

New Zealand Injury Prevention Strategy

Rautaki Ārai Whara o Aotearoa

Five-year Evaluation – Final report May 2010



New Zealand Government

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Contents

1. Executive summary	1
2. Introduction	5
2.1 The purpose of evaluating the New Zealand Injury Prevention Strategy	5
2.2 The New Zealand Injury Prevention Strategy	5
2.3 The Strategy's governance structure	7
3. Methodology	8
4. The social and economic cost of injury	9
4.1 Cost of injury methodology	9
5. What has the Strategy achieved?	11
5.1 Progress against serious injury outcome indicators	11
5.2 Safety culture survey findings	14
5.3 Priority area outcomes – analysis by injury area	15
5.4 Emerging injury issues	21
5.5 Key achievements for the Strategy	23
5.6 Barriers at a strategic level	27
6. Government expenditure in injury prevention	32
6.1 Comparison between social and economic costs and government expenditure	34
6.2 Cost-effectiveness of government investment	34
7. Potential new approaches	37
7.1 Potential new approaches	37
8. Governance arrangements for the Strategy	40
8.1 NZIPS Secretariat	40
8.2 Key findings from the review of functional relationships and structures	41
9. Conclusion and summary of proposed new approach	45
9.1 Conclusion	45
9.2 Summary of proposed new approach	46

1. Executive summary

1.1 Background

Injury is the leading cause of death for New Zealanders aged between one and 34. Injury is also the second leading cause of hospitalisations. The estimated social and economic costs of injury are approximately \$9.67 billion per year,¹ yet many injuries are preventable. To address this burden, the New Zealand Injury Prevention Strategy (NZIPS) was launched in 2003, focusing on six priority areas that accounted for at least 80% of the serious injuries and injury deaths: motor vehicle traffic (road) crashes, suicide and deliberate self-harm, falls, workplace injuries, drowning and assault.

Partners in leading the Strategy are the Ministries of Health, Labour, Transport, Social Development and Justice, as well as ACC.

1.2 Overall findings

This five-year evaluation of NZIPS shows the Strategy has created a foundation for future work to further reduce injuries and ultimately reduce the costs associated with them. When the Strategy was set out, it was acknowledged that achieving injury reductions would be a long-term gain, as behaviour change takes time. However, the goals of the Strategy are seen as being aspirational, and more achievable and measurable goals should be pursued.

Compiled in 2009, this report shows that, overall, injury-related deaths have decreased, specifically in areas such as road crashes and workplace injuries owing to sustained activity and investment in injury prevention over a period of time. For example, in the road crashes area the fatal injury rate has decreased from 11.55 per 100,000 (2003) to 9.00 (2006). However, the overall serious, non-fatal injury rate has increased from 212 per 100,000 (2005) to 224 per 100,000 (2008). This could be due to a variety of factors, such as the implementation of a range of effective injury prevention interventions that have successfully reduced the severity of the injury from fatal to serious (e.g. enforcement, vehicle safety standards and road engineering) and changes in medical technology that have resulted in the increased survivability of previously fatal injuries.

Importantly, the Strategy has raised awareness among government agencies, non-government organisations and community groups of the need to improve injury prevention, and has tightened coordination and efficiencies between these groups.

The report also shows there is now a general acceptance among New Zealanders that injury is a significant issue, and that investing in injury prevention is valid and necessary.

1. Wren, J., Barrell, K., & O'Dea, D. 2010. The Costs of Injury and Methods for Prioritising Resource Allocation: A background briefing paper to inform the evaluation of the New Zealand Injury Prevention Strategy. Wellington: New Zealand Injury Prevention Secretariat, ACC.

Looking forward, the report emphasises the need to build on the foundation that might otherwise be lost. It suggests a number of ways the Strategy can be enhanced and more tightly targeted through the inclusion of specific performance targets within the NZIPS and priority area strategies.

There is scope for greater targeting through more focused data. There is also scope for closer cooperation and coordinated effort. This will not only produce better injury prevention outcomes but do so in a more cost-effective manner. There is also a need to streamline funding at the community level to achieve efficiencies and reduce duplication of activity.

The evaluation has highlighted the need for an integrated, cross-agency focus in the areas of child injury, alcohol, Māori and community engagement, as these areas currently face challenges in terms of leadership and coordination. For example, injury prevention in children poses specific challenges in terms of requiring targeted interventions (e.g. child restraints). This is an area where injury is a major problem,² but there is no national leadership, a lack of specific targets or priorities, and a lack of coordination.

1.3 Moving forward

It is recommended that the Strategy be continued in order to address the high burden of injury borne by New Zealand and that the original six priority areas (road crashes, workplace injuries, suicide and self-harm, assault, falls and drowning) be maintained, including performance targets being set for each priority area.

ACC's mandate as leader of the Strategy must be formally strengthened to ensure accountability and drive performance. The role of the NZIPS Secretariat should be enhanced so it can perform a whole-of-injury-prevention policy function, focused on identifying gaps, overlaps, win/wins and synergies across the injury prevention environment.

Structural arrangements can be streamlined by retaining the engagement of the Injury Prevention Ministerial Committee and Chief Executives' Injury Prevention Forum (CEs' Forum) at a reduced frequency, supported by a Senior Officials Group, which will have joint accountability for driving the Strategy's performance.

There will be an increased focus on the areas of child injury, alcohol, Māori and community engagement through the incorporation of actions within priority area strategies, where appropriate.

Government agencies in the injury prevention sector must continue to improve their knowledge of the cost effectiveness of government spend in this area. They must support the Secretariat to collect information on government expenditure, intervention effectiveness and cost of injury on an annual basis, and track this over time.

2. In New Zealand, unintentional injury is the leading cause of death for children aged one to 14 years, and the leading cause of hospitalisation for those aged five to 14 years.

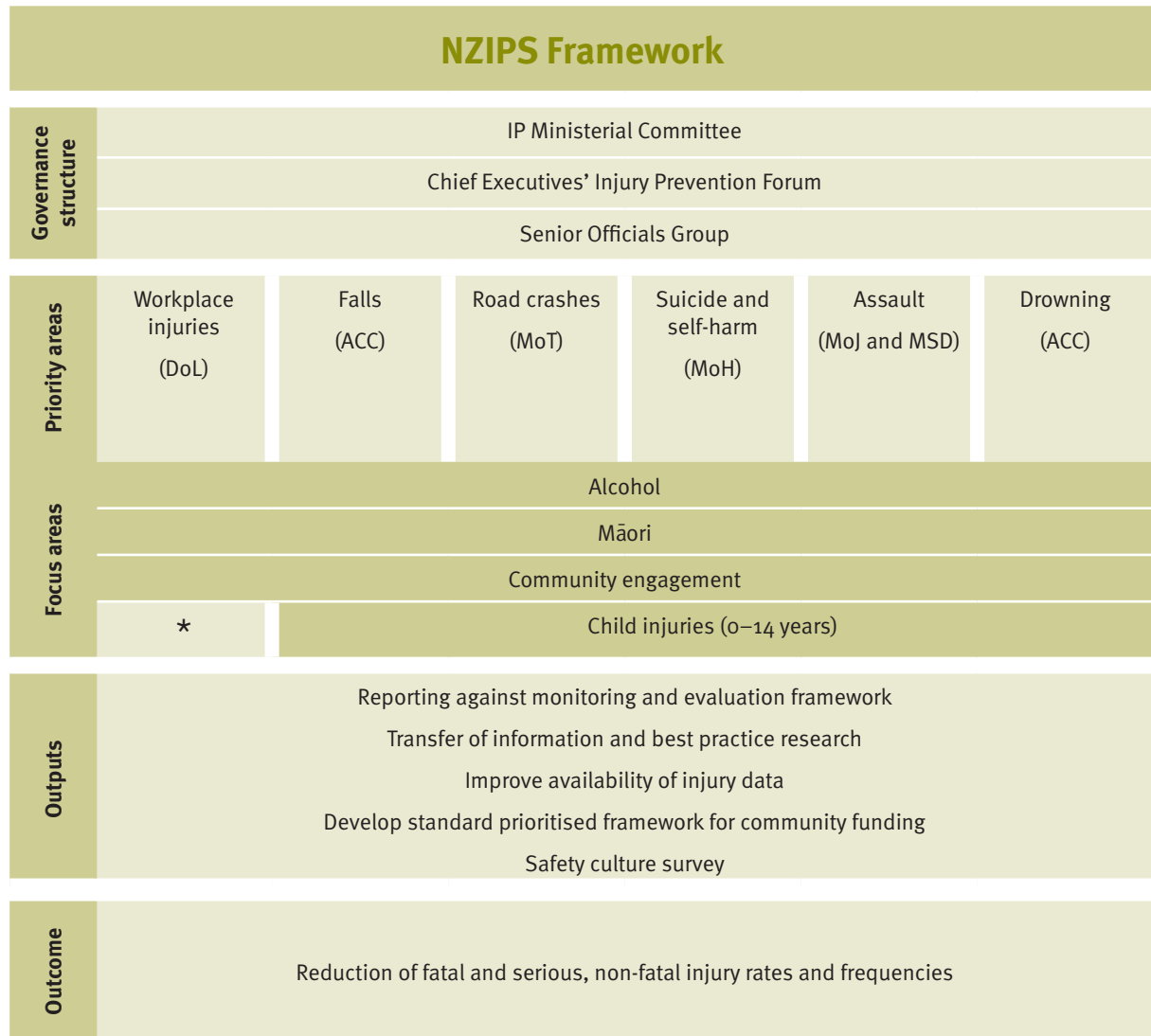
1.4 Key recommendations

The key recommendations from this evaluation include:

