

ABSTRACT

- Paper title: Western Australian Children and Road Safety Review
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- Topic Field: Policy
- Discussion: In 2000, the Office of Road Safety, on behalf of the Road Safety Council of WA initiated a review in to road safety initiatives being undertaken that targeted children and novice drivers. The task included an independent review of the nature and extent of crash involvement of young people aged 0 to 20 years-of-age, and initiatives being undertaken with these age groups as a primary target. The recommendations of the review were considered by an inter-sectoral Steering Group and three working groups (0 to 4 years; 5 to 15 years; and pre and novice drivers) that provided a final report to the Road Safety Council in June 2002. Issues considered include school-based road safety, bicycle education, driver education, early childhood and parental involvement and pre-driver education. This paper will discuss the process used, the content of the final report and early implementation plans.
- Limitations of study: The study is jurisdiction-specific and reflects the variables affecting implementation within the Western Australian road safety environment.
- What's new to the field: The study is an account of a policy formation and resourcing process.
- Completed/work in progress: Stage one of the project is complete and implementation (Stage 2) begins.

WESTERN AUSTRALIAN CHILDREN AND ROAD SAFETY REVIEW

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INTRODUCTION

In 2000, the Road Safety Council commissioned a comprehensive review of road safety in relation to children and young people, aged zero to 20 years. The review was undertaken in order to:

- examine the nature and extent of injuries and fatalities in Western Australia for zero to 20 year olds;
- examine existing road safety programs throughout Australia and overseas, with a view to identifying best practice and evidence-based programs; and
- recommend priorities for Western Australia taking into account existing structures and budget constraints.

In February 2001, a report titled, *A Review of Good Practice: Children and Road Safety*¹ was submitted to the Road Safety Council. In March 2001, the Road Safety Council established the Children and Road Safety Initiative in response to the recommendations of the report.

The report made recommendations for the implementation of strategies in key areas of road safety that relate to children and young people (zero to 20 years). These recommendations focussed on achieving the greatest road safety benefits while maintaining cost effectiveness.

On the basis of the Review report, three priority areas have been identified. These include road safety for:

- parents and young children (zero to four year-olds);
- students from Kindergarten to Year Nine (four to 14 year-olds); and
- pre-drivers and novice drivers (15 to 20 year-olds).

The purpose of the Children and Road Safety initiative has been to ensure the development and implementation of appropriate and effective road safety programs for children and young people across Western Australia based on the Review's recommendations and emerging, current issues in Western Australia.

A steering committee and three working groups involving 29 different agencies and organisations were established in May 2001 to further develop recommendations and principles about best practice for road safety programs in these three priority areas. Terms of Reference were developed which included a timeframe, outline of a consultation process and the role of each committee.

The strategies and activities recommended for implementation stem from the consultation process with the working parties. The recommendations outlined in this document provide the direction for business planning that the Road Safety Council considered in May/June 2002.

This paper outlines the policy direction for the key strategies to be supported by the Road Safety Council as a matter of priority, to address the identified needs. It also provides opportunities for any agency involved in road safety programs to review their operation and involvement.

NB: Parents are referred to throughout this paper as a key target group across all age groups (zero to 20 year-olds). The term parent includes other adult carers.

BACKGROUND

Children 0 to 4 years

In Western Australia, motor vehicle, pedestrian and cycle injuries are important and preventable causes of both infant and one to four years aged injury deaths². On average, nine children under the age of four years will die each year, 100 will be hospitalised and about 160 will present to the Emergency Department of Princess Margaret Hospital for Children as a result of injuries received in a car crash³. Of those children who die from road trauma most are pedestrians. More children are killed in rural areas compared with the metropolitan area. Those who die after a road crash are more likely to have been unrestrained in the motor vehicle when the crash occurs.

More than half of the young children who require hospitalisation at Princess Margaret Hospital after road trauma are injured when cycling. The majority of these cycling injuries relates to falls and is not associated with crashes

with motor vehicles. Other children are hospitalised at Princess Margaret Hospital after being injured in motor vehicles that crash and as pedestrians.

In 2000⁴, the total number of children zero to years-of-age killed on Western Australian roads was 10 compared with seven in 1999. Three deaths occurred as occupants of a motor vehicle and of the three deaths, two were not restrained in the vehicle (66 percent of children aged zero to years who were killed as occupants of a vehicle were unrestrained). One death occurred in the metropolitan area and two deaths in rural areas.

Six of the children aged zero to five years were killed as pedestrians compared with seven pedestrian deaths of children aged zero to five years in 1999. Two deaths occurred in the metropolitan area and four in rural areas. One child was killed as a cyclist in a rural area.

In 1999, admissions of infants and young children aged zero to five years to Princess Margaret Hospital for Children, showed that 32 were motor vehicle occupants, 71 were cyclists and 29 were pedestrians. Hospital admission road crash statistics for the zero to five years age group are over represented by cyclists who account for 54 percent of admissions.

