk. The survey results indicate opportunities for other road safety stakeholders to work together with motorcyclists to support and extend these initiatives.

References


European Experimental Vehicles Committee (1993), Report on Motorcycle Safety, European Experimental Vehicles Committee (EEVC).


Survey of motorcyclists aged over 30

Narelle Haworth & Christine Mulvihill
Monash University Accident Research Centre

The aims of the study

• To develop a better understanding of the patterns of riding and risk factors associated with older motorcyclists, and
• to recommend measures that may reduce the crash involvement of riders aged over 30
Motorcycle riders in casualty crashes in Victoria

Three groups of older riders

- Continuing riders – held licences and ridden for many years
- Returned riders – held licences for many years but only returned to riding recently
- New riders – only obtained a licence recently
Survey method

• Questions for riders and non-riders
• Questionnaires mailed to 4,000 licence holder aged over 30
• Sample was stratified to include sufficient new riders and riders aged over 40
• Reminder letters sent 2 weeks later

Response to the survey

• 49% of licence holders returned the survey
• 53% of responses were from riders
• Percent who were riders decreased with age
• Among riders
  – 43% continuing riders
  – 27% returned riders
  – 31% new riders
Demographics

- New riders were
  - younger
  - more likely to be female
  - more likely to be single
- Fewer continuing riders lived in the metropolitan area

Rider training

- 45% of riders had completed a training course
- 29% had completed licence course
- New riders more likely to have completed training
- Continuing riders more likely to have completed advanced course
Amount of riding

- Returned riders were
  - More likely to ride less than 50 km per week
  - Less likely to ride 3 or more days per week

- Continuing riders were more likely to ride year round

Main means of transport

![Bar chart showing the main means of transport for different groups of riders.](chart.png)
Changes in patterns of riding

- Continuing riders were more likely than returned riders to
  - Have continued commuting and general transport
  - Have continued riding on a farm
- Returned riders were more likely than continuing riders to
  - Have never commuted or ridden for general transport
  - Have stopped commuting
  - Have started touring

Engine capacities of current bikes

![Bar chart showing engine capacities of current bikes for different classes of riders: Continuing, Returned, New, All riders.](chart.png)
Engine capacities of past bikes

<table>
<thead>
<tr>
<th>Engine Capacity</th>
<th>Continuing</th>
<th>Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 125</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>125-250</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>250-749</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>750 and over</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Club membership

- 24% of respondents belonged to motorcycle clubs
- Largest were Ulysses, HOG and MRAA
- Club members older than non-members
- Continuing, returned and new riders equally likely to belong to clubs
Crash involvement in last 5 years

- Self-reported involvement
- 11.5% reported involvement
- Continuing, returned and new riders equally likely to report crash involvement
- Crash involvement related to distance travelled and frequency of riding

Conclusions

- Half of the licence holders had not ridden in previous 12 months
- Recreation main purpose of riding and higher risk activity
- Continuing, returned and new riders do differ
- Novices higher risk than continuing or returned
- Returned riders higher risk than continuing but ride less
This research was funded by VicRoads, the Department of Justice, and the Transport Accident Commission.

We would like to thank:
• the motorcyclists who responded to the survey
• the members of the Project Advisory Committee, particularly Kelly Imberger
• our database design and entry staff
• Liz de Rome
Motorcycling in the Snowy Mountains region of New South Wales

Trudy Stewart
Tumut, Tumbarumba & Gundagai Councils

Joanne Cheshire
Roads and Traffic Authority

&

Sgt Terry MacGregor
New South Wales Police

Motorcycle accidents are a significant road safety problem. In Tumbarumba Shire 22%, Tumut Shire 10% and Snowy River Shire 22% of all crashes involve a motorcycle. Motorcycle riding and subsequently motorcycle crashes have gradually increased in these Shires over the last 3 years. A number of factors have contributed to these crashes, including speed, fatigue, riders not riding to the conditions, and riders not knowing the roads. The majority of riders involved in crashes are not residents of any of the three Shires. The Project has been running for twelve months. During this time a number of achievements have been made. These include two motorcycle surveys to obtain a picture of the riders who are riding in the region and the road safety issues motorcyclists felt they faced when riding in the region. A motorcycle forum was held as a means to consult with those involved, in relation to the development of an action plan and to gain support for the establishment of the “Snowy Region Motorcycle Safety Group”. This group consists of representatives from Tumbarumba and Tumut Councils, Snowy Hydro, the Roads and Traffic Authority, NSW Police and Victoria Police, the Motorcycle Council of NSW, the National Parks and Wildlife Service and motorcyclists, and meets on a monthly basis. An email group has been formed allowing the reporting of road conditions and the provision of information on group rides occurring in the Region. The “Motorcycling in the Snowy’s” brochure has been developed containing a map detailing the main motorcycling routes through the Region. Road safety audits have been conducted along these routes, and new rest area signage will be implemented naming each rest area in line with the map. The Motorcycle Council of NSW, as a result of their involvement with the group sought and received a grant from the Motor Accidents Authority to develop strategies and resources that specifically target group riding. New town entry signs have been implemented for each village within Tumbarumba Shire, which include information on safe riding and details of rest areas within the Shire.

The Motorcycling in the Snowy Mountains program takes a new step in developing strategies to address a road safety issue. The program has been developed around issues identified by stakeholders including motorcyclists and uses strategies suggested by these stakeholders to
address these issues. According to motorcyclists and the Motorcycle Council of NSW this is the first time a program of this nature has been undertaken which shows a new direction in road safety practice. This program involves several stakeholders and demonstrates multi-organisation collaboration. There have been several strategies implemented which have been evaluated by stakeholders and motorcyclists throughout New South Wales.

Statistics

The first step in developing the project was to obtain a profile of crashes that were occurring in the region. It was found from this review that a number of crashes involving motorcyclists were occurring across the shires.

Motorcycle crashes make up 22% of crashes in the Tumbarumba and Snowy River Shires and 10% of crashes in the Tumut Shire. This percentage has grown every year and is continuing to grow with a higher number of crashes occurring in 2002, which included a number of fatalities. Many factors have contributed to these crashes, including speed, fatigue, riders not riding to conditions and riders not knowing the roads. The Snowy Mountains Region has been promoted widely through the motorcycle industry as a great spot for people to ride and draws a large number of riders each year.

The initial crash data analysis was carried out for the period January 1996 to December 2001. Data are collected by the local police each time a motorcycle crash occurs. Analysis of crashes in the Tumbarumba, Tumut and Snowy River local government areas showed the following results:

- Motorcycles were involved in 22% of all crashes within Tumbarumba and Snowy River Shires and 10% in Tumut Shire. This is well above the State average of 4%;
- 133 motorcycle crashes occurred - 3 fatal, 124 injury and 6 non-casualty crashes;
- The majority of crashes occurred on Sunday (31), followed by Saturday (27) and Friday (23);
- The majority of crashes occurred during the afternoon, with 44 occurring between 12:00-3:00 p.m. and 42 crashes occurring between 3:00-6:00 p.m.;
- 108 were single vehicle crashes with 94 of these occurring on a curved alignment;
- Identified factors relating to crashes included 101 crashes involving no hazardous feature and 32 involving a hazardous feature; 117 crashes occurring on sealed roads; 113 crashes occurring on a dry surface; and 73 crashes involving speed as a contributing factor;
- 124 controllers were male with 38 controllers aged between 16-25 years, 25 controllers aged between 26-35 years and 66 controllers aged over 30 years;
- 99 controllers were from local government areas (LGAs) other than where the crashes occurred.

A later analysis of crashes for the period January – June 2002 showed:

- Motorcycles were involved in 43% of all crashes within Tumbarumba Shire, 20% in Snowy River Shire and 24% in Tumut Shire. This is well above the State average of 4%;
- 19 motorcycle crashes occurred - 2 fatal, 15 injury and 2 non-casualty crashes;
- The majority of crashes occurred on Saturday (7), followed by Sunday (4);
• The majority of crashes occurred during the afternoon, with 10 occurring between 12:00-3:00 p.m. and 3 crashes occurring between 3:00-6:00 p.m.;
• 13 were single vehicle crashes with 15 of these occurring on a curved alignment;
• Identified factors relating to crashes included 12 crashes involving no hazardous feature and 7 involving a hazardous feature; 18 crashes occurring on sealed roads; 17 crashes occurring on a dry surface; and 14 crashes involving speed as a contributing factor;
• 18 controllers were male with 3 controllers aged between 16-25 years, 2 controllers aged between 26-35 years and 14 controllers aged over 30 years;
• 16 controllers were from local government areas other than where the crashes occurred.

Survey

In developing the profile further a survey was conducted in order to assess rider knowledge and experience and gain information on strategies that may assist to reduce the number of motorcycle crashes within the region. This survey was distributed to all known motorcycle rest areas in the Tumbarumba Shire. There were a total of 450 surveys distributed with 174 (39%) responding. Results included:
• 91% (158) were male with 53% (92) aged 35-50 years, and 26% (46) aged more than 50 years;
• 97% (168) held a full licence with 47% (81) having held their license for more than 20 years;
• 82% (142) road a motorcycle greater than 750cc;
• 80% (140) ride their motorcycles occasionally in the Tumbarumba Shire with 95% (166) not residing in Tumbarumba Shire;
• 44% (77) were members of motorcycle groups;
• 57% (99) ride their motorcycles purely for recreational purposes;
• 5% (9) have had a motorcycle crash in the Tumbarumba Shire, of these 2 respondents stated inexperience as the cause, 4 stated road conditions and 3 stated other reasons;
• 67% (117) felt that the Shires could assist with improving the safety of riders in the area with 33% (57) feeling there could be nothing done;
• 8% (13) felt pamphlets and posters would assist with increasing motorcyclists safety, 4% (7) felt billboards would assist, 45% (79) felt roadside signage would be of benefit, and 2% (4) stated other resources may be beneficial.

Motorcycle forum

Once a full profile was developed a motorcycle forum was conducted. The forum called together stakeholders and motorcyclists who ride the roads of the Snowy Mountain region; there were 40 people in attendance. The focus of the forum was working together to develop strategies to make motorcycling safer in the Snowy Region. Discussion and the development of strategies were encouraged throughout the presentations with the final sessions of the forum being a facilitated workshop providing the group with the opportunity to address specifically identified issues.
People who attended this forum are now either members of the “Snowy Region Motorcycle Safety group” or an email group, which receives regular updates on the progress and activities of the “Snowy Region Motorcycle Safety group”. This email group expands regularly and now consists of approximately 50 motorcyclists who provide feedback and assistance for the group. The email group also provides motorcyclists with the opportunity to report on rides that may be occurring within the Snowy Mountains Region, and of hazards they have encountered when riding in the region.

Snowy Region Motorcycle Safety Group

The “Snowy Region Motorcycle Safety Group” meets on a monthly basis and consists of representatives from Tumbarumba and Tumut Councils, Snowy Hydro, South West and Southern Regions of the Roads and Traffic Authority, NSW Police and Victoria Police, the Motorcycle Council of NSW, the National Parks and Wildlife Service, and several motorcycle representatives.

The group is the backbone of all activities that occur across the three shires. They are responsible for planning and implementing any project which is undertaken. With such a keen involvement of various stakeholders the group has managed to achieve a variety of strategies from educational through to engineering. With such a keen involvement from motorcyclists it also means that the group is addressing issues identified by motorcyclists and not issues which non-motorcyclists believe to be the problem.

Action plan

From the profile and the Motorcycle Forum the “Snowy Region Motorcycle Safety Group” developed an action plan for the period September 2002-June 2004. The action plan will be reviewed in June 2004. Below is an outline of the goal, objectives and strategies within the plan.

Table 1: Strategies from the Snowy Region Motorcycle Safety Group action plan

| Goal: To improve the safety of motorcyclists riding in the Snowy Mountains area |
|-----------------------------|----------------------------------|
| Objective: | Strategies: |
| To improve the road environment | • Identify key motorcycle routes and prioritise to enable audits to be undertaken; |
| | • Develop audit brief; |
| | • Encourage councils to incorporate actions to reduce hazards to motorcyclists into Work Management Statements. |
| To encourage motorcyclists to stop at regrouping areas | • Identify current and possible future regrouping areas; |
| | • Promote identified regrouping areas; |
| | • Incorporate identification of motorcycle regrouping areas. |
To raise motorcyclist and other road user awareness of regional hazards

- Identify high risk locations and hazards;
- Pilot a mechanism for motorcyclists and other road users to identify hazards;
- Educate motorcyclists and other road users of regional hazards;
- Encourage the incorporation of motorcycle safety issues within the newly developed Snowy Booklet;
- Refer to corporate Roads and Traffic Authority regarding distribution of motorcycle safety information with motorcycle registrations and licenses;
- Encourage local businesses/organisations to incorporate motorcycle awareness into Safe Driving Policy;
- Establish links with Tumbarumba Shire Website.

To encourage ride organisers to raise the profile of safety on rides

- Encourage ride organisers to notify local services or planned rides;
- Encourage motorcyclists to consider emergency management strategies.