- » Continuing NZIPS, with ACC (through the NZIPS Secretariat) having an increased focus and being responsible for driving the Strategy's performance and improving accountability from other lead agencies, and efficiencies from other injury prevention groups;
- » Streamlining the Strategy's governance through improved role clarity and accountability;
- » Ensuring measurable high-level targets within individual priority areas;
- » Ensuring that Statistics New Zealand continues to advance work on improving the availability and timeliness of data, through its mandated role of Injury Information Manager;
- » Strengthening the NZIPS Secretariat's role so that it can:
 - » Implement a more robust monitoring, auditing and reporting role;
 - » Identify where injury prevention practices could be improved, using best practice research to support new and improved initiatives;
 - » Support and monitor the inclusion of specific actions in the plans of lead agencies, to address the focus areas of child injury, alcohol, Māori and community engagement;
 - » Evaluate the performance of the priority area strategies and focus areas, and report on outcomes, trends and value for money;
 - » Act as a conduit across the agencies to ensure that best-practice, cost-effective injury prevention interventions are adopted and implemented;
 - » Build the injury prevention knowledge base and share learnings across the sector to drive efficiencies and cost-effective interventions;
 - » Develop a durable cross-agency community funding model with a focus on efficiency gains and value for money, to reduce duplication and inconsistent service delivery;
 - » Investigate potential new approaches to achieve injury reductions (e.g. re-injury prevention).

Figure 1 illustrates the proposed framework for NZIPS based on the above recommendations.

FIGURE 1 – PROPOSED NZIPS FRAMEWORK



* Child injuries in the workplace to be addressed through the Workplace Health and Safety Strategy, as appropriate.

2. Introduction

2.1 The purpose of evaluating the New Zealand Injury Prevention Strategy

The New Zealand Injury Prevention Strategy (NZIPS) was launched in 2003. This is the five-year evaluation of the Strategy.

The purpose of the evaluation as defined in the Terms of Reference is to:

- ❖ Provide a review of the high-level achievements that have resulted from the implementation of the Strategy;
- ❖ Assess the country's injury prevention performance to date as evidenced by the NZIPS serious injury outcome indicators and the safety culture survey findings;
- ❖ Identify emerging injury issues;
- ❖ Identify areas of progress and barriers to optimal performance;
- ❖ Recommend changes to simplify and streamline the governance structure and thereby improve the coordination of effort across government, non-government and community organisations;
- ❖ Identify potential new approaches to achieve cost-effective injury reductions.

2.2 The New Zealand Injury Prevention Strategy

Injury is the leading cause of death for New Zealanders aged from one to 34 years, accounting for more years of life lost than cancer and heart disease combined. Injury is the second leading cause of hospitalisations.

Injuries impose both direct costs, such as those to the ACC scheme, and indirect costs, including reduced quality of life and disruption to individuals, families and communities.

Current evidence indicates that the social and economic costs of injury are high, approximately \$9.67 billion each year, yet many injuries and their consequences are preventable. Chapter 4 of this report examines these costs in more detail.

Prior to the Strategy's development, injury rates had declined in some areas where concerted efforts had been made. However, there were a number of challenges, including:

- Fragmentation of effort;
- Gaps in injury prevention activity;
- Workforce capability issues;
- Quality of, access to, and the dissemination of injury information;
- Lack of sustainable funding.

The Strategy was aimed at addressing these challenges by providing a framework for the policy development and service delivery activities of government agencies, local government, non-government organisations (NGOs), communities and individuals involved in injury prevention (refer to Table 1). It was envisaged that central government agencies would apply the Strategy across government portfolio areas.

TABLE 1 – NZIPS FRAMEWORK

New Zealand Injury Prevention Strategy	
Vision	A safe New Zealand, becoming injury free
Goals	Achieve a positive safety culture
	Create safe environments
Objectives	1. Raise awareness and commitment to injury prevention
	2. Strengthen injury prevention capacity and capability
	3. Design and develop safe environments, systems and products
	4. Maintain and enhance the legislative and policy framework supporting injury prevention
	5. Integrate injury prevention activity through collaboration and co-ordination
	6. Advance injury prevention knowledge and information
	7. Develop and implement effective injury prevention interventions
	8. Ensure appropriate resource levels for injury prevention
	9. Develop, implement and monitor national injury prevention strategies for priority areas
	10. Foster leadership in injury prevention

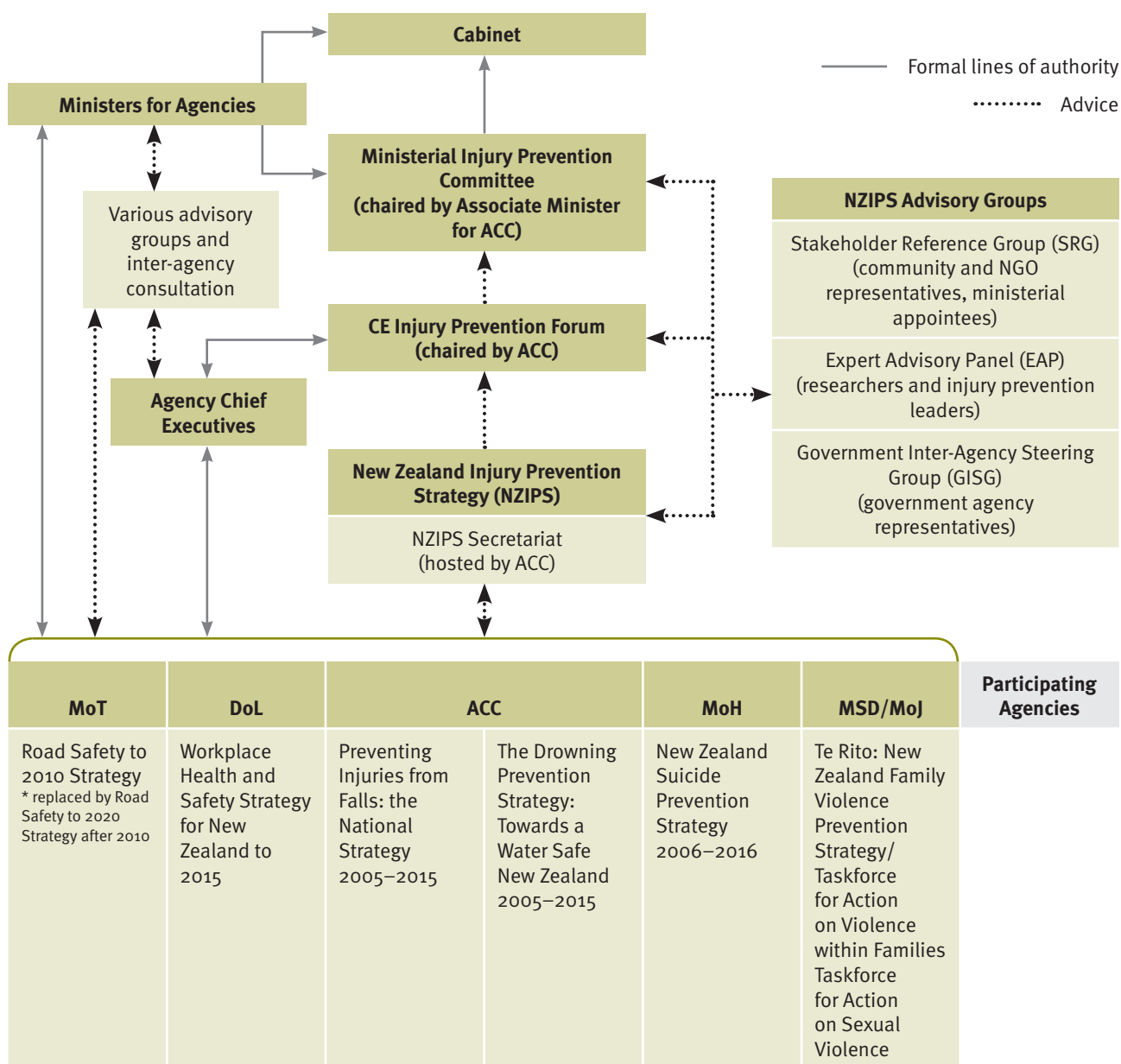
The Strategy had a specific focus on six national priority areas that collectively accounted for at least 80% of injury deaths and serious injuries in New Zealand. Each priority area was assigned to a government agency to lead the implementation activity in that area, as shown in Figure 2.

2.3 The Strategy's governance structure

A Secretariat was established within ACC to coordinate injury prevention activities across the whole of government and to implement the Strategy. Since the launch of the Strategy, the Secretariat has overseen the preparation and implementation of three implementation plans covering the periods 2004-05, 2005-08 and 2008-11. The Secretariat currently has four full time equivalent (FTE) staff and an annual budget of \$620,000.

Over time, several advisory and governance groups have been established to support the Strategy's implementation, as illustrated in Figure 2.