Aboriginal children aged zero to five years account for 15 percent of hospital admissions for road trauma. This is disproportionately high considering the number of Aboriginal children zero to five years-of-age in the population is very low compared to the number of non-Aboriginal children aged zero to five years. Of those Aboriginal children aged zero to five years-of-age admitted to hospital in 1999, three were injured as motor vehicle occupants, eight as cyclists and nine as pedestrians⁵.

The different patterns of road transport hospitalisations in Aboriginal people and non-Aboriginal people arise from different exposures to risk injury that include factors such as the physical road environment, cultural norms, usage of different modes of transport, and attitudes and behaviours to road safety.

Even though the number of children killed and injured is low for the age group zero to five years, from current research it is quite clear that providing road safety education for this age group will have beneficial long term effects on the road safety behaviour of these children as they approach adulthood.

Children 6 to 11 years

Police crash data shows that between 1990 and 1999, almost 1,000 children six to 11 years-of-age were either killed or taken to hospital as the result of a traffic crash in Western Australia. Forty-eight percent of these casualties were passengers in a motor vehicle, 31 percent were pedestrians, 19 percent were cyclists and two percent were motorcycle riders and other road users. The proportion of male and female passenger casualties was similar for the ten-year period, however male casualties were more common than female casualties in all other road user groups. Around half of the children fatally injured in a motor vehicle were not wearing a restraint⁶.

In 2000, 7 children aged six to 11 years were killed on Western Australian roads. Four were pedestrians (three in the metropolitan area and one in a rural area) and three were passengers in a motor vehicle (1 in the metropolitan area and 2 in rural areas)⁷. In 1999, four children were fatally injured (three were passengers in a motor vehicle and one was a pedestrian)⁸.

Police-reported hospitalisations show that in 2000, 23 children (six to 11 years of age) taken to hospital were passengers in a motor vehicle, 14 were cyclists and 14 were pedestrians⁹. In 1999, 52 child passengers, 18 pedestrians and nine child cyclists were taken to hospital¹⁰.

Hospital admission data shows that cyclists are over-represented in crashes. However, emergency department data indicates that most of these crashes do not involve a collision with a motor vehicle¹¹. Few child cyclists are fatally injured each year compared with passengers in motor vehicles and pedestrians. There were no cycling fatalities in children six to 11 years of age in 1999 and 2000.

Rural children are over-represented in traffic crashes, and the lower rate of child restraint usage in rural and Indigenous communities, is of significant concern¹².

Even though the number of children killed and injured is low for children aged six to 11 years of age, from current child development research, it is evident that providing road safety education for these children will have beneficial long term effects on the road safety behaviour of these children as they approach adulthood.

There are a number of environmental issues around children, road safety, and traffic management, in schools. A considerable number of these issues have been or are being addressed by a variety of initiatives such as: the

issues relating to school-bus travel to and from school; the Safe Routes to School Program (conducted by RoadWise); safe set down and pick up areas; and school crossing supervisors and traffic management issues.

In 1997, the 40km/h speed zone was introduced around schools in Western Australia (during morning and afternoon periods when children are travelling to and from school), as a significant step in reducing the number of young children affected by road crashes. The current Main Roads Western Australia trial, of painting 40 km/h signs on the roads, is showing a lowering effect on the average mean vehicle speed.

In December 2001, the Western Australian *Road Traffic Code 2000*, was amended to reflect the new 50 km/h speed limit for motor vehicles travelling in built up areas. The specific aim of this change is to reduce the number of people killed or seriously injured by lowering of speed limits on local residential streets. Prior to the introduction of this strategy, Main Roads Western Australia conducted a survey, the results of which indicated that the majority of people agreed with the strategy. In New South Wales, an evaluation of the 50km/h speed limit showed significant serious road crash reductions for road users including the young, cyclists and pedestrians.

Young people aged 12 to 16 years

Elliott reported¹³ that in Western Australia for 1998/99, the greatest number of children aged zero to 16 years were killed as passengers in motor vehicle crashes and were aged 12 to 16 years. For the ten years, 1990 to 1999, a significant proportion of children aged zero to 16 years killed in motor vehicle crashes were not wearing any form of restraint.

Boys aged 12 to 16 years are grossly over represented in fatalities where restraints are not worn, as are males 17 to 20 years. The fatality rates for 1999 show that it is the 12 to 16 year age group with the highest fatality rate, within the age group zero to 16 years. However, the fatality rate for those aged 12 to 16 years is significantly lower than those aged 17 to 20 years.

Analysis by road user category and age reveals that in terms of sheer numbers of children admitted to hospital, it is the male cyclists aged 12 to 16 years that account for the greatest proportion of the total injured males and females aged zero to 16 years¹⁴.