Map of motorcycle routes

One of the issues identified was that the majority of motorcyclists riding in the area were not residents of the area and therefore don’t know where services and rest areas were within the region. It was decided a motorcycle map would address this issue by detailing the main motorcycling routes through the Snowy Region. This map was developed by motorcyclists for motorcyclists and highlights the main motorcyle routes, sealed and unsealed roads, fuel stops and rest areas. The map has been utilised both as a strategic planning tools as well as a prominent part of the Motorcycling in the Snowy’s brochure.

Town entry signs

An initiative of the Tumbarumba Shire was to implement new town entry signs. The “Snowy Region Motorcycle Safety Group” became involved in the process by providing information to be included on the signs for motorcyclists. The signs include information on safe riding and details of rest areas within the Tumbarumba Shire.

Brochure

The “Motorcycling in the Snowy’s” brochure was developed and piloted with motorcyclists in January 2003. The brochure received positive feedback and created a demand for more to be
developed. This led the “Snowy Region Motorcycle Safety Group” to develop another 20,000 brochures to be distributed throughout New South Wales.

The brochure highlights issues identified which are contributing factors of motorcycle crashes in the Snowy Region. This includes roads and gear, fatigue, regional hazards, a map marking regrouping areas, and general safe riding tips.

Brochures have been distributed to motorcyclists through:-
• organised rides such as the Snowy Ride where there will be 2500 motorcyclists participating in 2003;
• known stopping points, fuel stations, tourist information centres, and retailers of motorcycles;
• identified motorcycle clubs for dissemination to members at organised events, such as the Sydney Motorcycle Show, the Bombala Motorcycle Show, Super Bikes and the Grand Prix at Phillip Island.

Road safety audits

Road safety audits have been conducted along all main motorcycle routes within the region. The purpose of the audit was to identify road safety issues that affect motorcyclists on popular routes within the Snowy Mountains. The audit was conducted by three auditors that traveled the route in both directions and during both daytime and night-time periods. A motorcyclist was used for daytime runs on a motorcycle but as a car passenger/driver for night-time audits.

The audit identified a wide range of issues that relate to motorcycle safety as well as the safety of other road users. The key issues identified in the audit were:
• Inconsistent spacing and provision of guide posts and sign posting;
• Insufficient delineation for the likely travel conditions to be encountered such as fog and vehicle types (that are signposted as being recommended to avoid the road);
• Insufficient signposting to advise of the presence of curves and the appropriate travel speed;
• Inconsistent and misleading signposting and advisory speed signs on curves and hairpin bends;
• The presence of gaps in guard rail sections exposing ends to oncoming traffic
• Pavement roughness that is inconsistent and may unbalance a rider;
• Speed limits that are considered higher than appropriate for a recreation road carrying a variety of road user and vehicle types within a National Park where wildlife could be expected;
• Extensive sections of chain wire fencing with questionable post-rigidity;
• Misleading sections of road alignment that lead a rider along a route inconsistent with the road alignment;
• The presence of installations of guard rail with “fish tail” end treatments;
• Obstructions within a clear zone that are inconsistent with adjacent areas i.e. trees and boulders that are much closer than sections of adjacent approaches;
• Guide and snow post installations that do not meet the construction standard.
Rest area signage

Another issue identified by motorcyclists was the lack of rest area signage and also the fact that if there was a sign it still didn’t state what rest area it was. When compiling the profile it was discovered that the majority of the crashes occurring in the region was the person at the back of the pack trying to catch up. To address this issue all rest areas within the region will now be signposted and will state the name of the rest area. These rest areas are also named and marked on the motorcycle map. This will enable motorcyclists to organise to meet at designated rest areas and will take away the need for the person trailing behind to feel they have to catch up.

Group riding project

The Motorcycle Council of NSW worked with the “Snowy Region Motorcycle Safety Group” to apply to the Motor Accidents Authority to receive a grant to develop strategies and resources to target group riding. This project builds on work already undertaken by the NSW Motorcycle Council in conjunction with other community stakeholders in the Snowy Mountains region of New South Wales to address the issue of safe riding in mountainous country. As mentioned previously motorcycle crashes in the Snowy Mountains are unique as they are all single vehicle accidents, involving older riders that do not reside in the region. Nearly all of the crashes have involved motorcyclists riding in groups and it would appear that it is the person at the back of the pack trying to catch up with the rest that is involved in the crash.

The aim of the Group Riding Project was to develop material to raise motorcyclists’ awareness of their responsibilities when riding in the region. In designing this material information that has been collected to date as well as other research that has been undertaken on motorcycle safety has been utilised. The material will be developed with the intention that it can be adapted for use by other agencies in areas where there are high levels of recreational motorcycle riding.

The aim is to develop materials that will target riding in groups. Riders have to be aware that within a group there are varying degrees of skill, experience, local knowledge of the road, bike capacity, and fatigue. All riders have a responsibility to ensure that others are able to ride within their capabilities.

It is expected that this project will result in:
- the development of countermeasures to specifically address motorcycle crashes of riders riding in groups;
- a safety program that will address the issues of riders riding in groups and which raises awareness of other drivers;
- a project that will easily be transferred to other regions with similar issues.

The countermeasure document targeting group riding has been produced in draft format. It is envisaged to have other materials finalised for the next riding season which commences in October 2004.
Evaluation of project

A second survey was conducted recently to obtain information on what other strategies could be implemented. This survey was distributed via the Snowy Ride newsletter with a total of 1000 surveys distributed with 185 (19%) responding. Results included:

- 90% were male with 97% aged more than 30 years;
- 76% have held their license for more than 15 years, with 40% being born again riders. Of the born again riders 43% have been riding for less than 5 years, 38% for 5-10 years, and 20% had been riding for more than 10 years;
- 77% ride their motorcycles occasionally in the Snowy Mountains;
- When riding in the region 59% ride alone or in a group and 55% ride in organised group rides;
- 65% of riders travel between 200-400km in a day, with 27% of riders travelling between 400-600km in a day. 48% of riders stop more than 3 times in a day.

A small evaluation of the overall activities of the “Snowy Region Motorcycle Safety Group” was also carried out in April 2003 to gain whether motorcyclists are aware of the activities of the group. This evaluation was done via an email survey. A total of 95 motorcyclists were contacted with 20 (21%) responding. Results included:

- 90% of respondents were aware of the project;
- 80% had not seen the motorcycle safety group brochure;
- 45% could list activities the “Snowy Region Motorcycle Safety Group” have done.

Since this evaluation the motorcycle safety brochure has been produced and distributed on mass through a variety of sources. It is intended to undertake a full evaluation of the project during this financial year, along with a review of the action plan which concludes in June 2004.
BACKGROUND

- The Snowy Mountains are in the south-east of NSW and are the highest point in Australia's Great Dividing Range. Much of the region is incorporated into Kosciuszko National Park.
- This area has been publicised both nationally and internationally as a fantastic place to ride.
- This publicity has led to an increase in motorcyclists visiting the region which led to an increase in crashes.
- With the increase in crashes the local Police approached the Tumbarumba Council via the local Traffic Committee at the beginning of 2002 for a solution.
What was happening?

Table 1 – Type of Crash: 1996-2001 Average

<table>
<thead>
<tr>
<th></th>
<th>Tumbarumba</th>
<th>Tumut</th>
<th>Snowy River</th>
<th>SW Region</th>
<th>NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycles</td>
<td>44 (22%)</td>
<td>53 (9%)</td>
<td>36 (8%)</td>
<td>476 (8%)</td>
<td>13,219 (4%)</td>
</tr>
</tbody>
</table>

Table 2 – Casualties: 1996-2001 Average

<table>
<thead>
<tr>
<th></th>
<th>Tumbarumba</th>
<th>Tumut</th>
<th>Snowy River</th>
<th>SW Region</th>
<th>NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycles</td>
<td>42 (39%)</td>
<td>63 (14%)</td>
<td>32 (11%)</td>
<td>501 (7%)</td>
<td>12,315 (7%)</td>
</tr>
</tbody>
</table>

In 2002 - 38 motorcycle crashes occurred, resulting in 4 fatalities.
In 2003 - 25 Motorcycle crashes occurred, resulting in no fatalities.

When was it happening?

Table 1 – Day of Crash: 1996-2001 Average

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-2000</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td>17</td>
<td>23</td>
<td>27</td>
<td>31</td>
</tr>
</tbody>
</table>

Table 2 – Time of Crash: 1996-2001 Average

<table>
<thead>
<tr>
<th></th>
<th>0000-0500</th>
<th>0500-1200</th>
<th>1200-1500</th>
<th>1500-1800</th>
<th>1800-2100</th>
<th>2100-0000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-2000</td>
<td>7</td>
<td>16</td>
<td>44</td>
<td>42</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>
Who was involved?

Table 1 – Age of Controller: 1996 to 2001 Average

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20</td>
<td>38</td>
</tr>
<tr>
<td>21-30</td>
<td>25</td>
</tr>
<tr>
<td>30-45</td>
<td>34</td>
</tr>
<tr>
<td>46-55</td>
<td>23</td>
</tr>
<tr>
<td>56-65</td>
<td>0</td>
</tr>
<tr>
<td>&gt;65</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2 – Residence of Controller: 1996 to 2001 Average

<table>
<thead>
<tr>
<th>Local Area</th>
<th>Neighbouring Area</th>
<th>Rest of NSW</th>
<th>Victoria</th>
<th>Other State</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>11</td>
<td>50</td>
<td>24</td>
<td>14</td>
</tr>
</tbody>
</table>

Initiatives and Achievements – Rider Awareness

- Motorcycle Survey (March/April 2002)
  - 450 distributed with 175 returned (39%)
  - Distributed at motorcycle stopping points
  - Assessed rider knowledge and experience
- Motorcycle Forum (August 2002)
  - 40 people attended
  - Development of strategies to address motorcycle safety in the Snowy Mountains Region
  - These strategies formed the Snowy Region Motorcycle Action Plan
Initiatives and Achievements – Rider Awareness

- Snowy Region Motorcycle Safety Group (Sept 2002)
  - Formed as a result of the Motorcycle Forum
  - Responsible for planning and implementing projects
  - Stakeholders include NPWS, NSW Police, VIC Police, Turbarumba Council, RTA, Motorcycle Council of NSW, various motorcyclists

- Snowy Region Motorcycle Safety Email Group
  - Formed as a result of the Motorcycle Forum
  - Provides feedback and assistance to the Safety Group

Initiatives and Achievements – Rider Awareness

- Map of Motorcycling Routes
  - Majority of riders not local and didn’t know the area
  - Details main motorcycle routes, sealed and unsealed roads, fuel stops and rest areas
  - Links in with newly named rest area signage, encouraging motorcyclists to regroup
Initiatives and Achievements – Rider Awareness

- Motorcycling in the Snowy Mountains brochure
  - Developed in January 2003
  - Highlights issues identified which are contributing factors of motorcycle crashes in the area
  - 40,000 brochures have been distributed across NSW, VIC and ACT to Motorcycle groups, Tourist Information Centres, and through motorcycle rides and rallies
  - The content from this brochure has been redeveloped by other road safety stakeholders to produce a localised brochure for their area
Initiatives and Achievements – Rider Awareness

- Police Enforcement
  - NSW Police have accessed enhanced enforcement funding to enable Police enforcement in the area.
  - This enables overnight stays in the area allowing for longer operations.
  - Police operate on high visibility and not on the amount of people booked.
  - Police have also worked with local businesses to create an environment which encourages motorcyclists to stay in the area. One example is the lock up sheds provided by the Tumbarumba Hotel.

Initiatives and Achievements – Road Environment

- Road Safety Audits
  - Conducted along all main motorcycle routes in the region during April 2003.
  - Utilised to identify road safety issues that affect motorcyclists.
  - Identified a wide range of issues that relate to the road environment.
  - Program of works currently being developed.
**Initiatives and Achievements – Road Environment**

- **Town Entry Signs**
  - New town entry signs developed in Tumbarumba
  - Include motorcycle safety information and a map of the area detailing rest areas

- **Rest Area Signage**
  - New rest area signage currently being implemented on all main motorcycle routes
  - Details the name of the rest area and links in with the Motorcycling in the Snowy Region Brochure
Initiatives and Achievements – Organised Rides

- Group Riding Project
  - Worked in collaboration with Motorcycle Council of NSW
  - Received a grant for $15,000 from MAA
  - Aim: to develop material to raise motorcyclists awareness of their responsibilities when riding in groups in the region
  - Extensive consultation with motorcyclists
  - Resources developed include two brochures and the Snowy Region Issue Document and Countermeasure Summary
  - The two brochures are currently under review by the RTA and will be distributed on a state-wide basis next year

Resources Available

- Motorcycling in the Snowy Mountains Region Brochures
- The Snowy Mountains Motorcycle Paradise – Guide for Organisers of Group Rides Brochure
- The Snowy Mountains Motorcycle Paradise – Guide for Motorcyclists on Group Rides Brochure
- Motorcycling in the Snowy Mountains Region Issues Document and Countermeasure Summary
- Motorcycling in the Snowy Mountains Region Posters
Survive the Ride motorcycle road safety campaign

Naomi Green
City of Canada Bay Council

Milan Letunica
Auburn Council

David Tynan
Blacktown City Council

Stephan Henderson
Parramatta City Council

Survive the Ride may well be New South Wales’s most recognisable motorcycle rider safety brand. Building on and utilising vital contacts with motorcyclists and the industry, Survive the Ride demonstrates how working with the grass-roots is achievable and why it is a successful promotional technique. The campaign was co-ordinated by Road Safety Officer’s from the four participating councils, Auburn, Blacktown, City of Canada Bay and Parramatta and involved substantial commitments of time and resources by those involved. Developing a successful road safety campaign relies on the input of those you are trying to educate. Reaching nearly 220,000 riders on a budget of $26,000, Survive The Ride focused on the rider taking responsibility for their safety. The high incidence of commuter motorcyclists involved in crashes along the Great Western Highway was the impetus for this campaign. Through the production of a rider safety brochure, advertisements in Two Wheels and Live to Ride and a stand at the Sydney Motorcycle Show, riders were challenged to consider their riding gear, their crash avoidance skills and their riding behaviour. The campaign successfully leveraged political and community support. Local councils, Government agencies, businesses and motorcycle clubs were keen to support this campaign. The initiative attracted national sponsorship from FPC Magazines, Stay Upright, Monza Imports and TJ Automotive Performance. The statistical analysis and crash statistics revealed a cluster of motorcycle crashes along the Great Western Highway and is being used by the Motorcycle Council of NSW as justification for their requests for blackspot funding. With the success achieved so far by these partnerships, plans are well underway for the future of Survive The Ride. Ongoing financial support has been secured from the local councils and the Roads and Traffic Authority. Stakeholder commitment has been confirmed from sporting venues, motorcycle clubs and State Government Agencies for the 2005 campaign.