FIGURE 2 – CURRENT GOVERNANCE STRUCTURE FOR NZIPS



3. Methodology

Information to evaluate the Strategy was collected through:

- ❖ Litmus Consulting's interviews with key stakeholders from government, non-government and community groups to ascertain barriers to progress and areas that need a particular focus. The NZIPS Secretariat also undertook regional workshops and analysed written submissions on progress and barriers;
- ❖ MartinJenkins Consulting's review of the functional relationships and structures to identify options to simplify and streamline the Strategy's governance arrangements, and identify arrangements to achieve coordination of injury prevention across government and non-government;
- ❖ A review of injury trends, including fatal and serious injuries, to identify priority areas for future focus, in conjunction with the Injury Prevention Research Unit at the University of Otago;
- ❖ ACC's completed estimates of the social and economic costs of injuries, in conjunction with health economist Des O'Dea, and government expenditure figures on injury prevention.

This report analyses and summarises the key findings, conclusions and recommendations from each work stream.

4. The social and economic cost of injury

The social and economic costs (the burden) of injury are estimated to be \$9.67 billion per year, of which \$8.12 billion covers the Strategy’s six injury priority areas. Table 2 lists the costs across the six priority areas.

TABLE 2 – SOCIAL AND ECONOMIC COSTS BY NZIPS PRIORITY AREA

NZIPS priority areas	Estimated annual total social cost	% of priority area total	% of all injury total
Road crashes	\$2.195 billion	27%	23%
Suicide and self-harm	\$2.169 billion	26%	22%
Falls	\$1.735 billion	21%	18%
Workplace injuries	\$1.347 billion	16%	14%
Assault	\$379.6 million	5%	4%
Drowning	\$295.5 million	3%	3%
Sub-total six priority areas	\$8.121 billion		84%
Total “all injuries” (including injuries outside the priority areas)	\$9.677 billion		

Refer to Section 6 for more information on government investment in injury prevention.

4.1 Costs of injury methodology

In 2008, the NZIPS Secretariat commissioned the New Zealand Institute of Economic Research (NZIER) to provide a high-level “scoping” estimate based on 2006 data, for the social costs of “all injuries” as well as for each of the Strategy’s six priority areas. NZIER estimated the total social costs of “all injuries” in New Zealand at \$60 billion.³

In order to provide a more robust estimate of the costs of injury than was made in the 2008 NZIER report, the NZIPS Secretariat commissioned Des O’Dea of the University of Otago to undertake further study, including a detailed sensitivity analysis, in conjunction with ACC researcher Dr John Wren.⁴ The approach taken by O’Dea and Wren (2009) for NZIPS is consistent with the original costs of injury estimates and methods used by the Expert Advisory Group when developing the Strategy in 2002–03, and the cost-of-suicide research (published by the Ministry of Health in 2005) that helped inform the development and public discussion of the New Zealand Suicide Prevention Strategy.

3. Cost of Injury Scoping Document prepared for NZIPS. 2008. Wellington: NZIER.

4. This Cost of Injury project used a different methodology from the earlier work undertaken by NZIER in May 2008. This resulted in a significant reduction in the “burden of injury” figure, from \$60 billion to \$9.67 billion. The Cost of Injury report clearly outlines the reasons for the differences; these include NZIER valuing all fatalities as the same irrespective of age, not applying a discount rate and using a mix of hospitalisation and ACC claims data to count the number of events.

4.1.1 Future costs of injury work

Putting a value on an injury or fatality necessitates putting a value on a human life. The dominant method for valuing a human life is the “willingness to pay” method, which values a life based on what people surveyed are prepared to pay to reduce the probability of a fatality or serious injury.

The official transport sector “value of statistical life” (VoSL) has become widely accepted by policy-makers, and has been used as the basis for valuing human life as part of the wider estimation of social costs across a number of injury-related sectors.

However, a review of another Ministry of Transport VoSL survey in 1997–98,⁵ and work by consultancy company BERL (2007), on behalf of the New Zealand Fire Service, suggests that the VoSL for the transport sector might not be appropriate for other injury areas or even appropriate for road safety today. This is for two key reasons:

- ❖ Today’s perceptions of willingness to pay are likely to be markedly different from the perceptions of 20 years ago;
- ❖ The purpose of the Ministry of Transport VoSL development was to inform road injury or fatality-related decisions. Those figures might not be directly applicable to other injury or fatality sectors, such as drowning, because individuals place different VoSLs on these sectors. Reasons for these differences are that people perceive that different types of injury have different levels of risk, as well as differing levels of personal responsibility and ability to reduce the risks.

It is recommended that methodologies continue to be improved (including ways to approximate VoSL) to calculate the burden of injury across the six priority areas and all injuries.

5. New Zealand’s transport sector VoSL was established in 1991. However, the VoSL has been indexed to the average hourly earnings to express the value in current dollars. It was \$2 million in 1991, and at June 2008 prices it is \$3.35 million.

5. What has the Strategy achieved?

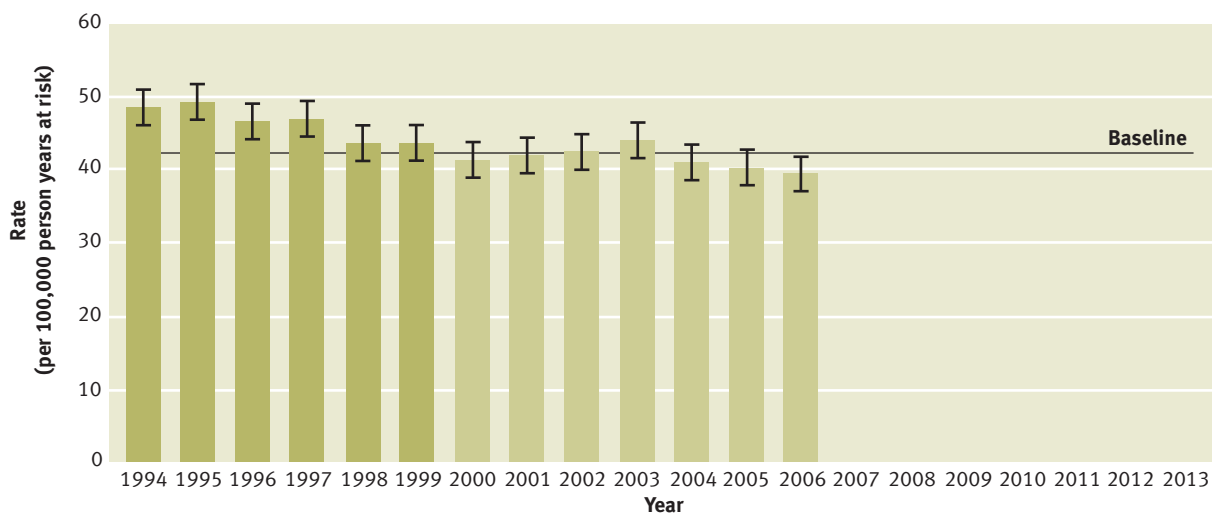
This section outlines the outcomes that can be attributed to the Strategy as a framework for change. Litmus Consulting’s report to NZIPS notes that at the time the Strategy was developed there was no expectation from stakeholders that injury rates would have significantly improved by 2009, as behavioural change takes time. However, some progress has been made.

5.1 Progress against serious injury outcome indicators

The NZIPS serious injury outcome indicators were developed in 2005, and provide trends for fatalities and serious injuries over time. The indicators are based on the concept of “threat to life” and are mainly derived from the New Zealand Health Information System mortality and National Minimum Dataset hospitalisation data.

Overall, injury fatalities have decreased in recent years. While there has been a downward trend in the rates of motor vehicle and drowning-related fatalities, for all other areas the injury fatality rate has remained relatively stable (refer Figures 3 and 4).

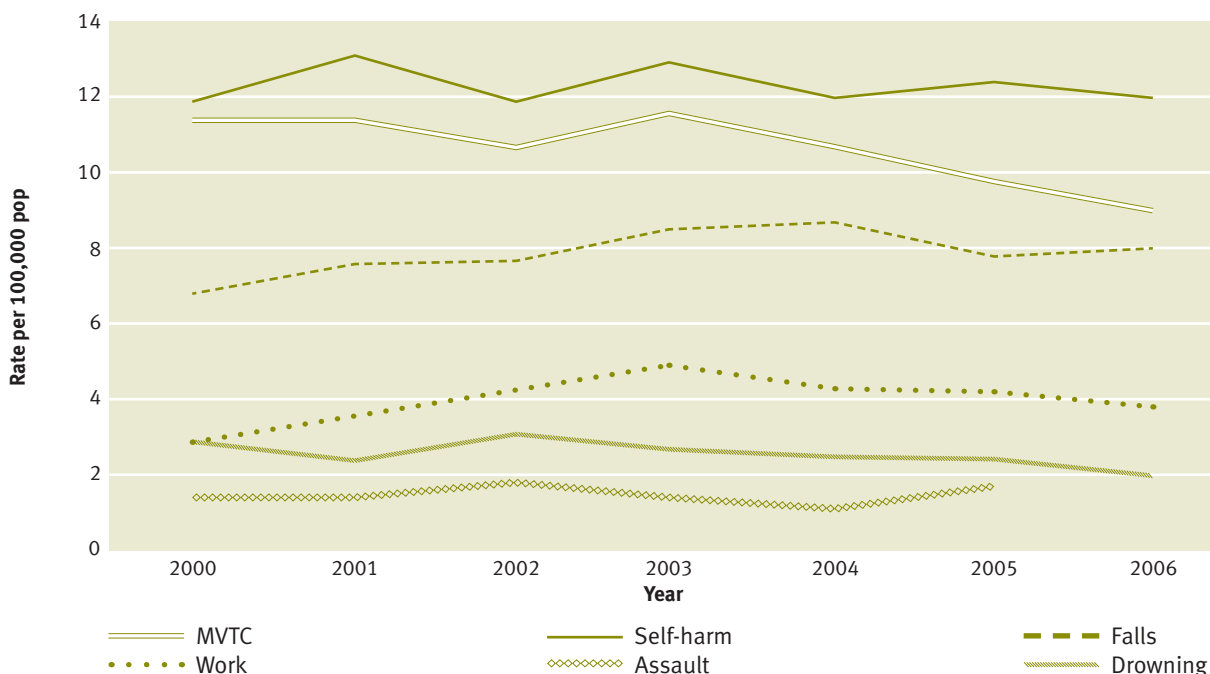
FIGURE 3⁶ – ALL FATAL INJURY – AGE STANDARDISED RATE (I12)