Aboriginal children accounted for 11 per cent of children zero to 16 years admitted to hospital for a traffic crash injury in 1999. The data reveals that it is the 12 to 16 year age group being admitted in greatest number but it is the zero to five-year age group who are over represented compared with non-aboriginal children. Younger Aboriginal males are especially over-represented as motor vehicle occupants aged 12 to 16 years and as cyclists aged six to 16 years.

In summary, in his analysis of the involvement of Western Australian children aged zero to 16 years-of-age Elliott¹⁵ stated that:

- Most children zero to 16 years killed in WA roads are in a motor vehicle and likely to be unrestrained.
- The majority of children admitted to hospital or to Princess Margaret Hospital Emergency Department are cyclists and their injuries were not likely to be the result of being hit by a moving vehicle.
- It is the 17 to 20 year age group that account for much greater numbers of death and injury than the zero to 16-year age group and largely as occupants (including drivers) of a motor vehicle.
- For children aged zero to five years, their hospital admission rate as cyclists is considerably higher than as pedestrians or occupants and this should not be, given their age and limited capacities.
- Males are the major contributor to hospital statistics across all sub-age groups and road user groups except zero to five year olds injured as motor vehicle occupants.

Young people aged 17 to 20 years

Police crash data shows that, between 1990 and 1999, over 5,000 young people 17 to 20 years of age were either killed or taken to hospital as the result of a traffic crash in Western Australia. Forty-nine percent of these casualties were drivers of a motor vehicle, 30 percent were passengers, 11 percent were motorcyclists, 6 percent were pedestrians, 2 percent were cyclists and 1 percent was other road users. Of the young motor vehicle occupants killed, around 30 percent were not wearing a seat belt at the time of the crash¹⁶.

In 2000, 37 young people aged between 17 and 20 years were fatally injured on our roads. Twenty-eight were occupants of a motor vehicle, two were motorcyclists and 7 were pedestrians¹⁷. In 1999, 42 young people were killed (37 motor vehicle occupants, three motorcyclists, one cyclist and one pedestrian)¹⁸.

Police crash data also shows that in 2000, 186 drivers, 112 passengers and 27 motorcyclists aged between 17 and 20 were taken to hospital compared with 219 drivers, 137 passengers and 29 motorcyclists in 1999^{17,18}.

Compared with all drivers, young drivers are over-represented in both fatal traffic crashes and crashes requiring hospitalisation. For the period 1987 to 1996, around one third of all drivers killed, and over one third of drivers reported hospitalised by police, were 17 to 24 years-of-age, yet this age group comprises only 17 percent of all licensed motor car drivers in Western Australia¹⁹. In particular, young males and young rural drivers are over-represented in fatal crashes involving young drivers in Western Australia²⁰. Per population, Indigenous young people have higher rates of death and hospitalisation from road crashes compared with non-Indigenous young people²¹.

Driving inexperience, risk-taking behaviour and driving exposure are all major factors that contribute to the high crash risk of young drivers^{22 23}. Within the first six to twelve months of gaining their licence, young drivers in Western Australia are at their greatest risk of crashing²⁴. During 1990 to 1999, speed was a factor in 43 percent and alcohol was a factor in 21 percent of fatal crashes involving 17 to 24 year olds¹⁶.

To address the issue of driving inexperience, the Western Australian government introduced a graduated licensing system. Graduated licensing systems are designed to allow learner drivers to obtain initial driving experience under lower risk conditions²⁵.

Under graduated licensing systems, learner and novice drivers progress in stages towards receiving their full driver's licence. In general, these stages include a supervised learner phase and an unsupervised driving phase (provisional licence stage). In some jurisdictions, the supervised learner phase includes a compulsory minimum learner period and compulsory hours of supervised driving. Normally, the unsupervised driving phase includes restrictions on drivers such as lower blood alcohol concentration (BAC) limits and speed limit restrictions. In some North American states, night-time driving and passenger restrictions are imposed during the provisional licence stage²⁵.

THE REVIEW FINDINGS

Aim

The overall aim of the Children and Road Safety Initiative is to reduce road trauma among children and young people, (0 to 20 years-of-age), by developing, positive, lifelong attitudes and road user behaviours.

Principles

The policy directions outlined in the report are underpinned by a set of principles. These principles provide the foundation to guide and focus efforts and resources in planning road safety education for infants, children and young people, and aim to reduce road trauma.