How did we attract this ongoing support?
Because everyone is convinced that the motorcycling community is great to work alongside and an influential road user group that has much to say about the safety of its members.
Background

Implementing a successful road safety campaign relies on the input of those you are trying to reach. Everyone likes to talk about themselves and the motorcycle community is no different. Ask any rider about the last time they crashed and you will hear the tale and be shown the scars.

Motorcycle safety is a niche area in road safety. The statistics have indicated that motorcycle crashes are on the rise and consequently the NSW Government and other funding agencies have sought to quantify and tackle motorcycling safety issues over the past six years. And this seems to be the case in the other states of Australia and New Zealand. For instance, this is only the second year that motorcycle safety has been a category at this conference.

As a road user group, motorcyclists are both similar and diverse. They are unified by the number of wheels underneath the engine, but that is where the similarities end. Motorcycles are ridden for a plethora of reasons including image, cost effectiveness, transport, the “thrill”, fashion, mid life crises’, social clubs etc… Some motorcyclists prize their bike over their families and all other material possessions while others maintain their machines only enough to “make it home”. This great diversity makes reaching the target group with educational messages very difficult.

In different forms the Survive the Ride campaign has been running since 2002. Initially targeting motorists with the now infamous and frequently replicated rear vision image (see Figure 1), the 2002 Survive the Ride campaign paved the way for other councils to explore motorcycle safety.

In its early days, the campaign targeted motorists' awareness of motorcycles on the road. The 2004 campaign targeted motorcyclists’ behaviour. The person who has the most influence on saving lives and reducing injury is the vehicle controller. Motorcyclists are classified in the vulnerable road users group and for good reason. In a crash with a vehicle, the motorcyclist will come off second best. Survive the Ride focused on the rider taking responsibility for their safety.
Rationale

The profile of motorcycle crashes in Australia has changed significantly over the past 16 years. National statistics indicate that from 1987 to 1997, motorcycle fatalities halved. In New South Wales, they decreased by 70%. More recently, the national fatality rate has risen by 27% and in New South Wales, the fatality rates have increased to nearly 80 per year.

Riding a motorcycle is a relatively high-risk activity. Motorcycle riders have a far higher rate of fatalities per 10,000 vehicles than motorists (6.55 and 0.78 respectively). From January to December 2001 there were 2,366 crashes involving motorcycles, of which 76 were fatal with a further 2,087 being injury crashes.

Roads and Traffic Authority crash data for the council areas involved indicated that a significant proportion of motorcycle accidents occurred along the common arterial, the Great Western Highway. Further investigation revealed that these accidents transpired predominantly during peak hour times. The conclusion was reached that commuter riders were the high-risk motorcycle road user group in the combined areas.

Commuter motorcycle traffic is difficult to reach and educate because road users may not reside in the council area where crashes occur and is comprised of people from all backgrounds, levels of education and different reasons for travelling.

Stakeholders, sponsors and supporters

Our stakeholder goal was to bring together organisations that have an interest in motorcycle safety and present a unified front.

For this reason, government authorities, industry importers, retailers and representatives, media representatives, professional and casual riders, celebrity riders, motorcycle lobby groups and motorcycle clubs were approached.

The motorcycling community is a very passionate group to work alongside and their extensive social and professional networks enabled greater exposure to the campaign message first hand.

The alliances we forged in 2003 and early 2004 greatly assisted not only our end goals but also the quality and credibility of the campaign delivered, and our capability to extend the campaign in subsequent years.

A financial success, external funding and sponsorship enabled a campaign with a market value of over $50,000 to be delivered for $26,000.

Along with the Roads and Traffic Authority and the campaign patron, TV presenter and motorcyclist, Mr Tim Webster, our list of supporters and sponsors include:

- Ambulance Service of NSW
- Australia Goldwing Association
Central Sydney and Western Sydney Area Health Services
BEARS (Motorcycle Racing Team)
Blacktown Olympic Park
FPCMagazines (Two Wheels and Live to Ride magazines)
Girls Ride Out (Women’s motorcycle club)
Local and state Politicians
Metropolitan Motorcycle Spares
Monza Imports (motorcycle accessory retailer)
Motorcycle Council of NSW
Motorcycle dealerships and accessory retailers
NSW Police
Other local Councils
Stay Upright Pty Ltd (Accredited Rider Training Provider)
TJ Automotive & Motorcycle Performance

The tremendous support received by industry players, media representatives motorcycling and road safety stakeholders and other interested parties enhanced the success of the campaign.

Strategies

With the momentum generated and the lengthy list of supporters and financial contributors, the strategies implemented included:

- Development of a relevant campaign image and brand
- Widespread distribution of a rider safety techniques brochure
- High profile and widespread media strategy
- A network-building campaign launch
- Face-to-face contact with motorcyclists
- Attractive competition aimed at motorcyclists
- Evaluation of the opinions of motorcyclists regarding their road safety

Development of a relevant campaign image and brand

Probably the area of the campaign which needed and received the most forethought and refinement was the image and brand/logo development which took many months. The image and brand/logo needed to:

- be relevant to the target group
- be appealing to the target group
- portray the campaign safety message
- provoke thought
create a positive residual image about the campaign

In collaboration with media partners, FPC Magazines, the graphic was developed for use in several applications. Inspiration was taken from the motorcycling community and industry.

This image became
a) the cover of our rider safety/techniques brochure,
b) our advertisements in the motorcycle magazines and
c) posters which were distributed at the show.

Widespread distribution of a rider safety techniques brochure

The campaign brochure was produced in consultation with the Roads and Traffic Authority and Stay Upright. The brochure was targeted at motorcycle riders and used language and jargon consistent with current Roads and Traffic Authority motorcycle rider training. Positive language was used to encourage riders to consider their behaviour and the safety benefits and included sections on attitude, braking and maintenance.

25,000 brochures were distributed through an insert into the June issue of the largest national motorcycle magazine Two Wheels and Live to Ride (reaching the entire New South Wales readership), at the campaign launch, at in-store promotions at local dealerships and at the Sydney Motorcycle Show.

High profile and wide-spread media strategy

With the campaign area stretching for 34 kilometres, our media budget was focused into avenues wider than our local papers to access the diverse, sizeable and transient target group.
Advertisements were placed in the highest selling motorcycle magazine *Two Wheels* and the hard core cruiser market magazine *Live to Ride* for two consecutive months April and May 2004. The brochure was inserted into the June edition of *Two Wheels*.

In-venue promotions at dealerships and motorcycling accessory retailers in the participating council areas were strategically placed to reach potential commuters and support local businesses.

Advertising featured in the bi-monthly newsletter of Blacktown Olympic Park, a campaign launch venue, and media kits were sent to all Sydney radio stations and local newspapers.

Media coverage was obtained from the various local newspapers and Sydney radio station 2GB.

**A network-building campaign launch**

Spanning the extremities of the campaign area, the launch consisted of two phases. Sponsors and stakeholders were invited to participate in and speak. Health, political, enforcement, social and personal riders’ perspectives were presented, demonstrating the far reaching influence motorcycle riding and motorcycle crashes have.

Beginning in Blacktown, the morning launch consisted of public addresses from the Ambulance Service of NSW, local government representative and *Survive The Ride* campaign patron, Tim Webster. A rider technique demonstration was provided by sponsor and rider training company Stay Upright and was well received by the launch attendants.

From the morning launch to the lunch-time launch, attendees were encouraged to travel along the commuter routes to the City of Canada Bay Council area, with motorcycle being the preferred mode of transport.

Speeches were delivered by a local government representative, NSW Police, and by *Survive The Ride* campaign patron, Tim Webster. Among the additional attendees to this launch phase was the Federal Member for Lowe, John Murphy MP.

Attendees were then treated to local Sydney blues/rock musician, Adam Alexander and a BBQ lunch.

The structure of both launch phases enabled networking among sponsors and gave relevant stakeholders the opportunity to present their professional concerns regarding motorcycle safety.

**Face-to-face contact with motorcyclists**

It was recognised that a wide-spread and high-profile media campaign would attract the attention of our target group but to achieve campaign success, awareness alone was insufficient. We knew that to move from a simple awareness campaign to establishing the
Survive the Ride messages and branding amongst motorcycling as credible required a high level of personal contact.

To augment the Survive the Ride brand and gain direct access to the target group, an information stand was set up at the Sydney Motorcycle Show, which has an annual patronage of approximately 30,000 riders and enthusiasts. This strategy gave the project team an insight into the community, and an indication of how effective our communications strategies were.

The stand included:
- Three road safety professionals to discuss issues;
- Custom motorbikes (on loan from sponsors);
- A map that highlighted motorcycle crashes along the Great Western Highway;
- Screening of the rider safety video Ride On;
- Competition (prizes and entry barrel);
- Brochure stands containing motorcycle-specific road safety information;
- Oversized road safety posters (and smaller versions to give away);
- Damaged motorcycle leathers and helmet (from a crash at 150k/m per hour);
- Trial of reflective motorcycle helmet bands (given free to interested motorcyclists).

Attractive competition aimed at motorcyclists

Entry into the competition was free with the $5,000 worth of prizes. The prizes enhanced campaign elements:
- Stay Upright Advance Rider Training Course – promoted safe riding techniques;
- Leather jackets, boots and gloves – promoted safe riding apparel;
- Motorcycle servicing – promoted the need for regular and continued maintenance.

The first prize winner also had his picture taken with Survive The Ride campaign patron, Tim Webster.

Evaluation of the opinions of motorcyclists regarding their safety

Sound evaluation strategies were considered early on in the campaign development and was designed to ensure it would provide a clear indication of the perceptions of riders in terms of the campaign messages.

We evaluated the campaign through qualitative and quantitative measurements:
- Motorcyclist survey (Qualitative and Quantitative);
- Anecdotal observations and conversations (Qualitative);
- Number of resources produced/distributed (Quantitative);
- Exposure of the target group to campaign message (Quantitative);
- Benefit: Cost Ratio (Quantitative);
- Media coverage received (Quantitative);
- Level of continued committed sponsorship (Quantitative).

Motorcyclist survey

A database of motorcyclists was compiled from the competition entrants. Over 2,000 people entered the competition at the Sydney Motorcycle Show.

Removing duplicate, erroneous, interstate and international and other non-Sydney metropolitan entrants, the usable information left us with a sizeable sample of 1,200 suitable motorcycle contacts.

The survey covered riders’ safety perception, recall of Survive the Ride messages, motorcycling gear wearing rates, crash avoidance skills and safety opinion questions. The opportunity to win one of 5 Advanced Rider Training Courses from Stay Upright and the use of reply-paid envelopes provided the motivation for riders to return their surveys. The survey response rate was 33%.

Results showed that most riders recalled the Survive the Ride messages. Results also support recent Roads and Traffic Authority observational studies in that the majority of survey respondents espoused wearing proper protective clothing and indicate that motorcyclists do take notice of educational campaigns about motorcycle safety.

Riders appear to externalise the fault of crashes by way of blaming cars and the road conditions in most responses.

It was also evident that nearly 40% of riders surveyed do not leave a 3 second gap between themselves and the vehicle in front.

Some future education recommendations from the survey results are:
- Future education campaigns to target specific situations that motorcyclists relate and encounter (i.e., intersections, corners and other common road environments);
- Educating riders not to assume that motorists are aware of their presence;
- Further development of the mindset of riders regarding their perceptions of their role in avoiding crashes needs;
- Education on the benefit of the 3 second gap.