Note: 2006 data are provisional
 Numerator Source: Ministry of Health Mortality Collection
 Denominator: Statistics New Zealand

6. The change in colour from dark green to light green is to indicate the change in coding from ICD-9 to ICD-10. Please refer to the NZIPS serious injury outcome indicators chartbooks for further information www.nzips.govt.nz

FIGURE 4 – FATALITIES, AGE STANDARDISED RATES, TOTAL POPULATION, SIX PRIORITY AREAS, 2000–2006



5.1.1 Serious, non-fatal injury trends

In contrast to fatalities, there has been a steady increase in the rate of serious, non-fatal injuries (Figures 5 and 6).⁷ This increase is most noticeable for the period since 2005.

For the NZIPS priority areas, there have been increases in the frequency and rates of falls and motor-vehicle-related serious injuries. Refer to section 5.3 for more information about each injury priority area.

7. Serious, non-fatal injuries are events defined as having resulted in an admission to hospital that was associated with at least a 6% chance of death. Of all injury discharges from hospital (excluding re-admissions for the same event), approximately 13% have at least a 6% chance of death.

FIGURE 5 – SERIOUS, NON-FATAL INJURY RATES, AGE-STANDARDISED RATES (TOTAL POPULATION), ALL INJURIES AND BY SIX PRIORITY AREAS (1994–2008)

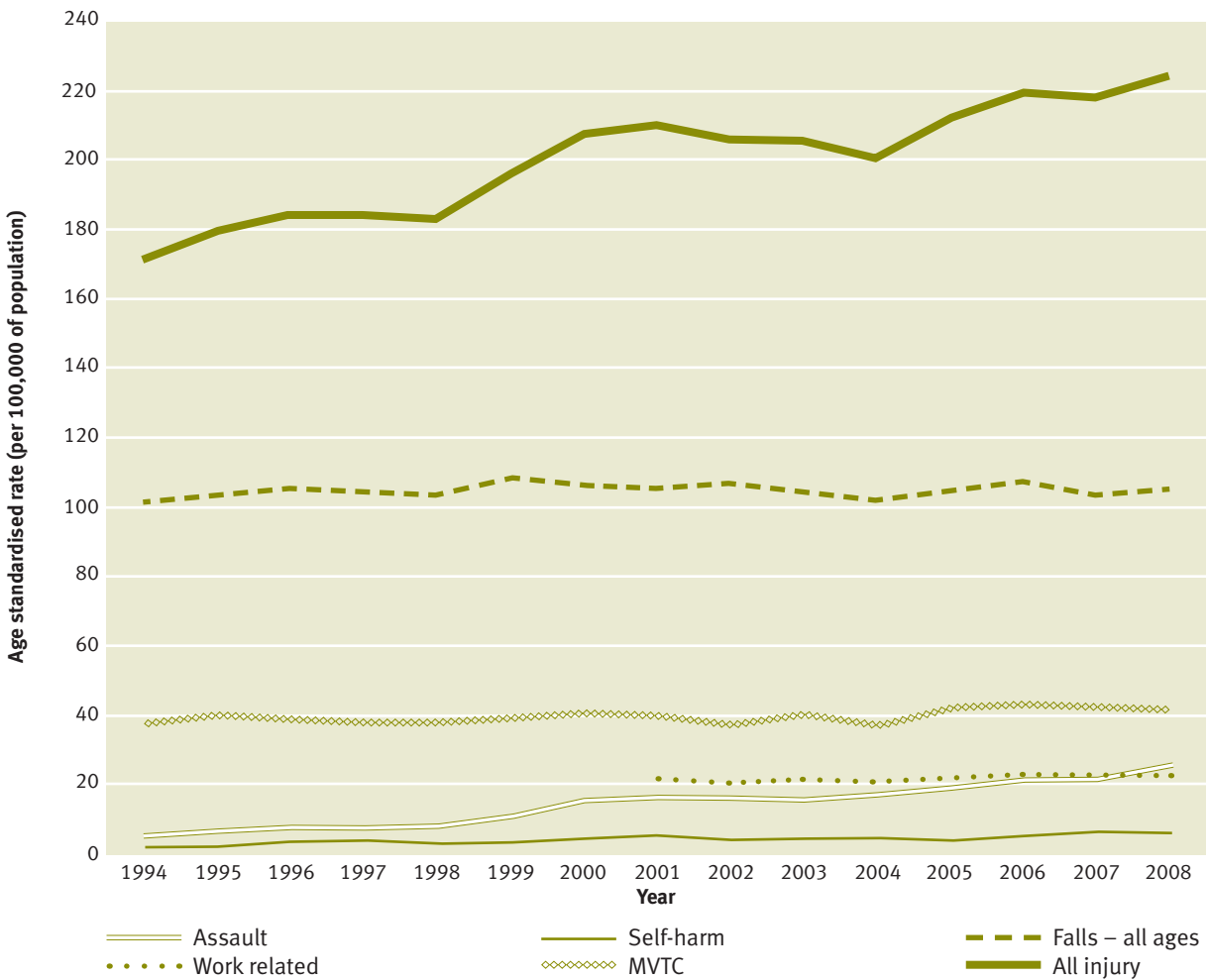
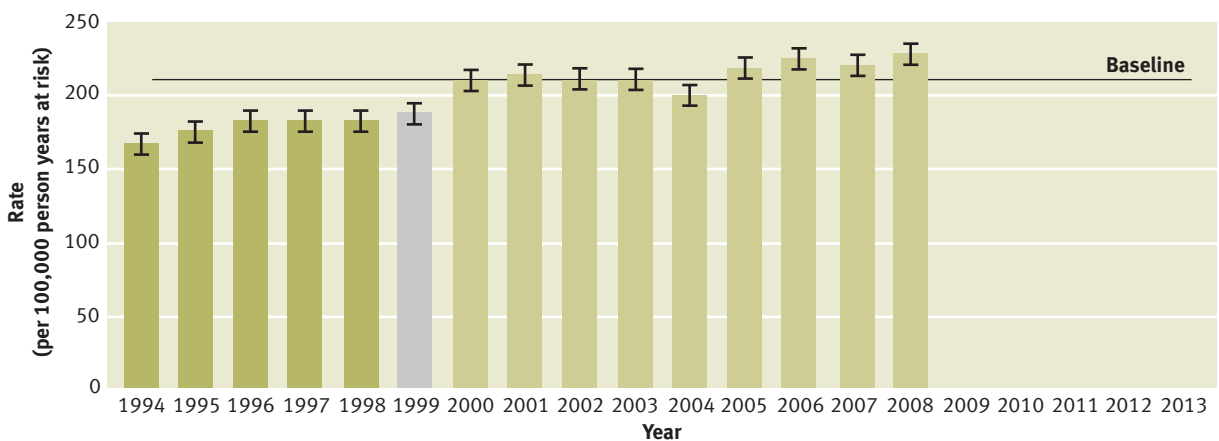


FIGURE 6 – ALL SERIOUS NON-FATAL INJURY – AGE STANDARDISED RATE (IO2)



Note: 1999 data are affected by the changeover from ICD-9 to ICD-10, 2008 data are provisional
 Numerator Source: Ministry of Health Minimum Data Set
 Denominator Source: Statistics New Zealand

The recent upward trend in serious injury and other hospitalisations is likely to be due to a range of factors, including:

- ❖ The implementation of a range of effective injury prevention interventions that have successfully reduced the severity of injury from fatal to serious (e.g. enforcement, vehicle safety standards and road engineering);
- ❖ Changes in medical technology that have resulted in the increased survivability of previously fatal injuries;
- ❖ An increased awareness and reporting of injurious events owing to improved agency activity that has created a higher public profile (e.g. the Ministry of Social Development’s “It’s Not OK!” campaign, which might have resulted in increased reporting of assault-related injuries);
- ❖ An increased awareness of and participation in activities (e.g. physical activities) that have unintentionally increased injury rates.