These principles are:

- Road safety policy and programs are developed ensuring consistency with national and state road safety strategies;
- Road safety policy and programs are developed recognising and working at child developmental levels;
- Policy and programs are developed recognising parents/carers as the primary road safety educators and role models for children and young people;
- Road safety policy and programs are developed based on best practice and consistent with research evidence;
- Road safety policy and programs are developed based on legislation;
- Road safety policy and programs are developed ensuring program sustainability;
- Road safety policy and programs are developed ensuring universality of access to road safety initiatives;
- Road safety policy and programs are developed ensuring consistent and coordinated service delivery;
- Road safety policy and programs are developed ensuring provision of information and resources for all contexts;
- Road safety policy and programs are developed ensuring appropriate monitoring and evaluation of programs;
- Road safety policy and programs are developed ensuring provision of universal and targeted programs with effective coordination and partnerships; and
- Road safety policy and programs are developed ensuring consistency with outcomes focused education.

Rationale

It has become increasingly clear from research that the early years of life, particularly the zero to four year age group, are very important for establishing lifelong behaviours and wellbeing, as many beliefs are formulated during this period. This period of life is one where parents are responsible for their child's safety and are the prime teachers.

There is a need to build on the already strong commitment to provide strategies that support the parents of babies and young children, to reduce road-related child deaths and injuries and to improve road safety. This will impact significantly on young children's lives and later in life as a consequence of learning positive road safety behaviours during this critical period of life. Learning positive road safety behaviours, attitudes and skills at an early age has a significant impact on road user behaviours later in life.

For school-aged children, the role of parents as teachers of road safety needs to be complemented by road safety education in schools. The focus of school-based road safety in the compulsory years of schooling should be primarily on the Kindergarten to Year 3 age group (five years of schooling).

Road safety education for children in Years 4 to 9 (aged eight to 15 years) is still required but only where it is clear a difference can be made. Children aged eight to 15 years need opportunities to develop self-management skills to deal with road-related pressure situations. They also require opportunities to practise these skills.

Children of all ages need to be trained to recognise dangerous situations in order to choose safe situations or to use strategies designed to deal with dangerous situations. Adolescence is a time of conflicting emotions, where risk-taking can be a way to gain new experiences. Becoming an adult is both exciting and daunting and can make a lot of adolescents feel insecure. In turn, they may feel a greater need to conform with people their own age, follow the crowd and impress their peers. The emerging adult is open to many pressures that can advertise risk-taking behaviour as glamorous and desirable.

Newly-licensed drivers face a higher crash risk than those with more experience and research has found that this is highest in the first six to twelve months of driving solo. Around one third of drivers killed in Western Australia are aged between 17 and 24 years-of-age.

A strong commitment to provide evidence-based strategies is required to reduce road deaths and injury among zero to 20 year-olds and to positively influence their current and future road safety attitudes and behaviour.

Priorities

There are several major road safety priorities for zero to 20 year-olds that need to be addressed as part of this initiative. These are:

Road safety priorities for 0 – 4 year olds:

- child car restraints (installation and checking, training and information; and enforcement of child care restraint use);
- child pedestrian safety and road use;
- fostering parental role in road safety; and
- coordination and implementation of recommendations.

Road safety priorities for 4 – 14 year olds:

- road safety education in schools (early childhood focus; professional development for teachers; and provision of up-to-date resource material for all primary teachers);
- fostering parental role in road safety; and
- coordination and implementation of recommendations.

Road safety priorities for 15 - 20 year olds:

- providing universal pre-driver education;
- gaining extensive practical driving experience for pre-drivers (learner drivers);
- educating and promoting parents as supervisors and role models for pre-drivers (learner drivers);
- newly-licensed drivers; and
- coordination and implementation of recommendations.

IMPLEMENTATION

The Western Australian Children and Road Safety Review Project has reviewed road crash data involving children and young people aged zero to 20 years-of-age. The review also included evidence-based practice and compared this with existing programs that target young people.

The resultant report that was endorsed by the Western Australian Road Safety Council in June 2002 made recommendations about activities that should be developed. The recommendations within the report describe several new initiatives as well as some that reinforce existing programs conducted by agencies. Some agencies are in a process of program review with the intention of adapting to the recommended directions in the report.

As part of the implementation process opportunities are also being investigated to merge the school-based road safety initiative with another statewide initiative, as identified in the Elliott report (as a preferred option). The benefits of amalgamating are in reducing duplication, utilising established regional networks and creating a seamless response to community issues.

The Road Safety Council has a coordinating role and is considered the peak advisory body in Western Australia. Its member groups are those agencies with road safety as a core agency function. The policy direction established by this review and the effective implementation of its recommendations will be the responsibility of these agencies. This will be achieved by the adoption of policy, purchasing and practice intentions and the ability to communicate the changes outlined in the policy.

This implementation and the related funding decisions have commenced. However, implementation, including a monitoring and review process, is expected to be on going.

CONCLUSION

The recommendations of the Children and Road Safety Review has provided a new framework for the existing loose program of activities that targeted road trauma affecting children and young people. It challenges road safety agencies and the community to increase focus on evidence-based practice and has detailed a policy and program of initiatives for Western Australia.

Acknowledgements

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