Anecdotal observations and conversations

Many conversations were conducted with riders at the campaign launch and with show patrons, giving us a further insight into the individual rider. This interaction revealed the success of the magazine advertising as many recalled the ad and the inserted brochure.
Number of resources produced/distributed
Historically, a key measure of road safety projects is the number and extent of resources produced.
- 35,000 Survive the Ride brochures produced
- 25,000 Survive the Ride brochures distributed through magazine inserts
- 3,000 Survive the Ride brochures were distributed
- 1,000 resources provided in kind by RTA
- 1,000 resources provided in kind by other sponsors
- 100 Survive the Ride posters produced and distributed to show patrons

Exposure of the target group to campaign message
- National readership of Two Wheels and Live to Ride: 186,000 (x two months)
- Show patronage: 29,000
- Number of dealerships/motorcycle accessory shops: 13 (x three weeks)

Total direct campaign exposure: 216,000 riders.

Benefit:Cost ratio
Dollar values for the benefits and costs of the Survive The Ride program are as follows:

<table>
<thead>
<tr>
<th>Sponsor/Supporter</th>
<th>Nature of sponsorship</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPC Publications</td>
<td>Advertising and graphic design</td>
<td>$9,800</td>
</tr>
<tr>
<td>Blacktown City Council</td>
<td>Printing and resource production</td>
<td>$4,100</td>
</tr>
<tr>
<td>Local newspapers</td>
<td>Media coverage</td>
<td>$3,000</td>
</tr>
<tr>
<td>Stay Upright</td>
<td>10x Rider training courses</td>
<td>$3,000</td>
</tr>
<tr>
<td>Other Councils</td>
<td>Media promotion</td>
<td>$1,500</td>
</tr>
<tr>
<td>Monza Imports</td>
<td>Discount for prize items</td>
<td>$1,500</td>
</tr>
<tr>
<td>Serge Martich-Osterman</td>
<td>Discount on brochure production</td>
<td>$1,200</td>
</tr>
<tr>
<td>Tim Webster</td>
<td>Celebrity Appearance</td>
<td>$1,000</td>
</tr>
<tr>
<td>Blacktown Olympic Park</td>
<td>Advertising</td>
<td>$700</td>
</tr>
<tr>
<td>TW’s radio station</td>
<td>Radio advertising</td>
<td>$500</td>
</tr>
<tr>
<td>TJ Motorcycle Performance</td>
<td>Transport/use of Aprilia for show</td>
<td>$500</td>
</tr>
<tr>
<td>RTA</td>
<td>GWH map and resources</td>
<td>$500</td>
</tr>
<tr>
<td>BEARS Racing Team</td>
<td>Transport/use of Ducati for show</td>
<td>$500</td>
</tr>
<tr>
<td>Sydney Motorcycle Show</td>
<td>Announcements at show</td>
<td>$300</td>
</tr>
<tr>
<td>Metropolitan Motorcycle</td>
<td>Loan of crashed items and</td>
<td>$100</td>
</tr>
</tbody>
</table>
Spares | transport to the show |
---|---|
**TOTAL Sponsorship value** | **$28,200**

<table>
<thead>
<tr>
<th>Project Team Contribution</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA and Councils Advertising</td>
<td>$5,000</td>
</tr>
<tr>
<td>RTA and Councils Launch Costs</td>
<td>$5,500</td>
</tr>
<tr>
<td>RTA and Councils Resources</td>
<td>$5,600</td>
</tr>
<tr>
<td>RTA and Councils Show costs</td>
<td>$5,570</td>
</tr>
<tr>
<td>RTA and Councils Evaluation Expenditure</td>
<td>$3,700</td>
</tr>
<tr>
<td>RTA and Councils Sundry Expenses</td>
<td>$700</td>
</tr>
<tr>
<td><strong>TOTAL Team expenditure</strong></td>
<td><strong>$26,070</strong></td>
</tr>
</tbody>
</table>

**TOTAL CAMPAIGN VALUE** $54,270

For the budgeted amount of $24,000, a campaign to the value of more than $50,000 was delivered due to sponsorship and support. For that figure, a total of 216,000 riders in the target group were reached with campaign messages.

Expenditure per motorcyclist exposed to the campaign: $0.13. By quick calculations, 13c can buy two thirds of a phone call, or one fifth of a postage stamp... per rider!

**Media coverage received**

Media coverage was received in:
- The Inner West Courier (April 19 2004)
- The District News (April 20 2004)
- The Blacktown Advocate (April 28 2004)
- Mt Druitt and St Marys' Standard (April 14 2004)
- Auburn Review (April)
- Parramatta Advertiser (April)
- Blacktown Olympic Park News (March/April edition)
- Strathfield and Burwood local papers (April)

Verbal endorsement of *Survive the Ride* was received from the Ray Hadley Program, 2GB prior to and on the day of the campaign launch.

**Level of continued committed sponsorship**

Future commitment has been confirmed from sponsors to date.
Future directions

A finalist in the 2004 Australian Marketing Institute NSW Awards for Marketing Excellence, Survive the Ride has not only caught the attention of motorcyclists. Striving to establish the campaign logo and associated messages as integral elements of the national motorcycling culture, Survive the Ride will continue to engage with motorcyclists in their language, on their turf and through their representatives.

References


PRESENTATION SLIDES

Presentation Overview

- **Rationale** *(Why?)*
- **Background** *(Where from?)*
- **Strategies** *(What and How?)*
- **Outcomes** *(Where to from here?)*
Rationale

• Statistics (NSW)
  - Over 2,200 crashes annually
  - 4% of road toll
  - 7% of all injuries
  - 10% of all fatalities

• Statistics (Local)
  - Commuter Riders (60%)

• The current status

Background

2002 Campaign

• Motorists awareness of motorcycles

• Rider responsibility
STAYSAFE Committee

MOTORCYCLE AWARENESS MONTH

LOOK OUT

FOR MOTORCYCLES

SURVIVE THE RIDE 2004

2004 Campaign

• Rider responsibility
  - Road Craft
  - Protective Clothing
Strategies

• Getting to the STAKEHOLDERS

• Getting to the RIDERS

• Getting to the INDUSTRY

Getting to the STAKEHOLDERS

• Government Agencies
Getting to the **STAKEHOLDERS**

- **Government Agencies**
- **Sponsors**
Getting to the STAKEHOLDERS

- Government Agencies
- Sponsors
- Supporters
Getting to the RIDERS

- Brochure
  - Consistent with RTA training syllabus
  - Focused on rider responsibility
Getting to the RIDERS

- Brochure
- Using the Right Media
Getting to the RIDERS

- Brochure
- Using the Right Media
- Sydney Motorcycle Show
Getting to the RIDERS

- Brochure
- Using the right media
- Sydney Motorcycle Show
- Competition
Getting to the RIDERS

- Brochure
- Using the right media
- Sydney Motorcycle Show
- Competition
- Survey

Survey

- Recall messages
- Externalise blame
- Not observe 3 second gap
STAYSAFE Committee

Getting to the INDUSTRY

- In-store Promotions
Getting to the INDUSTRY

- In-store Promotions
- Launch
Getting to the INDUSTRY

- In-store Promotions
- Launch
- Competition
Outcomes

- **Sponsors**
- **Financial**
  - $24,000
  - 216,000 riders
- **Recognition**
  - Marketing Awards (ANI & AGDA)
  - Local Government (Metro Pride)

Outcomes ctd...

- **Survey Results**
- **Campaign elements replicated**
Motorcycle safety in New South Wales

Michael de Roos, Rosemary Rouse & Evan Walker
Roads and Traffic Authority

Overview

› Trends in motorcycle rider casualties
› Characteristics of motorcycle rider fatalities in NSW
› Predictors of motorcycle rider fatalities
› Current initiatives
› Future issues and actions

What is a fatal motorcycle accident?

A fatal motorcycle accident is defined as a crash for which there is at least one fatality and at least one motorcycle involved.

A motorcycle casualty crash is defined as a crash for which there is at least one casualty and at least one motorcycle involved.

A “motorcycle rider” is defined as the operator of the motorcycle.
Motorcycle crash risk

› In NSW from 1997 - 2001:
  › motorcycles were 2% of registered vehicles
  › motorcycle travel accounts for 0.5% of all motor vehicle travel
  › motorcycle crashes account for 11% of all fatal crashes.

› Risk
  › 30 times more likely to be killed than car occupants (Austroads 1999 quoting Evans 1991)

Motorcycle crash & casualty trends

› Over the five year period 1997 – 2001:
  ♦ fatal motorcycle crashes represent 11% of all fatal crashes
  ♦ 271 motorcycle riders were killed
  ♦ 9, 257 motorcycle riders were injured

› In 2001, 70 (13%) out of 524 fatalities were motorcycle riders and passengers
Motorcycle crash & casualty trends

› 2001 had the lowest road toll since 1947
› Both the number (74) and proportion (15%) of fatal crashes involving a motorcycle increased in 2001
› Motorcycle riders under 30 are still the majority of motorcycle riders that are killed and injured

Motorcycle Rider Casualty trends by age

There has been a steady increase in casualties for older riders.
Registration trends

- Increased from 74,000 (1997) to 90,000 (2001)


When do motorcycle casualty crashes occur?

- Daylight
  - 71% during daylight hours
  - 27% between 3pm & 6pm

- Months
  - 27% in October, November and December
  - 26% in March, April and May

- 67% of casualty crashes occur on weekdays

- Weekends over-represented
  - 29% of the week but 33% of crashes
Where do motorcycle casualty crashes occur?

Urbanisation of motorcycle casualty crashes

- Country non-urban roads: 14%
- Country urban roads: 26%
- Roads in the Sydney - Newcastle - Wollongong Metropolitan Areas: 60%

Where do motorcycle rider casualties occur?

Top ten routes for motorcycle rider casualties in 1997-2001

<table>
<thead>
<tr>
<th>Route</th>
<th>Number of rider casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Highway (Route 10)</td>
<td>391</td>
</tr>
<tr>
<td>Princes Highway (Route 1)</td>
<td>286</td>
</tr>
<tr>
<td>Great Western Highway (Route 5)</td>
<td>211</td>
</tr>
<tr>
<td>Hume Highway (Route 2)</td>
<td>123</td>
</tr>
<tr>
<td>North-Northern Beaches route (Route 16)</td>
<td>110</td>
</tr>
<tr>
<td>Victoria Road (Route 165)</td>
<td>92</td>
</tr>
<tr>
<td>South to South Western route (Route 167)</td>
<td>78</td>
</tr>
<tr>
<td>New England Highway (Route 9)</td>
<td>76</td>
</tr>
<tr>
<td>Parramatta to Bell route (Route 184)</td>
<td>74</td>
</tr>
<tr>
<td>Sir Bertram Stevens Drive (Route 393)</td>
<td>73</td>
</tr>
</tbody>
</table>
Where do motorcycle riders crash?

Number of riders killed relative to place of residence 1997 - 2001

<table>
<thead>
<tr>
<th></th>
<th>Aged less than 30</th>
<th>Aged 30 to 50</th>
<th>Aged 40 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Killed in same LGA as residence</td>
<td>76 (54%)</td>
<td>27 (47%)</td>
<td>24 (34%)</td>
</tr>
<tr>
<td>Killed in other LGA as residence</td>
<td>61 (44%)</td>
<td>36 (52%)</td>
<td>40 (53%)</td>
</tr>
<tr>
<td>Unknown LGA of residence</td>
<td>3 (2%)</td>
<td>1 (1%)</td>
<td>2 (3%)</td>
</tr>
<tr>
<td>Total</td>
<td>140 (100%)</td>
<td>56 (100%)</td>
<td>71 (100%)</td>
</tr>
</tbody>
</table>

Where do motorcycle riders crash?

» Closer to home for riders aged less than 30

» Away from home for riders 40+ years
  » 75% fatalities for these riders aged 40+ occur on country roads
Motorcycle issues – crash type

› For riders killed from 1997 – 2001:
   » 35% were killed in a single vehicle crash
   » 32% were Off Path on a Curve *

* Road User Movements (RUM Codes)

Predictors of motorcycle rider fatalities

Key predictors of motorcycle rider fatalities are:
› Gender
   » 97% are men
› Age
   » 52% are aged under 30 years
Predictors of motorcycle rider fatalities

Key predictors of motorcycle rider fatalities are:

- Speed
  - at least 55% were speeding
- Alcohol
  - at least 23% had illegal BAC

Behavioural factors

Proportion of motor vehicle controllers (MVCs) involved in fatal crashes by behavioural factors 1997 - 2001

<table>
<thead>
<tr>
<th>Controller Type</th>
<th>Speeding</th>
<th>Drink riding</th>
<th>Fatigue</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Motorcycle Riders</td>
<td>50%</td>
<td>20%</td>
<td>7%</td>
</tr>
<tr>
<td>All Vehicle Controllers</td>
<td>26%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Incorrectly licensed riders*</td>
<td>66%</td>
<td>41%</td>
<td>2%</td>
</tr>
</tbody>
</table>

* Rider was unlicensed, or their license had been disqualified, cancelled or suspended
Speeding

› 50% of riders involved in fatal crashes (1997-2001) were speeding versus 26% for all motor vehicle controllers involved in fatal crashes.