Also, the Māori population is overrepresented in the rates of all injury compared with non-Māori. As an example, in 2008–09 Māori represented 20% of ACC’s serious injury portfolio.⁸ Māori are a younger population than the general population, and since youth to some extent is a factor in injury this could explain the group’s overrepresentation in some priority areas such as road crashes and falls.

5.2 Safety culture survey findings

A national population-based safety culture survey was conducted in May 2007 to establish a baseline for measuring changes in beliefs, values and attitudes that support the prevention of injury. The safety culture survey provides an indication of respondents’ attitudes to the risk of injury and personal responsibility. This survey was repeated in May 2009.

The 2007 research findings identified three key baseline measures founded on responses from those surveyed:

- ❖ KPI 1: “Everyone is at risk of injury and harm” (baseline 29%);
- ❖ KPI 2: “Consequences of injury and harm are far reaching” (baseline 80%);
- ❖ KPI 3: “Accidents and injuries are preventable” (baseline 53%).

8. To be classified as seriously injured by ACC, a person has to have sustained one of the following injury types: high-level tetraplegia, low-level tetraplegia, paraplegia, severe brain injury, moderate brain injury, or a comparable diagnosis such as burns to at least 50% of the body, or an incomplete spinal cord.

In the 2009 survey, no statistically significant change was recorded for KPIs 1 and 3; however, there was a 5% increase in respondents acknowledging that the consequences of injury are far reaching (KPI 2).

The 2009 survey results also showed that people do discriminate between injury events. For example, the majority of respondents (74%) identified the road as the place where they were most at risk of injury, with home being the least risky (15%). These perceptions differ from the official statistics, which highlight the home environment as accounting for far more injury-related claims than the road.

Most respondents acknowledged there should be individual responsibility for safety, but saw the government and employers as having a role in some areas, particularly for the workplace and road environments.

5.3 Priority area outcomes – analysis by injury area

This section provides an analysis of key data for each priority injury area and identifies briefly the key factors that affect progress in reducing injuries in each area.

Note: The following tables show the results for the priority areas for the Strategy’s duration, i.e. 2003–08. Fatal injury data is only available to 2006 owing to delays via the Coroner’s Office.

5.3.1 Snapshot of priority area – road crashes

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agency expenditure – Ministry of Transport ⁹
Serious, non-fatal	40.15	42	up 5%	1,615	1,813	up 12%	\$387.1m	\$2.19b	\$854m	\$4.7m
Fatal injury rate	Decreased 22% between 2003 and 2006, from 11.55 per 100,000 to 9.00 per 100,000.									

Key trends highlighted by the data include:

- ❖ Moderately high rates of fatal and serious, non-fatal injury per capita compared with other injury types;
- ❖ Since 2003 there has been a large decrease in fatalities, offset by a small increase in serious injuries;
- ❖ Road crashes are the highest area of social cost for the country because of high rates of both fatality and serious injury;
- ❖ Road crashes represent by far the highest level of government investment.

9. The NZ Transport Agency is the agency with major expenditure in this area (\$571 million).

5.3.2 Key features of the road crashes priority area

- ❖ The Road Safety to 2010 strategy has been in place since 2003, but New Zealanders have been exposed to more than 20 years of awareness campaigns about drink-driving, seatbelts, etc. This has provided sufficient time for behaviours to change.
- ❖ Road engineering initiatives, such as black-spot treatments, have been shown to reduce injuries both internationally and in New Zealand. However, many of these initiatives cost hundreds of millions of dollars to implement, and the investment in engineering interventions has not been at the level necessary to provide the predicted social cost reductions.¹⁰
- ❖ In the past 10 years, legislative changes that have been shown to work elsewhere, such as lowering blood-alcohol limits and raising the driving age to 16 (as in Australia), have not been progressed. The government has recently announced that legislative changes of this nature will be on the agenda for 2010.
- ❖ There has not been an appreciable reduction in alcohol/drug-related crashes in the past 10 years, despite highly visible enforcement and an increase in the number of breath tests administered.¹¹
- ❖ In general, there is a high level of public awareness of road safety issues and a high perception of risk; however, this does not necessarily translate into behavioural change within at-risk groups, such as young men. The awareness level remains low for issues such as fatigue and distraction.
- ❖ There is high public acceptance of the need for the government to intervene as the road is a public space.

5.3.3 Snapshot of priority area – workplace injuries

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agency expenditure – Department of Labour
Serious, non-fatal	20.65	22.45	up 9%	399	498	up 25%	\$798m	\$1.34b	\$85m	\$45m
Fatal injury rate	Decreased 21% between 2003 and 2006, from 4.85 per 100,000 to 3.82 per 100,000.									

10. Report on Road Safety Progress since 2000. 2009. Wellington: Ministry of Transport.

11. Ibid.

Key trends highlighted by the data above include:

- ❖ An increase in serious injury rates, offset by a significant decrease in the workplace injury fatality rate since 2003;
- ❖ Costs to the government are high owing to the provision of income compensation and support to assist people to return to work;
- ❖ There is a low level of government investment in injury prevention compared with total costs.

5.3.4 Key features of the workplace injuries priority area

- ❖ Workplace health and safety is a mature priority area with a robust regulatory environment and active injury prevention capacity across the Department of Labour and ACC.
- ❖ Collaboration on and coordination of actions among key agencies delivering the Strategy remains a challenge. There is evidence of some very effective joint ACC/Department of Labour interventions operating at local or regional level, but national coordination is uneven.
- ❖ The Workplace Health and Safety Strategy (WHSS) has been in place since 2005, and was formally reviewed between February and June 2009.
- ❖ The review concluded that the WHSS is sound and that there is widespread commitment to its intent. However, the review identified that more work is needed to bring the principles of the WHSS into action at the workplace, industry or hazard level. The priority issues identified include:
 - » Improving the focus and delivery of workplace health and safety issues;
 - » Workplace capability, guidance and standards, especially for small businesses;
 - » Taking a sector-based approach, particularly for high-risk industries;
 - » Competency standards for health and safety professionals;
 - » Worker participation and training.
- ❖ The Workplace Health and Safety Council has been in place for two years, providing a high-level strategic focus for health and safety in New Zealand. A recent review of the Council has reaffirmed its value.
- ❖ By June 2010 the Minister of Labour will oversee the development of a new set of actions that will outline a finite set of activities designed to further reduce New Zealand's workplace death and accident statistics.

5.3.5 Snapshot of priority area – drowning

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agency expenditure – ACC ¹²
Serious, non-fatal	0.22	0.25	Up 14%	7	11	up 57%	\$0.7m	\$295m	\$10.2m	\$0.78m
Fatal injury rate	Decreased 33% between 2003 and 2006, from 2.65 per 100,000 to 2.00 per 100,000.									

Key trends highlighted by the data above include:

- ❖ A low rate of fatalities and very low rate of serious injury from drowning;
- ❖ Volumes of deaths and injuries are also very low;
- ❖ A significant decrease in fatalities;
- ❖ An increase in the serious injury rate, but this represents a very small increase in terms of actual numbers (n<10);
- ❖ Represents a very low level of cost for the government and a low level of total cost.

5.3.6 Key features of the drowning priority area

- ❖ Coordination and collaboration within the water safety sector are challenging and rarely occur at a strategic or operational level for the following reasons:
 - » Most of the organisations are NGOs with no secure funding streams;
 - » Water safety organisations historically and currently compete with each other for the limited funding available;
 - » Organisations can be working on the same idea from different philosophical viewpoints;
 - » Organisations work to improve their own profiles and brands to raise revenue for their work;
- ❖ There is a large and active voluntary sector;
- ❖ The highest rate of drowning deaths is in the one- to four-year age group (2.46 per 100,000);¹³

12. The New Zealand Lotteries Grant Board is the agency with major expenditure in this area (\$5.3 million).

13. Child and Youth Mortality Review Committee. 2009. Fifth Report to the Minister of Health: Reporting mortality 2002–2008. Drowning data covers 2003–07.

- Alcohol is a significant factor for adult drowning. A 2000 study showed 27% of boating deaths among 15- to 64-year-olds involved a blood-alcohol concentration (BAC) over 80mg/100ml, which is the legal limit for driving a car in New Zealand, while 43% had evidence of drinking (or had positive BAC).¹⁴

5.3.7 Snapshot of priority area – suicide and self-harm

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agency expenditure – Ministry of Health
Serious, non-fatal	4.14	6	up 45%	167	247	up 48%	\$1.9m	\$2.17b	\$25m	\$15m
Fatal injury rate	Decreased 7% between 2003 and 2006, from 12.89 per 100,000 to 12.00 per 100,000.									

Key trends highlighted by the data above include:

- The social costs in this area are very high owing to the large proportion of fatal injuries;
- There has been a significant increase in serious injuries, coupled with a moderate decrease in fatalities. It is unclear to what extent the rise in non-fatal injury might be related to changes in recording practices at the District Health Board level.

5.3.8 Key features of the suicide and self-harm priority area

- The all-ages Suicide Action Plan has been in place for less than two years.
- Suicide and self-harm are different in nature from other kinds of intentional injury (e.g. assault) and from unintentional injuries, because of mental illness being the major risk factor for harm. Therefore most suicide-prevention interventions rely on promoting mental health and preventing and treating mental illness. Some interventions also endeavour to create environments that reduce opportunities for self-harming (e.g. providing suicide-safe prison cells for high-risk offenders).
- The subgroup that appears to have an emerging and concerning upward suicide trend is Māori aged 15–35 years, and in particular Māori aged 15–24 years.¹⁵
- Risk of suicide or self-harm reflects the general pattern of health inequalities in New Zealand, which in turn reflects gender, ethnicity, geographic location and socio-economic factors.

14. Evaluation of the ALAC Boating and Alcohol 1999/2000 Campaign. Injury Prevention Research Centre, University of Auckland.

15. Suicide Facts: 2005–2006 data. Wellington: Ministry of Health.

5.3.9 Snapshot of priority area – assault

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agencies expenditure – Ministry of Social Development and Ministry of Justice
Serious, non-fatal	16.04	24	Up 50%	646	1,012	up 57%	\$4m	\$379.6m	\$122m	\$75m & \$13m
Fatal injury rate	Increased 19% between 2003 and 2006, from 1.44 per 100,000 to 1.72 per 100,000.									

Key trends highlighted by the data above include:

- Increases in both fatalities and serious injuries. However, some of these increases might reflect higher levels of reporting, as public awareness improves around the need to report violent acts, such as family violence and sexual violence.

5.3.10 Key features of the assault priority area

- The Taskforce for Action on Violence within Families has been in place since 2005, while the Taskforce for Sexual Violence has been in operation since 2007. It is unclear how much coordination or overlap there is across the two sub-strategies.
- Circumstances leading to violence and assault are complex, and compared with other injury areas evidence-based prevention interventions are more limited.
- Comprehensive services to address violence in all its forms are not available in all parts of New Zealand.
- The “It’s Not OK!” campaign and high-profile cases have led to greater public awareness of violence and a greater willingness to report it.

5.3.11 Snapshot of priority area – falls

	Rate per 100,000 population			Hospitalisation frequency			07–08	07–08	08–09	08–09
	2003	2008	% of change	2003	2008	% of change	ACC costs	Social and economic costs	Estimated government expenditure	Lead agency expenditure – ACC
Serious, non-fatal	103.9	105	up 1%	4,155	4,806	up 16%	\$681.9m	\$1.73b	\$9.2m	\$8.8m
Fatal injury rate	Decreased 5% between 2003 and 2006, from 8.46 per 100,000 to 8.00 per 100,000.									

Key trends highlighted by the data above include:

- ❖ A very small increase in serious injuries and a moderate decrease in fatalities;
- ❖ A very low level of government investment compared with other priority areas;
- ❖ Falls have by far the highest rate of injury per capita compared with other priority areas.

5.3.12 Key features of the falls priority area

- ❖ The Falls Strategy has only been in place for three years. There is no dedicated “fall prevention” sector, so it has been hard to gain traction for this Strategy.
- ❖ ACC’s leadership in this area has been less than optimal, but it is now an area of greater focus.¹⁶
- ❖ There has been a lack of ongoing commitment from key and participating agencies, particularly around achieving outcomes in ACC’s Falls Strategy Implementation Plan.
- ❖ There is a limited ability to use legislative levers to reduce this type of injury as it mostly occurs in private spaces, such as the home. This means agencies must rely on awareness-campaign-type initiatives, the benefits of which take longer to realise.
- ❖ Evidence exists of effective initiatives, such as tai chi programmes and other balance programmes targeting the elderly. However, owing to cost, these programmes have only reached a small percentage of the population.
- ❖ The general public’s perception of the risk of injury from falling is low, as indicated by the NZIPS safety culture survey results.

5.4 Emerging injury issues

5.4.1 Alcohol

It is clear that alcohol is a contributing factor to injury in almost all settings. At high levels of consumption, drinking has been shown to place a considerable cost burden on our communities. There are various government agencies involved in the prevention of alcohol-related harm, including the Alcohol Advisory Council of New Zealand (ALAC), the Ministry of Justice with its Drivers of Crime work programme, and the Ministry of Health, but there is no specific leadership in addressing alcohol as a causal factor for injury.

16. ACC’s Leadership in the Implementation of the National Falls Prevention Strategy, 2008. Wellington: Office of the Auditor General.

Recent studies in New Zealand have highlighted alcohol as a key emerging issue that needs to be addressed.

BERL Report

In 2008, ACC and the Ministry of Health engaged BERL to estimate the social costs of harmful alcohol and other drug (AOD) use¹⁷ in New Zealand. The principal findings from the BERL report were that:

- The total social cost of harmful AOD misuse in 2005–06 was calculated at \$6.88 billion. The results of international research would suggest that half of this is avoidable;
- Approximately 28% (\$1.9 billion) of the total social cost of AOD result from injury;
- In 2005–06 approximately 513,000 people were using alcohol in a harmful manner in New Zealand;
- It is estimated that ACC accepted approximately 284,640 compensation claims for AOD-related injuries in 2005–06, costing \$287 million.

Law Commission Review

In 2009 the Law Commission produced a paper on the reform of New Zealand's liquor laws. That paper reflects some of the issues associated with harmful alcohol consumption in New Zealand and makes the following points:

- It is estimated that up to 22% of all ACC claims have alcohol as a contributing factor;
- A total of 5,413 young people were hospitalised with alcohol-related admissions between 2002 and 2006;
- Of the 2,581 patients who presented with facial fractures between 1996 and 2006, almost half (49%) of the injuries were alcohol-related;
- Of the 972 survey participants responding to a question about injury, 30% said they had been injured as a result of drinking.

5.4.2 Child injuries

Children under five years of age are vulnerable members of our society and have the least ability to change their environment. Both in New Zealand and internationally, injury is a major health problem for this age group. Unfortunately, children under five are most susceptible to high levels of serious, non-fatal injury.¹⁸ The statistics below provide an overview of the child injury sector:

17. BERL defines harmful use as that which leads to a net social cost resulting in society having fewer resources and less welfare.

18. Data from ACC's Injury Prevention Child Safety Under 5 portfolio.

- ❖ Injury is the leading cause of death (38%) for one- to four-year-olds;
- ❖ More than half the child injury deaths and hospitalisations occur in the home;
- ❖ Road crashes are the most common cause of unintentional injury death for young people under 25 years in New Zealand, followed by drowning;¹⁹
- ❖ Children under five are one of the most susceptible groups to serious, non-fatal injuries;²⁰
- ❖ In 2008–09 serious child injuries cost ACC \$54 million (13% of ACC’s total serious injury expenditure);²¹
- ❖ The inclusion of six- to 15-year-olds increases the child serious injury costs to approximately \$90 million or 21% of ACC’s serious injury expenditure.²²

Both the child and alcohol areas face challenges in terms of inter-agency coordination and leadership.

5.5 Key achievements for the Strategy

MartinJenkins reported that there is general acceptance and awareness that injury is a significant issue in New Zealand, and that the presence of the Strategy has paved the way for an improved, shared focus on the issue.

MartinJenkins noted the following benefits attributed to the Strategy:

- ❖ Increased engagement between agencies (at national and regional levels) in relation to individual agency initiatives with injury prevention outcomes;
- ❖ The introduction of some priority area strategies that might not otherwise have emerged (such as suicide across all ages, drowning and falls);
- ❖ A contribution to some tangible outcomes (such as regulatory change in, for example, the prohibition of caustic dishwashing powders, the development of an all-age suicide strategy and more designated safe communities);
- ❖ Some shifts in focus (such as the Ministry of Transport putting more emphasis on reducing serious injuries rather than just reducing fatalities);

19. Child and Youth Mortality Review Committee 2009. Fifth Report to the Minister of Health: Reporting mortality 2002–2008.

20. Serious, non-fatal injuries are defined as injuries associated with at least a 6% chance of death.

21. Cost data sourced from 2008–09 ACC’s Serious Injury portfolio data.

22. In 2008–09 ACC spent \$416 million on serious injury costs and managed 4,747 serious injury clients.

- ❖ Providing a rationale and legitimacy for community injury prevention activities and enabling NGOs to link their programmes to the Strategy outcomes, leading to increased credibility, recognition and potential funding.

The following sections outline in greater detail the key achievements of the Strategy as reported by Litmus Consulting and collated from stakeholder submissions.

5.5.1 A mechanism for collaboration and information-sharing

The Strategy is seen to have improved relationship management across the many participants in the sector. Stakeholders indicated that the Strategy has provided processes and systems to support collaboration, communication and coordination between government agencies, government and the private sector, as well as NGOs.

Government agencies, in particular, believed the Strategy's value was in bringing agencies together and enabling information-sharing, support and, where appropriate, coordinated action.

The Strategy is also seen as having played a role in the growing involvement of local government in injury prevention. Local government stakeholders suggested that the Strategy provides an umbrella framework, useful for council planning around community outcomes, as well as a common language for local government to communicate with central government.

Stakeholders representing communities noted that a significant lever to implementation was the Local Government Act 2002, which requires local governments to develop Long-term Council Community Plans every three years. Where plans include an injury prevention focus, there is considered to be greater injury prevention buy-in from councils and local partners.