› For the period 1997 - 2001, of riders killed:
  » 64% aged 16 - 29yrs were speeding
  » 48% aged 30 - 39yrs were speeding
  » 44% aged 40+ yrs were speeding

Speeding

› Speeding increases the risk of a fatal outcome:
  » 55% of riders killed were speeding
  » 22% of riders injured were speeding
Alcohol

- A motorcycle rider casualty is 4 times more likely to be a fatality if the motorcycle rider has an illegal BAC.
- 43% of drink riders killed or injured were speeding versus 23% of sober riders killed or injured.
- 57% of riders with illegal BAC in casualty crashes were aged under 30 years.
- 46% of drink riders killed or injured crash on weekends.

Alcohol

- Part of the drink rider problem involves riders that did not have a valid licence.*
  - 27% of drink riders involved in fatal crashes (1997-2001) did not have a valid licence.*

* Rider was unlicensed, or their licence had been disqualified, cancelled or suspended.
Current initiatives

Current initiatives include:

- compulsory helmet usage
- double demerit points
- compulsory training course for novice riders
- broad based mass public education
- qualitative, quantitative and observational research
- thematic safety audits
- *Motorcycle and Bicycle Road Safety Action Plan*

Rider training scheme

- 1984-1988 pilot rider training program implemented

- 21 training centres established based on crash data

- Training consists of two phases

- 90% of licence applicants receive training
Rider training scheme

› In 2001
  » 30,000 riders were trained
  » 12,500 licensed

› 59% of learners continue on to provisional training

---

Rider Training Scheme

Novice* rider involvement in all crashes 1989 - 2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Killed</th>
<th>Injured</th>
<th>Not Injured</th>
<th>Involved in a Recorded Crash</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>15</td>
<td>758</td>
<td>96</td>
<td>870</td>
</tr>
<tr>
<td>1990</td>
<td>17</td>
<td>668</td>
<td>73</td>
<td>658</td>
</tr>
<tr>
<td>1991</td>
<td>4</td>
<td>414</td>
<td>42</td>
<td>460</td>
</tr>
<tr>
<td>1992</td>
<td>4</td>
<td>354</td>
<td>43</td>
<td>401</td>
</tr>
<tr>
<td>1993</td>
<td>7</td>
<td>364</td>
<td>41</td>
<td>412</td>
</tr>
<tr>
<td>1994</td>
<td>4</td>
<td>292</td>
<td>40</td>
<td>336</td>
</tr>
<tr>
<td>1995</td>
<td>12</td>
<td>207</td>
<td>42</td>
<td>361</td>
</tr>
<tr>
<td>1996</td>
<td>6</td>
<td>257</td>
<td>48</td>
<td>341</td>
</tr>
<tr>
<td>1997</td>
<td>5</td>
<td>223</td>
<td>30</td>
<td>258</td>
</tr>
<tr>
<td>1998</td>
<td>3</td>
<td>166</td>
<td>24</td>
<td>183</td>
</tr>
<tr>
<td>1999</td>
<td>1</td>
<td>144</td>
<td>17</td>
<td>162</td>
</tr>
<tr>
<td>2000</td>
<td>4</td>
<td>133</td>
<td>13</td>
<td>150</td>
</tr>
</tbody>
</table>

* Novice riders are those on their L and P plates.
Thematic audits

Thematic audits:

› Old Pacific Highway from Sydney to Gosford

› Audit conducted from the perspective of motorcyclists

› Audit to identify hazards based on guidelines for future treatment

Future issues and actions

› *Motorcycle Problem Definition and Countermeasure Study*

› Safety skills brochure

› Targeted public education
Protective motorcycle clothing and injury reduction

Liz de Rome
LdeR Consulting

Introduction

At the Gearing Up seminar conducted by the Motorcycle Council of NSW on 4 May 2005, Liz de Rome, Research Consultant, LdeR Consulting, summarized the literature on the injury risk patterns in motorcycle crashes and presented data that confirmed the benefits of effective protective clothing in reducing up to half of all motorcyclist injuries.

The crucial question, however, is 'How does a rider know if the protective clothing that he or she buys will work and protect in a crash?' The short answer, if, 'The rider doesn't know ...'

Why buy motorcycle clothing?

What is essential?
What is desirable?
What is just fashion?
What Protection do you need?

Protection from:
- Injury
- Weather
- Other motorists
- Making a fashion error

Protection from the weather

Albert E. Catt 1910
Protection from other motorists

By drawing their attention

Making a fashion statement
Injury prevention

There are limits

Nothing can protect you from:
• High energy impacts
• Being bent or crushed

Most crashes (70%) are at 60km or less
(MAIDS, 2004)
Protective clothing can prevent or reduce

- Cuts, gravel rash & friction burns
- Exhaust pipe burns,
- Stripping of muscles & skin
- Infection & complications from road dirt in open wounds.
- Fractures and joint damage.

Schuller et al (1986)

Protective clothing reduced or prevented 43% soft tissue injuries

Injured riders wearing protective clothing:
- 7 days less in hospital
- Returned to work 20 day earlier
- 40% less permanent disability
**Otte (2002)**

- Riders wearing protective clothing had fewer leg injuries.
- High boots reduce foot injuries.
- Impact protectors reduce the severity of fractures.

**MAIDS (2004)**

![Bar chart showing injury prevention and reduction by body part.]

- Head: Prevented 46%, Reduced 26%, No effect 28%, Total 90%.
- Upper torso: Prevented 62%, Reduced 15%, No effect 23%, Total 90%.
- Lower torso: Prevented 69%, Reduced 16%, No effect 15%, Total 90%.
- Hands: Prevented 52%, Reduced 43%, No effect 5%, Total 100%.
- Feet: Prevented 52%, Reduced 39%, No effect 9%, Total 100%.
- All areas: Prevented 57%, Reduced 34%, No effect 10%, Total 100%.
Motorcycling in Australia

- 400,000 registered motorcycles
- 200 motorcycle fatalities (pa)
- 4,000 seriously injured in road crashes, and another
- 4,000 in off road crashes (pa)

Type of injuries

<table>
<thead>
<tr>
<th>Region</th>
<th>On Road</th>
<th>Off Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>Neck</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Thorax</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Lower Torso</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Upper Limb</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td>Hip &amp; Thigh</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Lower Limb</td>
<td>32%</td>
<td>31%</td>
</tr>
</tbody>
</table>
Who wears motorcycle gloves?

Injury Risk zones

Arms
56% injury
51% soft tissue
11% fracture

Legs
21% injury
76% soft tissue
32% fracture

Ankle
23% injury
26% soft tissue
4% fracture

Hands
30% injury
27% soft tissue
5% fracture
How do you know the gear you buy, will work and protect you in a crash?

You don’t
European standards for protective motorcycle clothing—a new benchmark

Liz de Rome
LdeR Consulting

Introduction

At the Gearing Up seminar conducted by the Motorcycle Council of NSW on 4 May 2005, Liz de Rome, Research Consultant, LdeR Consulting, outlined the requirements of the European standards for motorcycle gloves, footwear, jackets, pants and impact protectors which are based on a series of tests of abrasion, impact, burst, cut and tear resistance and set a benchmark for the protective performance of each type of gear. Liz reported on a number of published consumer reports which have revealed that much of the motorcycle gear currently produced for the European market fails these tests when undertaken by independent consumer groups. She noted that as these standards are not applied in the Australian market, local motorcyclists have no way of knowing whether locally available products will perform any better in providing protection from injury in a crash. Liz also provided data on Australian rider's usage of protective clothing.
The Standards

EN 1621-1: 1997 Impact protectors.
EN 1621-2: 2003 Back protectors
EN 13594: 2002 Protective gloves
EN 13634: 2002 Protective footwear.

EN 13595-1-4: 2002 Jackets, trousers and one piece or divided suits.
    Part 1 General requirements
    Part 2 Impact abrasion resistance tests
    Part 3 Burst strength tests
    Part 4 Impact cut resistance tests

EN 1938:1999 Personal eye protection. Goggles for motorcycle and moped users

Australian Standards

AS 1609 - 1981 Eye Protection for Motorcyclists and Racing Car Drivers

www.roadsafety.mccofnsw.org.au
Performance tests

- Abrasion resistance
- Burst strength
- Tear and cut strength
- Impact energy absorption

2 levels of performance

Injury risk zones

1. High - needs impact protectors & high abrasion resistance
2. High - needs high abrasion resistance
3. Moderate - moderate abrasion resistance
4. Relatively low risk.
Levels of performance

Abrasion resistance (no. of seconds) in jackets and pants.

<table>
<thead>
<tr>
<th>Zones</th>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &amp; 2</td>
<td>4 s</td>
<td>7 s</td>
</tr>
<tr>
<td>Zone 3</td>
<td>1.8 s</td>
<td>2.5 s</td>
</tr>
<tr>
<td>Zone 4</td>
<td>1 s</td>
<td>1.5 s</td>
</tr>
</tbody>
</table>

How do they perform?

<table>
<thead>
<tr>
<th>Brand</th>
<th>Total</th>
<th>Abrasion</th>
<th>Burst</th>
<th>Impact</th>
<th>Tear</th>
<th>Zip</th>
<th>Road</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrera</td>
<td>48</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>999.00</td>
</tr>
<tr>
<td>BKS</td>
<td>47</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>1,400.00</td>
</tr>
<tr>
<td>Dannysport</td>
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Leathers - Ride, August 2004

18 one piece leathers
7 <5/10 abrasion
10 <5/10 burst test
9 <5/10 impact test
8 <5/10 the tear test
2 had zip failure
All passed the road test for practicality, comfort.

51 Winter Jackets, Ride (Jan 2002)

13 <5/10 abrasion
41 <5/10 seam burst
5 <5/10 impact
### 19 Boots (Ride, June 2004)

- 15 <5/10 on abrasion test
- 5 <5/10 on impact
- 11 <5/10 on cut test
- 9 <5/10 sole crush test

### 44 Gloves (Ride, April 2004)

- 4 failed abrasion test
- 33 <2/5 abrasion test
- 25 <2/5 burst test
- 11 <2/5 impact protection
- 11 <2/5 the dye fastness test.
How would local products perform on these tests?

How can we take advantage of the European experience?
Australian Standards

John Limnios
Standards Australia

Introduction

John Limnios, Group Manager, Environment and Consumer Standards, Standards Australia, explained the range of options and processes involved for adopting or adapting the EU standards as Australian Standards at the Gearing Up seminar conducted by the Motorcycle Council of NSW on 4 May 2005.

In his presentation he said the benefits of standards include promoting confidence in products and services, facilitating international trade and promoting safety, quality and reliability.

The process for the development of an Australian Standard is initiated by a request to Standards Australia by any group or individual. Standards Australia will review the viability of the proposal and on approval will establish a technical committee, if a relevant committee does not exist, from representatives of relevant interest groups. The technical committee formulates the standard, which may be partially or wholly based on an existing standard from another country. When the draft is at a sufficiently advanced stage, it is released for public review and comment, which may result in enhancements being incorporated. The final stage of a project is committee approval of the draft, by ballot, which must result in a minimum 80% support and no single interest group maintaining a collective negative vote.

The Standards Australia website is www.standards.org.au
Introducing Standards Australia

- Standards Australia is the peak standards body in Australia
- Standards Australia is a registered Australian Corporation, limited by guarantee.
- Members represent Australia’s technical and commercial infrastructure, industry, unions, academia and government.
- There are no shareholders
- No dividends are paid
- Any surpluses are re-invested in the business.

Standards Australia’s Mission

To excel in meeting Australia’s need for contemporary, internationally-aligned Standards and related services which enhance the nation’s economic efficiency, International competitiveness, and fulfill the community desire for a safe and sustainable environment.
The Evolution of Standards Australia

1922  Australian Commonwealth Engineering Standards Association
1929  Standards Association of Australia
1950  Royal Charter
1988  Standards Australia (trading name) & MoU with Federal Government

The Evolution of Standards Australia (continued)

1991  Quality Assurance Services Pty Limited formed as wholly owned subsidiary
1999  Standards Australia International Limited, incorporated as a company limited by guarantee
2003  Restructure with most commercial activities sold to SAI Global including publication of standards and other documents. Name changed to Standards Australia
What is a Standard?
A Standard is a published document, which sets out specifications and procedures designed to ensure that a material, product, method or service is fit for its purpose and consistently performs the way it was meant to perform.

Why are Standards important?
Standards are the common denominator in countless daily business transactions. They add value through enhanced organisational intelligence, operational efficiency, and deliver measurable and competitive advantages both nationally and in overseas markets.
Benefits of Standards

Standards provide social and economic benefits:

- Facilitating international trade and technical communication
- Promoting confidence in products and services
- Establishing order and convenience
- Promote Safety, quality, reliability
- Compatibility of systems and components
- Protect the environment

Are Standards Mandatory?

- Observance of Australian Standards is voluntary unless they are mandated by Commonwealth or State government legislation.
- Currently, about 2,400 Standards are mandatory under government legislation.
Who develops Standards?

- Standards Australia is a purely neutral facilitator
- Experts from representative interest groups are brought together in technical committees that work to formulate or revise Standards.
- Standards Australia staff do not have any voting rights or powers to influence committee decisions.
- 80% agreement is required before any Standard can be finalised and no major sectional interest can maintain a negative vote.