5.5.2 Raising awareness of the injury issue

Litmus reported strong feedback that the Strategy had helped to raise awareness of injury issues, including the burden of injury. It has been used as a tool to influence communities and local authorities, and bring them together under one umbrella.

There was also acknowledgement that initial moves have been made that will act as precursors to long-term behavioural change. For example, there has been a general increase in public awareness of injury prevention in the past five years, particularly in relation to injury prevention in the home and on the roads and concerning family violence. Social norms around these issues have also changed (e.g. society is less accepting of drink-driving than it was, and family violence is no longer such a hidden issue). Stakeholders also talked about the growing mobilisation of communities to take action on injury prevention issues. Examples were given of:

- ❖ Schools lobbying local government and the police to reduce speed limits and restrict parking around school entrances;

- ❖ Employers taking a holistic approach to workplace injury prevention and recognising how injuries in the home impact on work absences and employee wellbeing;
- ❖ Increased media attention on injury prevention issues, particularly around ACC Safety New Zealand Week;
- ❖ The increasing numbers of World Health Organization-accredited Safe Communities in New Zealand.

For many stakeholders, these changes in awareness, attitudes and norms represent progress towards an improved safety culture and environments – the two goals of the Strategy. However, further work remains to be done to raise perceptions of individual risk, as evidenced by the safety culture survey results.

5.5.3 Building capacity and capability

There has been significant progress in injury prevention workforce development since the launch of the Strategy, specifically:

- ❖ The creation of the Foundation Certificate in Injury Prevention, Te Aho Tapu, where participants gain basic skills enabling them to run effective, good-practice injury prevention projects. The Certificate was seen by some respondents to represent a growing recognition of injury prevention as a discipline in its own right with its own career pathway;
- ❖ The emergence, or strengthening, of national injury prevention NGOs, including:
 - » The Injury Prevention Network of Aotearoa New Zealand (IPNANZ), which promotes safe living, working, recreational environments and communities in New Zealand through injury prevention;
 - » The Safe Communities Foundation New Zealand, which is a not-for-profit organisation that champions the promotion of the International Safe Communities (ISC) model;
- ❖ An Injury Prevention Mentoring Programme that provides guidance, advice and support to facilitate the learning or career development of new injury prevention practitioners;
- ❖ An increased recognition of leaders in injury prevention in recent years through several awards, such as the New Zealand Community Safety and Injury Prevention Awards, the IPNANZ Te Manaia leadership awards and the Road Safety innovation awards.

5.5.4 Improving collaboration and coordination

Listed below are examples of successful collaboration driven by the Strategy:

- The development of a cross-agency working group to implement the workforce development programme, including representatives from the Ministry of Health, ACC, IPNANZ and the NZ Transport Agency;
- The ISC model was identified as a key example of successful injury prevention collaboration at the community level. The ISC model requires partnerships across the community, particularly between local government and community organisations, as well as alignment with national strategies such as NZIPS. The model provides good coordination and leadership opportunities and has facilitated a number of local authorities becoming engaged in injury prevention.

5.5.5 Research and information

Progress has been made in injury prevention research and information dissemination since the establishment of the Strategy. The research being undertaken by university research centres (Injury Prevention Research Units) and the role of the Strategy in driving and supporting this research were specifically noted by various stakeholders. The research centres were also seen to contribute to increased access to data and to the production of policy-relevant research.

Other positive initiatives established included:

- *IP News*, the bimonthly community safety and injury prevention e-newsletter;
- The IP Database, which allows injury prevention practitioners to locate injury prevention and safety initiatives and programmes that are taking place both nationally and in their regions.

5.5.6 Data quality

The development of the NZIPS serious injury indicators has contributed to improved data quality.

Some stakeholders were positive about the large amount of injury prevention data being collected by different agencies (such as hospitals, ACC, doctors and the coronial system) and the decision to have Statistics New Zealand coordinate the data collation. This enthusiasm, however, was tempered by concerns that progress from Statistics New Zealand has been limited.

It is recommended that the Strategy be continued so that it can address the high burden of injury borne by New Zealand.

5.6 Barriers at a strategic level

While stakeholders stated that good progress had been made in the past five years, they identified several areas that needed further attention. These issues are addressed in this following section.

5.6.1 No natural injury prevention sector

The MartinJenkins review clearly identified that while government agencies tend to identify and cluster into sectors with “like” agencies, most agencies do not think of themselves as part of an injury prevention “sector” and consider this to be an artificial construct. This is seen as a significant challenge to the agencies’ ability to collaborate. However, feedback from the NGOs and community organisations identified that they considered themselves to be part of an injury prevention sector at the grassroots level.

5.6.2 Need to strengthen the accountability structure across government

The landscape of injury prevention delivery in New Zealand is fragmented, representing a diversity of funders, researchers, government agencies with policy functions, and NGOs all involved in injury prevention activity. This fragmentation has led to inefficient injury prevention delivery and a lack of accountability for sector investments. The implementation of the Strategy has seen some improvements in inter-agency and sector coordination; however, there is a need for much stronger leadership in this area.

The Strategy was developed to address this, with ACC being tasked to lead and coordinate the overall implementation of the Strategy. However, no single agency – nor the NZIPS Secretariat – currently has the mandate to require action within, between or across priority areas. This has resulted in a lack of clarity as to which agency or agencies is accountable for filling gaps on issues that sit between or straddle the priority areas. In addition, the Strategy, as it currently operates, is reliant on individual agencies working to achieve their specific injury priorities. This requires voluntary compliance by agencies and individual resourcing for each priority, and results in less-than-optimal outcomes.

It is recommended that the mandate of ACC (through the NZIPS Secretariat), as leader of the Strategy, be strengthened in order to hold other agencies to account and drive the performance of the Strategy. A mandate for leadership could be conferred either through a Cabinet directive or through the inclusion of specific measures within chief executives’ performance agreements.

5.6.3 Limited priority for injury prevention – not considered core business, even for lead agencies

Lead agencies are each responsible for one or more of the Strategy’s priority areas. However, for most of these agencies, injury prevention is a minor focus and agencies can also be responsible for multiple non-injury-prevention-related strategies. As might be expected, agencies tend to look at their own mandates, levers and incentives

when prioritising their activities rather than considering the broader injury prevention landscape.

Attendance at the CEs' Forum is poor, with chief executives often delegating representation to officials at a lower level without decision-making authority (e.g. senior analysts), indicating a lack of priority compared with agencies' core business.

Lead agencies' accountabilities for each of the priority area strategies are currently reasonably clear. In some priority areas (road crashes, falls, drowning, workplace injuries), the mandate relates directly to a reduction in injury. In other areas, the mandate relates to other outcomes, such as reduced social impacts, reduced inequalities and improved support services. This means some agencies view their accountabilities from a non-injury-prevention perspective, acknowledging that by achieving these other outcomes in their priority areas they are likely to contribute indirectly to injury prevention outcomes, rather than through a specific accountability to reduce injuries significantly.

It is recommended that the NZIPS Secretariat:

- a. ***Drive performance across the priority area strategies and improve accountability from lead agencies;***
- b. ***Develop an agreed monitoring and reporting framework with the lead agencies;***
- c. ***Monitor the performance of the priority area strategies and report on outcomes, trends and value for money.***

5.6.4 Need for more specific goals and focus

The goals of the Strategy are seen to be aspirational. While the Strategy has established indicators to measure serious and fatal injury trends and changes in safety culture attitudes, there are no specific targets to drive better performance against injury rates. There is an opportunity to introduce a set of specific outcome measures for the Strategy, such as stipulating injury reduction targets, with lead agencies being held accountable for feeding into the targets in their respective areas.

It is recommended that the Strategy have clear performance targets; for example, requiring lead agencies to include measurable targets in each priority area sub-strategy. These could be included as new strategies are developed and existing ones come up for renewal.

5.6.5 Cross-cutting issues need focus within the strategy

During the original development of the Strategy, the six priority areas were chosen in order to reflect the fact that 80% of New Zealand’s fatalities and serious injuries fall into those areas.

The current priority areas are a mix of location-based (road crashes and workplace injuries) and mechanism-of-injury-based (falls, assault, suicide and self-harm, and drowning) ways of defining injury. Some priority areas (assault, and suicide and self-harm) are intentional injuries while the others are unintentional, and this has significant implications for the way these injuries are targeted in prevention activity.

As the Strategy has only been in place for five years, it is proposed that the Strategy’s priority areas remain the same, to allow further bedding-in of progress. However, it has become clear that the issues of child injury and alcohol-related injury cut across most, if not all, of the existing priority areas. These issues are seen by stakeholders to be a gap in the Strategy because of an absence of accountability in these areas, despite their impacts on injury rates.

Additionally, Māori and the community sector would benefit from an increased focus within the Strategy, as noted in sections 5.6.6 and 5.6.8 of this report.

It is recommended that the following new focus areas be adopted:

- ✧ ***Child injury;***
- ✧ ***Alcohol;***
- ✧ ***Māori;***
- ✧ ***Community engagement.***

Lead agencies would be required to identify specifically in their action/implementation plans ways to address each of the four cross-cutting focus areas. This would be monitored by the NZIPS Secretariat.