Who develops Standards? (continued)

Members of Standards Australia committees represent:
- Governments, Federal, State & Local
- Associations of commercial & retail interests
- Trade union & consumer interests
- Research, academic & testing organizations
- Professional bodies
- Associations for manufacturing & industry groups
Basis of Standards Development

- Transparency and Consensus are the cornerstones of Standards development
- Technical Committees have an obligation to work towards consensus.
- Consensus means that broad based agreement is reached by consideration of many different points of view
- Transparency is maintained through members liaising with their nominating organizations and by making Public Comment drafts available for review
- Resulting Standards match the needs and values of our society

The Process Used to Develop Standards

1. Request for new Standard Project
2. Project approved
3. Preliminary Draft
4. Committee Draft
5. Draft for public comment
6. Consideration of comment
7. Draft for Postal Ballot
8. The Published Standard
### SA 2004 Summary

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### SA 2004 Summary

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Governance of Standards Australia

- The company is managed by a Board of directors.
- Members appoint a Council, which is an advisory body with particular responsibility to:
  - elect the Chairman and 8 of the 10 Directors;
  - 15 of the 28 members of the Standards Development Board; and
  - 6 members of the Standards Accreditation Board which reports to the Council.
Come off your bike and looking for answers?
A 'how-to' of suing the manufacturer of your supposed "protective" gear

Ray Giblett
Clayton Utz

Introduction

At the Gearing Up seminar conducted by the Motorcycle Council of NSW on 4 May 2005, Ray Giblett, Senior Associate, Clayton Utz, explained the concept of negligence and the provisions of the Trade Practices Act 1974 in terms of the duties and liabilities of manufacturers, importers and retailers.

In his presentation he advised that riders may have a right to compensation in cases of crashes where injuries are related to the failure of motorcycle protective clothing. Although there are no standards for motorcycle protective clothing in Australia, he noted that the Australian Courts would recognise the European standards as a guideline of relevance in such cases.
Case Study: *The Angry, Injured Biker*

- Taking legal action:
  - against manufacturer, distributor or retailer
- Types of claims:
  - statutory - the *Trade Practices Act 1974*
  - the tort of negligence
- Design and manufacturing standards
- Claim requirements / defences
- Available damages

---

**The Nuts and Bolts of Negligence**

- Requirements:
  - duty of care, breach of duty, foreseeability and causation.
- Considerations:
  - defect in manufacture
  - defect in design or formulation
  - defect in information
Turning to the Trade Practices Act

- Relevant Parts:
  - Part VA - defective products
  - Part V, Division 2A - breach of warranties
  - ss52, 53 - misleading & deceptive conduct, false representations

- Standards:
  - Defective: "products whose safety is less than users are generally entitled to expect"
  - Not fit for particular purpose, not of merchantable quality

Compliance with Standards

Guidelines:
- Australian manufacturing standards
- The European Personal Protective Equipment (PPE) Directive 1999 - EU Standard for jackets/pants labelled CE EN13595

Standards:
- Defective: "products whose safety is less than users are generally entitled to expect"
- False representations: that goods are "of a particular standard, quality, value, grade and particular performance characteristics...uses or benefits they do not have"
What will the manufacturer claim?

Defences to a claim under the TPA

- Defect did not exist at the time of supply
- Defective only due to compliance with mandatory standard
- Technical knowledge at time of supply did not enable discovery of defect
- Component manufacturers' defect is attributable to design of the finished product

No statutory defences under s52 and 53 or Part V Division 2A of the TPA.

---

What will the manufacturer claim?

Defences to a claim in negligence

- Voluntary assumption of risk
  - must show the plaintiff not only perceived existence of danger involved in the use of the product, but fully appreciated and accepted that risk.
- Contributory negligence (not a complete defence)
  - plaintiff failed to meet the standard of care required for his/her own protection and safety - contributing to cause of injury.
The Breaks: Limitation Periods

Claims under the TPA (Part V Div 2A and Part VA):

- within 3 years after the time the person becomes aware, or ought reasonably to become aware, of particular circumstances giving rise to the claim; and
- within 10 years of supply by the manufacturer.

Claims in negligence:

- within 3-8 years of the date the cause of action accrued (depending on the jurisdiction in which the claim is brought). Most state/territory Limitation Acts provide availability of extension.

The Breaks: Capped Damages under the TPA

- Damages available under s82 of the TPA
- Compensation available for loses suffered as a result of personal injuries (inclusive of medical expenses).
- A person other than injured party may claim if suffering loss as a result of the other person’s injury or death.
The Breaks: Capped Damages in Negligence

- Bodily injury: general damages: pain and suffering, loss of amenities and expectation of life
- special damages: loss of wages (past and future), medical expenses
- mental distress (req. diagnosed psychiatric condition)
- Capped by tort reform

Alternatives to a Claim

Lobby:
- ACCC Chairman, Graeme Samuel
- Attorney General, the Hon Philip Ruddock MP
Compliance to standards—learning from the European model

Paul Varnsverry  
PVA Technical File Services Limited

Paul Varnsverry was the keynote speaker at the Gearing Up seminar conducted by the Motorcycle Council of NSW on 4 May 2005.

He provided a detailed explanation of the research background and the technical specifications that form the basis of the European Union (EU) standards for motorcycle protective clothing. He allayed participants’ concerns about the process and costs involved in manufacturing motorcycle protective clothing that complies with the European Union Standards.

He provided indicative costs for testing individual models of clothing against the European Union Standard:
- Leather or textile jackets and pants would cost approximately A$2,900
- Gloves cost A$5,000, and
- Boots cost A$6,000.

He noted that boots are the most expensive due to the comprehensive panel of tests involved, this has not prevented key brands such as BMW, Hein Gericke and Oxtar from quickly launching accredited boots, and at prices which do not appear to be much different from the previous versions of the same models.

He also commented that it was the smaller British companies that were the first to produce CE marked motorcycle clothing in Europe.

He concluded by summarizing the benefits of working to a standard:
- An independent mark of fitness for purpose
- Single technical benchmark for manufacturers
- Improved consumer choice
- Safeguard against litigation (3rd party certification)
- Prospect of insurance discount incentives (product liability)
- Motivational force for further development
- Positive press test reports will assist sales
STAYSAFE Committee

PRESENTATION SLIDES

Compliance to Standards
Manufacturing costs & how to do it
Learning from the European model

Speaker:
PAUL VARNSVERRY
Principal UK Technical Expert - BSI PH063/9
UK Delegate to CEN/TC 152/WG9
Special Advisor to UK Police

www.pva-ppe.org.uk

Brief Personal Bio

Involved in manufacture of motorcycle clothing (MC) since 1979
Owned UK’s leading MC manufacturer 1983 - 1993
Involved in testing and certification of MC since 1994
Principal UK Technical Expert (MC) – Member of WG9
Special technical advisor to APFO (UK Police)
Motorcyclist for 20 years
Holder of two Advanced Motorcycling qualifications
In the World there are TWO distinct categories of motorcyclists’ clothing

The “marked”

CE

= “Conformité Européen”

Independently tested and approved in accordance with the requirements of the EU Personal Protective Equipment (PPE) Directive
...and the “unmarked” ‘CE’

= “Caveat Emptor”

“Let the buyer beware”

Untried and unproven – until the owner puts them to “the test”!

Would you be confident in claiming these garments to be “protective”? 
Legislative background to the CEN Standards

Timeline to Standards

1984 – First steps by ACU
1989: ACU Standard cancelled
1989: Dr Willson meets Mr Petrovich
1990: First meeting: BSI PSM 34/3
1991: First meeting: CEN/TC 162/WG9
1994: Cambridge Standard published
1994: SATRA technical specification published
1997: EN 1621-1 published
2002: EN 13594, EN 13595 & EN 13634 published
2004: Publication of EN 1621-2
PERSONAL PROTECTIVE EQUIPMENT

Defined by EU Council Directive 89/686 as:

“...any device designed to be worn or held by an individual for protection against one or more health and safety hazards”

Response: given by the services of the Commission, after consultation of the committee set up by the Directive, to questions relating to the implementation of the Directive.

Q. 2: Scope of the Directive 89/686/EEC regarding motorcyclists’ garment and additional protection features

As far as this garment shelter from climate conditions such as heat, cold and humidity it is an object for private use. As such it does not fall under the scope of the PPE Directive (89/686/EEC Annex I.3).

If a manufacturer explicitly claims, or implies in sale literature and/or advertisement, that a garment offers protection because of specific additional features, these additional features shall be qualified as “PPE”. As such they must comply with the provisions of the PPE Directive.

The specific features may materialise in e.g. impact protectors for arm and/or back; pads for shoulder and protection from cuts and abrasions (not exclusive listing of examples).

It follows that protectors to be placed in non-protective garments are PPE: the manufacturer has to provide the information related to the PPE as specified in the Directive together with the garment. For these protectors as for any other detachable PPE, the information about the correct way of placing, fixing and detaching these PPE must be given by the manufacturer.

If the manufacturer claims, or implies in sale literature and/or advertisement, that the whole garment provides special protection in addition to that provided by individual protectors, the whole garment must comply with all the essential requirements of Directive 89/686/EEC.

Notes:

(1) The same argument applies to clothing designed for sports for which specific clothing already exists.

(2) Helmet designed to protect against shocks should always be dated as PPE, except for helmets for riders of two- or three-wheeled motor vehicles, which are specifically excluded from the Directive (Annex I, point 5).
EN 13595 CE-marked motorcyclists' PPE works!

Technical background to the CEN Standards
FIG 1. Distribution of abrasion damage on the fronts and backs of 100 suits. Numbers denote the number of suits with damage at that point.
TABLE 1 - Mean performance values in abrasion, heat and cut tests of the coveralls of mixed shortening, and comparison for normal and high performance level values for new clothing.

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FIG. 7 - Sixty-second torque wrench for measuring the tear strength of high.

Proper resistance to tear testing
CAMBRIDGE STANDARD

SATRA ALTERNATIVE TECHNICAL SPECIFICATION

BSi

PH/3/9

CEN/TC 162/WG9

(EU PERSONAL PROTECTIVE EQUIPMENT DIRECTIVE 89/686/EEC)

The CEN Standards explained
3.4 professional rider

A person who is employed to provide or contracts to perform for reward, the services requiring the riding of a motorcycle.

Examples are:

a) the delivery of letters, packets or other small freight;
b) the transport of passengers by motorcycle;
c) emergency medical treatment;
d) vehicle breakdown support.
4 Performance levels and principle of zoning

4.1 Performance levels

Two performance levels are specified for clothing providing protection against road surface impacts. These are as follows:

LEVEL 1: Clothing designed to give some protection whilst having the lowest possible weight and ergonomic penalties associated with its use.

LEVEL 2: Clothing providing a moderate level of protection, higher than that provided by level 1. There are, however, weight and restriction penalties in providing this level of protection.

4.2 Principle of zoning

See C.1

Figure C.1 — Diagram of zone positions on a suit. Drawn from a suit laid out flat, slightly simplified
Tensile strength testing
- in the laboratory and "in the field"

Other tests:
Dye-fastness
Restraint

Image courtesy of Draggin' Jeans
... Fit and ergonomics

Impact abrasion testing (EN 13595-2)

Cambridge-type machine

Moving abrasive belt and specimen holder

Image courtesy of Jofains AB
Issues in motorcycle safety: Seminar proceedings

Burst strength testing (EN 13595-3)

Mullen-type apparatus

Impact cut testing (EN 13595-4)
The availability of EN 13595 has motivated the development of 3 New Textile motorcycle clothing concepts.

Three technological approaches:

1. Single heavyweight layer
   (For example, the heavyweight Cordura jackets and trousers as supplied to Pizza Hut)

2. Polyamide mechanical interlining as S.S.L.
   (Scott Leathers jackets as supplied to the Metropolitan Police and developmental BKS jacket)

3. “Tritector” system of terry-knit + high-tenacity mesh
   (Kevlar-based Fillers suit and Polyester-based Halvarssons suit)

The first approach meets the “Level 1” performance requirements of EN 13595.
The second and third approaches either meet with or exceed the “Level 2” performance requirements of EN 13595.
These CE textile garment programmes have also delivered innovation in non-PPE garment technology.

Even in their “Caveat Emptor” garments, some manufacturers are incorporating the lessons learned from their PPE development programmes.

EN 1621-1 (Impact protectors)
EN 1621-1 (Impact protectors)

Now commonplace in both types of "CE" garments!

EN 1621-2 (Back protectors)
EN 1621-2: Back protectors

Increasingly available following publication of EN 1621-2

EN 13594 [Gloves]
EN 13634 (Footwear)

"Look for the logos"
The Cost?

A$S 450

Limb Protectors (EN 1621-1)
Gloves (EN 13594) - Aus$ 5000

Footwear (EN 13634) - Aus$ 6000
In addition to the requirements of the motorcyclists' PPE standards, all the requirements of EN 340 also apply.

Verification of the innocuousness of materials and components requires chemical safety testing to be performed.

Auss$ 2000

Innocuousness (EN 340)
The benefits of producing motorcyclists' clothing to a story:

Better products
Safer motorcyclists

An independent probe of motorcycle suits
Single test for consumers and manufacturers
Improved insurance choice
Safeguards against litigation (3rd party certificate)
Prospect of insurance discounts
Motivation for increased sales of motorcycle
Positive feedbacks on improved assistance sales

Thank You for your attention
The benefits of a motorcycle strategy in New South Wales

Brian Wood
Motorcycle Council of New South Wales

Introduction

My interest in motorcycle safety commenced in late 1999 when I skidded at an intersection on my way to work—a section of road that I had travelled on hundreds of times previously without incident. This led me to ask what could be wrong, who could help me find out what was the problem, and who could fix it. This took me on a journey of frustration, as I’m sure many others have travelled before and since. Eventually, the problem was fixed but it left me wondering just what were those who had responsibility for motorcycle safety actually doing, did they have other priorities and limited resources and were they busy addressing other issues? The simple answers to these questions were that there were no priorities, resources were non-existent and basically nothing was being done to address motorcycle specific issues.

My investigations soon introduced me to the Motorcycle Council of NSW, and it was by chance that I attended a road safety seminar conducted by the Roads and Traffic Authority at Campbelltown where I asked a number of very naïve questions. While I thought my questions were unsatisfactorily answered, I was extremely fortunate to get into conversation with Ms Liz de Rome, of LDR Consulting.

While I had a notion that something needed to be done I had no idea exactly what or how to go about it. Thankfully, Liz de Rome did. It was unrealistic to expect riders to be road safety experts. We were mere road users with little exposure to how road safety was administered or how policy was developed. It was Liz de Rome’s suggestion that what was need was a strategy that aligned itself with the strategies of other stakeholders and to use the methodology for the development of a strategy using the consultative process that had been developed of local government road safety strategies.

The Motorcycle Council of NSW was extremely fortunate to obtain funding from the Motor Accidents Authority for the development of a strategy, which is called “Positioned for Safety”, a first in Australia and possibly the world where a road safety strategy has been developed with strong rider input.
What were the benefits of the Positioned for Safety strategy?

Stakeholders
Other than the Roads and Traffic Authority, we had no idea who other stakeholders were who had an interest in motorcycle safety or how they could help us. We were in effect operating outside the road safety community.

The consultation with other stakeholders as part of the development of Positioned for Safety was also an opportunity for riders to be involved in discussing safety issues. It was a learning process for us as well as the other stakeholders.

Profile of the Motorcycle Council of NSW
In the same way that riders had no idea who other stakeholders were, other stakeholders had little or no knowledge about the Motorcycle Council of NSW, in most cases any perceptions they had were generally negative. Thankfully this has changed and the image of the Motorcycle Council of NSW is now more positive.

Positioned for Safety has proved to be a means of introduction: it has helped to open doors. It demonstrates that we have a detailed knowledge of the subject with clear goals and objectives.

Data
Prior to the development of Positioned for Safety there was no reliable data for New South Wales on which to base arguments or requests for action. Information that was available was either out of date, from other jurisdictions or very general in nature. Because there was a lack of reliable up to date information the gap was being filled with anecdotal evidence, misconceptions as to what was the real situation or in many cases it was filled with misinformation.

Much of the data for the project was supplied by the Roads and Traffic Authority, but we also conducted a comprehensive survey of nearly 800 riders. This provided us good data on the activities of riders and their crash experience. As the surveys were distributed through motorcycle clubs and at motorcycle events it also gave us credibility with riders.

Who would think that the average age of a motorcyclists is now 41 years old? Motorcyclists are not young tearaways as many would believe, nor are they outlaw group members who in fact represent only about 1.5% of the total rider population. Also, who would believe that the number of registered motorcycles has increased from 85,000 five years ago to over 104,000 today. While not quite back to record numbers in New South Wales, nationally they are. Who would think that one of the largest growing segments is female riders. Female riders taking up licences at a rate 50% greater than male riders. While still only a small in number the influence of female riders is growing.

Reliable data has clarified casual factors. Riders ‘externalise’ responsibility for crashes as do other road users as to the causes of crashes. Having credible data has allowed us to discuss behavioural issues, and how a rider’s action contributed to the cause of the crash, and that about a third of all crashes are single vehicle—the majority of which are caused by rider error.
Riders are passionate about their riding and tend to be sceptical of the motives of non-riders when they research motorcycle safety issues. I was expecting that Positioned for Safety would attract criticism from some sections of the rider community that developing a strategy was inappropriate and would only provide ammunition to those who supported the view that motorcycling was so inherently dangerous that it should be banned. However this has not been the case, my concerns were not realised.

**Proactive not reactive**

Previously motorcycle safety was addressed issue by issue as they arose, dealing with issues that seemed to be a good idea at the time or raised as a result of articles in the popular press. Issues were easily deflected off course or not followed through to their logical conclusion and usually abandoned when progress was slow or success seemed unlikely.

Rather than being reactive we are now proactive in raising issues and adding constructively to the debate. Single issues can still be raised but within the context of an overall strategy.

**Funding**

The improved profile of the Motorcycle Council of NSW, not only with other stakeholders, but also amongst riders has allowed us to attract funding to undertake a range of initiatives

It has allowed us to form partnerships with other stakeholders and to pool resources enabling us to make better use of volunteers and their limited time. This is most apparent with the Motorcycle Awareness Week initiative “Breakfast Torque”, the Snowy Region Motorcycle Safety Group and in the production of a number of booklets and leaflets.

**Achievements**

The achievements that have already resulted from Positioned for Safety include:

- The development of a website with funding from the National Roads and Motorists’ Association (NRMA), something that had been talked about for years but had never progressed
- Advertising campaigns, the first ever for the Roads and Traffic Authority and Motor Accidents Authority
- Tourism / safety booklets by a number of local government road safety officers
- A fatigue study by the Injury Risk Management Research Centre at the University of New South Wales
- The development of a users guide for protective clothing and a seminar for manufactures and retailers to ensure that what protective clothing is available in the marketplace is fit for purpose.

**Summary**

The development of Positioned for Safety has given us the knowledge and skills to be able to interpret the data, make sense of it and argue our case and work with stakeholders to achieve common goals and take ownership of the problem.

Without a motorcycle safety strategy I would not be here giving this presentation for a number of reasons. I believe none of us would be here as prior to the development of a
strategy for the Motorcycle Council of NSW, motorcycle safety was not on anyone’s agenda. Not only do motorcycles appear to be invisible out on the roads but they were also invisible in strategies, action plans and campaigns. I would not be here as I am quite sure that, like many others before me, with a lack of direction I would have given up in frustration at the lack of progress that has been associated with previous attempts to have motorcycle safety issues addressed.
A strategic approach to motorcycle safety – Two years on

Liz de Rome, Presenter,
LdeR Consulting

Brian Wood & Guy Stanford
Motorcycle Council of NSW

Liz de Rome is a consultant in road safety research and development. Her work on strategic planning for road safety has broken new ground in facilitating community ownership and involvement. She is the principal author of Positioned for Safety, a road safety strategic plan for motorcyclists and the associated web site. She is currently developing a users’ guide to motorcycle protective clothing. She is also the author of A Guide to Developing Council Road Safety Strategic Plans and A Framework for Driver Education. Liz was the convenor of the MAA Young Driver Seminar and co-facilitated the National Summit on the development of a Pedestrian Charter for Australia.

Abstract

In 2001 the MAA of NSW funded the development of a Road Safety Strategic Plan for the Motorcycle Council of NSW (MCC). This was a unique experiment in supporting a road user group to apply strategic planning methods to address their own road safety issues. The project was timely as motorcycle casualty rates in Australia were rising, but there was little agreement as to causes or solutions. This paper describes the benefits of the development process and an account of the subsequent implementation of the plan.

It is apparent that the process was at least as important as the final product – the strategic plan. While the MCC had an established track record as an effective lobby group at the political level, they were not previously recognised as a key stakeholder by the various road safety agencies. The process enabled members of the MCC to develop a better understanding of how road safety is delivered in NSW including the relationships between the key agencies and their roles. As a result they are a more informed and effective lobby group and are recognised as the peak body representing motorcyclists in the State.

The outcome has been to establish more productive relationships between other road safety stakeholders and the motorcycling community. Two years since the process began there is an impressive list of achievements, which may be linked either directly or indirectly to the strategic plan. These include research projects into motorcycle fatigue and protective clothing, a motorcycle road safety web site, the first state funded motorcycle safety advertising campaign, community based motorcycle safety projects with some 15 local councils, and the incorporation of motorcycle safety issues into the road safety strategy plans of many local councils. Demand for copies of the strategic plan nationally and internationally have far exceeded expectations, over 5,000 have been downloaded from the internet.

Paper

Since 1982, the Motorcycle Council of NSW (MCC) has represented the interests of motorcyclists in NSW on the NSW Motorcycle Consultative Committee. The Committee was
the established forum for input into public policy affecting motorcyclists, however progress was slow and frustrating.

The MCC felt that their needs as road users were not well addressed. At the time public policy was based on a general assumption that motorcyclists were adequately covered by road safety programs directed at motorists in general. There was a lack of provision for their special needs as vulnerable road users in road design, transport planning and facilities and the development of road safety behavioural campaigns.

The MCC were well organized in terms of identifying issues and responding to their members, but they were not recognised as a key stakeholder by the various road safety agencies. They were an effective lobby group at the political level, but this was not an effective or efficient way of influencing the agenda, nor decisions at the policy development level. When frustrations built up they would side step the NSW Motorcycle Consultative Committee and lobby the Minister directly. The outcome was frustrating both to the public servants who were attempting to address the motorcyclists’ issues, and to the motorcyclists who felt such drastic action should not be necessary. It was a failure of communications and understanding on both sides.

What was going wrong?

- The MCC were reactive to government policy, responding to decisions rather than setting the agenda or driving issues pro-actively. The MCC did not have access to basic motorcycle crash data. Their attempts to raise issues were hampered by reliance on anecdotal experience, rumour and occasionally misinformation.
- As a volunteer based community organization, they did not have the resources to employ professionals to research issues or prepare submissions and policy documents.
- While MCC members monitored journals and conferences on motorcycle issues they did not have access to unpublished information that was available within the local road safety community. Essentially the MCC were attempting to represent their members and contribute to the discussion on motorcycle safety, but they were not equal partners in the debate. They were disadvantaged by their lack of access to information and understanding of the structure within which the debate took place. They believed that by engaging in the consultation process established by the government, they actually were talking to “the government”, when their efforts failed to result in policy change, their response was disillusionment and anger.

Early in 2000 members of the MCC discussed their concerns with research consultant Liz de Rome. It was apparent at that stage that, despite the years of involvement in the NSW Motorcycle Consultative Committee, the MCC lacked understanding of how road safety is delivered in NSW, the relationships between the key agencies and their roles. Liz proposed that the MCC needed to take a strategic approach to the whole area of motorcycle safety. She suggested they approach the Motor Accidents Authority of NSW, who agreed to provide a grant to fund the development of a motorcycle road safety strategic plan.

The process involved an analysis of motorcycle crash data, interviews with a wide range of stakeholders, a survey of motorcyclists and a workshop at which all the stakeholders came together to develop a plan.

The data analysis and the interviews with stakeholders identified a number of key issues which became the focus of the survey of motorcyclists and further research and discussion.
The workshop was attended by MCC members and all the key stakeholders including the RTA, Police, MAA, Ambulance, Local Government, Streets Opening Conference, rider training organisations, road safety consultants and the Injury Risk Management Research Centre at UNSW.

The entire process had revealed a number of important gaps of understanding between the road authorities and the motorcyclists. The workshop went some way to resolving some of these points and it established and opened the way for constructive dialogue. The product of the workshop was a first draft of the strategic plan for the MCC. The plan set priorities, defined 10 objectives and described strategies for achieving them. Five hundred copies of the plan were printed and distributed to key stakeholder agencies. Demand for copies of the strategic plan AFTER POSITIONED FOR SAFETY

Positioned For Safety represented a watershed at its release in June 2002. Road safety agencies and motorcyclists are now talking the same language with better understanding and appreciation of each others’ perspective. It is apparent that the process was as important as the product for the motorcyclists and agencies involved.

A. The members of the MCC:

Learned how road safety is delivered in NSW. Learned about the range of different agencies involved in road safety and road maintenance (RTA, local government and utilities).

Discovered and established communications with a wide range of stakeholders including (MAA, NRMA, Local Council Road Safety Officers, road safety consultants, forensic engineers and university researchers).

Discovered opportunities for funding project (MAA, RTA, NRMA, IPWEA, Local Councils). Gained access to motorcycle crash data and information on factors contributing to crashes. Gained access to data on participation rates and changes in age profiles.

B. Stakeholders gained increased understanding of:

- How to communicate with motorcyclists.
- The MCC as a key stakeholder and conduit for consultation.
- Motorcyclist as road users with special needs.
- Motorcycle physics and environmental factors in crashes.
- Different perspectives on crash data and risk rates.

BROAD OUTCOMES

- The process has enabled members of the MCC to develop a better understanding of the motorcycle safety issues and the policy development system. As a result they are a more informed and effective lobby group and are recognised as the peak body representing motorcyclists in the State.
- Improved communications and relations with the RTA have resulted in a more effective two way flow of information and consultation on motorcycle issues.
- Attitude change on both sides due to improved communications and an increasing understanding of motorcycle issues by government agencies, and of government process and division of responsibilities by the MCC.
- Reliable data on motorcycle crashes is now available and provides a basis for motorcyclists to develop positions and prepare submissions for effective input to policy.
- Reconciliation and recognition of shared objectives for motorcycle safety.
- Direction and a framework for activity by the MCC of NSW has been established. Issues are no longer raised on an ad hoc basis. The MCC is now setting their agenda for change with priorities determined with clear objectives for the next few years.
- Direction and a framework for activity has also been provided for other stakeholders, particularly for Local Government. Road safety agencies are able to link their initiatives to the objectives of Positioned for Safety.

STRATEGIC PLAN TWO YEARS ON - ACHIEVEMENTS

While the MCC do not claim direct responsibility for all of the initiatives described below, it is significant that there is a raised level of awareness and activity associated with motorcycle safety in NSW.

RTA

Developed a Motorcyclists and Pedal Cyclist Safety Action Plan
- Commissioned motorcycle road safety audits of popular motorcycle routes such as the Old Pacific Highway, Royal National Park, Putty Road, Bell’s Line of Road and various roads in the Snowy Mountain including the Alpine Way.
- Developed a system of motorcycle warning advisory signs. Produced with the MAA a major motorcycle safety awareness advertising campaign and consulted the MCC on the content of the messages.
- Promoted Motorcycle Awareness messages on the Variable Message Signs during Motorcycle Awareness Week
  - Include ‘Making Motorcycling Safer’ brochures with registration renewals.
  - RTA Sydney Region have initiated a safety campaign with the use of banners.
  - RTA Northern Region are using billboards promoting motorcycle awareness along routes identified as crash sites.
  - Workshop on occupant and rider protection to develop an action plan.

MAA
- Funded the development of Positioned for Safety – the MCC Motorcycle Road Safety Strategic Plan.
- Funded an investigation of motorcycle crash patterns for riders aged 17-25 in NSW and development of countermeasure strategies.
- Produced with the RTA, a major motorcycle awareness advertising campaign.
- Held a motorcycle safety seminar to release the results of the research they have funded into motorcycle safety issues.
- Funded a project to develop a user’s guide to motorcycle protective clothing.
- Funded a project to address motorcycle group riding in the Snowy Mountains region.
- Funded a project to identify motorcycle usage and risk exposure in NSW.
NRMA

- The NRMA provided a grant to develop the MCC road safety web site to communicate the road safety strategic plan to motorcyclists and road safety stakeholders. This site has been visited over 26,000 times since it was launched in October 2002.
- The NRMA coordinated and funded a Motorcycle Safety Research Seminar and brought Dr Umar Radin from the University of Malaysia to be the key speaker.
- Published several motorcycle safety articles in their magazine “The Open Road”, Hub & Spoke and on the NRMA site.
- Developing an ITS motorcycle safety and security device which involves accident crash or theft notification using a combination of GPS/telematics and sensor technologies with the support of funding from Austroads.

INJURY RISK MANAGEMENT RESEARCH CENTRE

Undertaken pilot study into the effect of fatigue on riders on day rides.

STREETS OPENING CONFERENCE MEDICAL PROFESSION

The NSW Institute of Injury and Trauma Management and the Royal College of Surgeons are considering a ‘motorcycle safety’ project. The MCC bonafides were established by providing them with copies of Positioned for Safety and the MCC Survey of NSW Motorcyclists, 2001.

MEDIA

- MCC given the ALLMOTO internet motorcycle magazine award for their contribution to motorcycling safety by the development of the strategic plan Positioned for Safety. Raised the level of discussion of safety issue in the motorcycle media, by being able to provide factual information based on current crash data.
- Encouraged the involvement of motorcycle journalists in motorcycle safety projects eg Peter Thoeming with the Snowy Mountains Group Riding project and the Old Pacific Highway brochure.
- There has also been an increase in the number of safety related articles in motorcycle magazines. There have been a number of positive stories about motorcyclists in the general media.

MOTORCYCLE COMMUNITY

The credibility of the MCC has been enhanced by the professionalism of the strategy. This has:

- Provided a role model for motorcycle groups in other states to address safety issues at their local State and Federal level.
- Resulted in a representative from the MCC being appointed to the National Road Safety Strategy Panel representing the Australian Motorcycle Council.
- Encouraged high profile celebrities who are also motorcyclists to be involved in motorcycle safety. eg Kieren Perkins, Wayne Gardner, John Laws, Phil Koperberg, Darryl Eastlake all of whom donated their time to make radio commercials for Motorcycle Awareness Week.

Encouraged motorcycle groups to establish their own local safety groups. Eg Central West Motorcycle Safety and Tourism Group initiated by the Orange branch of the Ulysses
Motorcycle Club and now including the Ulysses branches from Mudgee, Dubbo, Cowra, Bathurst and Lithgow.

LOCAL GOVERNMENT

Prior to the development of Positioned for Safety there were no Local Government programs which had motorcycle safety as their primary objective. Motorcycle safety is now included in the road safety strategic plans of a number of Councils.

IPWEA/RTA LOCAL GOVERNMENT ROAD SAFETY PROJECTS GRANTS PROGRAM

The following projects have been initiated in the past two years:

- CESSNOCK CITY - Produced a brochure call ‘Motorcycling in Hunter Wine Country’ which was Highly Commended in the 2003 Local Government Excellence in Road Safety Award.
- NORTH SYDNEY, WILLOUGHBY AND KU-RING-GAI Motorcycle Safety Project which won the 2002 Local Government Excellence in Road Safety Award.
- CITY OF SYDNEY - Motorcycle safety campaign that included the display of banners.
- FAIRFIELD CITY - Traffic Awareness Program that included a presentation on sharing the road with motorcycles.
- GOSFORD CITY - Survey of riders using the Old Road (Old Pacific Highway).
- HAWKESBURY SHIRE - Survey of riders as part of a Motorcycle Safety Project.
- PARRAMATTA, AUBURN AND HOLROYD - ‘Survive the Ride’ motorcycle safety campaign.
- SHELLHARBOUR - Included sharing the road with motorcyclists in their ‘U-Turn the Wheel’ day for year 11 students.
- TUMUT, TUMBARUMBA AND GUNDAGAI COUNCILS - Formed the Snowy Region Motorcycle Safety Group to address safety issues and produce a brochure ‘Motorcycling in the Snowy Region’.
- WOLLONDILLY, WINGECARRIBE, GOULBURN CITY - Published a brochure ‘Motorcycling the Southern Way’. WOLLONDILLY - Included sharing the road with motorcyclists in their ‘U-Turn the Wheel’ day for year 11 students.
- WOLLONGONG, SHELLHARBOUR AND KIAMA - Conducted a fatigue study in conjunction with the Injury Risk Management Research Centre into the effect of fatigue on riders on day rides in the region. A survey of riders on day rides in the region, and a brochure to on ‘Motorcycle Touring the Illawarra’.
REFERENCES


Acknowledgments.
Many people contributed their time and expertise to the development and implementation of the strategic plan. However none of it would have been possible without the funding and support provided by the Motor Accidents Authority of NSW.

Key words -Motorcycle, safety, strategic plan, MCC.
Road Safety 2010 – Motorcyclist and bicyclist safety action plan 2002-2004
Motorcycle safety issues and countermeasures
‘Positioned for Safety’ – Road safety strategic plan 2002-2005
Evaluation of ‘Positioned for Safety’ – Road safety strategic plan 2002-2005
The UK government’s motorcycling strategy
RELEVANT Extracts from the Minutes of the STAYSAFE Committee regarding the seminar on issues in motorcycle safety

This appendix contains relevant extracts from the minutes of STAYSAFE Committee meetings of:

- Monday 8 November 2004
- Monday 6 December 2004
- Thursday 22 September 2005

regarding issues in motorcycle safety.
STAYSAFE

PROCEEDINGS OF THE
JOINT STANDING COMMITTEE ON ROAD SAFETY

9:00 A.M., MONDAY 8 NOVEMBER 2004
AT PARLIAMENT HOUSE, SYDNEY

MEMBERS PRESENT

Legislative Council
Mr Colless
Mr Tingle
Mr West

Legislative Assembly
Mr Gibson
Mr Barr
Mr Hunter
Mr Bartlett
Mr Maguire

Also in attendance: Mr Faulks, Manager of the Committee, and Ms Yeoh and Ms Cyril, Assistant Committee Officers.

The Chairman presiding.

1. Apologies

Apologies were received from Ms Saliba and Mr Souris.

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3. Chairman's report

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Seminar on motorcycle safety, Friday 3 December 2004
The Chairman noted the seminar on motorcycle safety that is being held at Parliament House on Friday 3 December 2004. The seminar will feature presentations on:

- Road trauma statistics relating to motorcycling
- The status of the New South Wales motorcycling strategy (Motorcycle Council)
- The ‘Motorcycling in the Snowy Mountains’ project (Tumbarumba shire council)
- The ‘Survive the Ride’ project (Blacktown local council)
- Injury prevention and motorcycles (Roads and Traffic Authority)
6. **General business**

There being no further business, the Committee adjourned at 12:20 p.m..

Chairman

Committee Manager
STAYSAFE

PROCEEDINGS OF THE
JOINT STANDING COMMITTEE ON ROAD SAFETY

9:00 A.M., MONDAY 6 DECEMBER 2004
AT PARLIAMENT HOUSE, SYDNEY

MEMBERS PRESENT

Legislative Council
Mr West
Mr Colless

Legislative Assembly
Mr Gibson
Mr Barr
Mr Maguire
Mr Bartlett

Also in attendance: Mr Faulks, Manager of the Committee, Mr Jefferis, Project Officer, and Ms Yeoh and Ms Cyril, Assistant Committee Officers.

The Chairman presiding.

1. Apologies

Apologies were received from Ms Saliba, Mr Tingle, Mr Hunter and Mr Souris.

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3. Chairman’s report

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Seminar on motorcycle safety, Friday 3 December 2004
Mr Colless reported that he had attended the Australasian College of Road Safety meeting at Parliament House on Friday 3 December 2004, where he represented the Chairman and delivered opening remarks. The Committee Manager and staff also attended the seminar. Presentations addressed motorcycling interventions in New South Wales and other jurisdictions, and included a description of the New South Wales motorcycling strategy, as well as examples of community interventions developed by local councils to address issues affecting commuting motorcyclists as well as touring motorcyclists.

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5. **General business**

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There being no further business, the Committee adjourned at 12:25 p.m..

Chairman

Committee Manager
STAYSAFE

PROCEEDINGS OF THE JOINT STANDING COMMITTEE ON ROAD SAFETY

1:00 P.M., THURSDAY 22 SEPTEMBER 2005 AT PARLIAMENT HOUSE, SYDNEY

MEMBERS PRESENT

Legislative Council
Mr Colless
Mr Tingle
Mr West

Legislative Assembly
Mr Gibson
Mr Souris
Mr Maguire
Ms Hay
Mr Hunter
Mr Barr

Also in attendance: Mr Faulks, Manager of the Committee, Mr Jefferis, Senior Committee Officer, and Ms Yeoh and Ms Cyril, Assistant Committee Officers.

The Chairman presiding.

1. Apologies

Apologies were received from Mr Bartlett.

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4. Consideration of Chairman's draft report: 'Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers'

The Chairman presented the draft report: 'Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers'.

The draft report was accepted as being read.

The Committee proceeded to deliberate on the draft report:
Paras, 1.1 – 1.41: read and agreed to

Proceedings:

- Motorcycle safety in New South Wales in 2004
- Survey of motorcyclists and their safety initiatives
- Survey of motorcyclists aged over 30
- Motorcycling in the Snowy Mountains region of New South Wales
- Survive the Ride.
- Motorcycle safety in New South Wales
- Protective motorcycle clothing and injury prevention
- European standards for protective motorcycle clothing—A new benchmark
- Australian Standards
- Come off your bike and looking for answers? A 'how-to' of suing the manufacturer of your supposed ‘protective’ gear
- Compliance to standards—Manufacturing, costs, and how to do it..
- The benefits of a motorcycle strategy in New South Wales
- A strategic approach to motorcycle safety—Two years on
- Road Safety 2010—Motorcyclist and bicyclist safety action plan 2002-2004
- Motorcycle safety issues and countermeasures
- ‘Positioned for Safety’—Road safety strategic plan 2002-2005
- Evaluation of 'Positioned for Safety'—Road safety strategic plan 2002-2005
- The UK government’s motorcycling strategy
  Read and agreed to

Recommendation 1: read and agreed to

The Committee read and agreed to the report.

On the motion of Mr Hunter, seconded Mr Colless:
That the draft report: 'Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers', be read and agreed to.
Passed unanimously.

On the motion of Mr Hunter, seconded Mr Colless:
That the draft report: 'Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers' be accepted as a report of the STAYSAFE Committee, and that it be signed by the Chairman and presented to the House.
Passed unanimously.
On the motion of Mr Hunter, seconded Mr Colless:

That the Chairman and Committee Manager be permitted to correct any stylistic, typographical and grammatical errors in the report.

Passed unanimously.

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6. General business

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There being no further business, the Committee adjourned at 1:35 p.m..

Chairman

Committee Manager