5.6.6 Limited visibility of Māori within the strategy

Māori have been characterised as “a population at high risk of injury”,²³ with 30–50% higher injury hospitalisation rates,²⁴ 33% more head/traumatic brain injuries,²⁵ and 200–300% more spinal injuries²⁶ than the general population. Despite this, stakeholders

23. Freyer, A.M. & Langley, J. 2000. Unintentional Injury in New Zealand: Priorities and future directions. *Journal of Safety Research*.

24. Ministry of Health. 2006. *Tatau Kahukura: Maori Health Chart Book*.

25. Barker-Collo, S.L., Wilde N., & Feigin, V.L. 2009. Trend in Head Injury Incidence in New Zealand: A hospital-based study from 1997/98 to 2003/04. *Neuroepidemiology*, vol 32.

26. Dixon, G.S., Danesh, J.N., & Caradoc-Davies, T.H. 1993. Epidemiology of Spinal Cord Injury in New Zealand. *Neuroepidemiology*, vol 12(2).

felt there was low Māori representation in Strategy governance groups, limited data specific to Māori and a limited willingness from agencies to fund Māori models of injury prevention delivery.

It is important that the visibility and participation of Māori in the Strategy are increased by:

- ❖ Inviting a representative from Te Puni Kōkiri to participate in Strategy governance groups;
- ❖ Requiring lead agencies to address Māori specifically as a risk group in sub-strategies where appropriate, with monitoring by the NZIPS Secretariat;
- ❖ The Secretariat developing more specific items to facilitate Māori participation in injury prevention in future implementation plans, in consultation with Māori.

5.6.7 Poor collaboration and coordination

Although improving, stakeholders still consider that there is poor collaboration and coordination around injury prevention, particularly at government agency level. Comments from stakeholders included:

- ❖ Lack of effective planning and coordination between government agencies and NGOs, resulting in duplication of effort, patch protection and competition for funding;
- ❖ NGOs commented that collaboration between national and community levels continues to be poor;
- ❖ Community leaders are not placing enough importance on injury prevention, i.e. only getting involved when a serious injury, such as a child assault, has impacted on their own communities;
- ❖ There is a disconnect between national priorities and the local identification of needs.

It is expected that the specific recommendations in this report should improve the collaboration occurring at the agency level.

5.6.8 Fragmented community injury prevention sector

Despite some progress in this area, the injury prevention workforce remains somewhat fragmented, with uneven coverage across the country. In particular, there is a lack of capability among community injury practitioners to evaluate their programmes and/or enhance community collaboration. Also, high staff turnover within the injury prevention sector results in a lack of institutional knowledge.

In addition, there are insufficient specialist injury prevention researchers in New Zealand. Confirming the contention made previously that there is not really an injury prevention sector, many in the workforce do not identify themselves as working in injury prevention. Rather, they tend to variously refer to what they do as health promotion, public health, violence prevention and community development, among other things.²⁷

While there are acknowledged overlaps between community and workplace injury prevention initiatives, public-health-oriented community injury prevention practitioners and their workplace occupational health and safety colleagues tend to interact little on a more day-to-day level.

It is recommended that the focus on “community” in the Strategy be increased, by requiring each lead agency to ensure there is recognition of community practitioners and organisations as a delivery channel within each sub-strategy. The NZIPS Secretariat would undertake monitoring of the “community” focus area.

5.6.9 Insufficient dissemination of research and information

While progress has been made in research investment and the availability of data since the establishment of the Strategy, it is still felt to be a barrier to the optimal implementation of the Strategy. The NZIPS Secretariat currently lacks the resources to disseminate research findings and other data more widely. Community injury prevention practice is not consistently informed by evidence.

It is recommended that the Secretariat:

- a. Continue to support the increased availability and timeliness of injury prevention data and research through Statistics New Zealand’s role as Injury Information Manager;***
- b. Act as a conduit across the agencies to ensure that best-practice, cost-effective injury prevention interventions are adopted and implemented.***

5.6.10 Lack of sustainable funding

A number of stakeholders representing communities commented on the lack of long-term, sustainable funding. Communities gain funding from different agencies that have different funding cycles and reporting requirements. Furthermore, yearly funding cycles make programme planning challenging. This also creates an environment where it is hard to attract and retain skilled and experienced staff, which makes it difficult to achieve measurable results.

27. Community Injury Prevention Workforce Education and Training Development Needs Analysis (report prepared for ACC), Alistair MacDonald, 2009.

6. Government expenditure in injury prevention

To inform this report, the NZIPS Secretariat coordinated a project to identify government expenditure on the six NZIPS priority areas. Twenty-four state sector agencies were asked for their injury prevention expenditure data in their priority areas or across a number of areas (e.g. expenditure to minimise the impacts of alcohol).

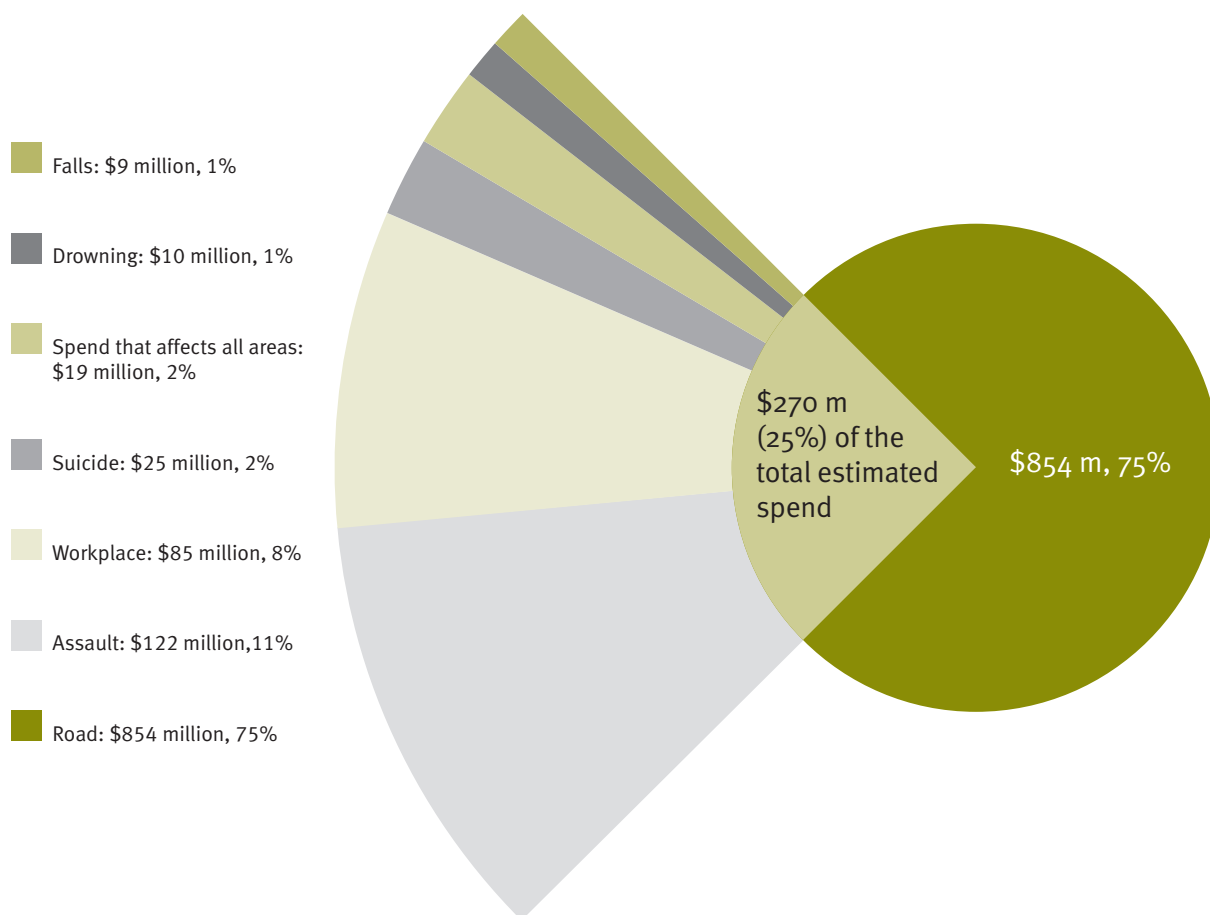
Collection was limited to the six injury priority areas for consistency against burden of injury information, which is also presented by priority area. Expenditure by priority area is shown in Table 3 and Figure 7.

TABLE 3 – GOVERNMENT EXPENDITURE ON INJURY PREVENTION 2008–09, BY PRIORITY AREA

Total estimated government spend on injury prevention \$1.1b ²⁸		
Road crashes – \$854m (75%)	Other injury priority areas – \$270m (25%)	
NZ Transport Agency Police Six others	Assault – \$122m (11%)	Ministry of Social Development Department of Corrections Ministry of Justice
	Workplace injuries – \$85m (8%)	Department of Labour Maritime New Zealand ACC
	Suicide and deliberate self-harm – \$25m (2%)	Ministry of Health Department of Corrections
	Spend that impacts on all areas – \$19m (2%)	ALAC Ministry of Health
	Falls – \$9m (1%)	ACC
	Drowning – \$10m (1%)	New Zealand Lotteries Grants Board Maritime New Zealand

28. Total excludes expenditure in areas that fall outside the priority areas (e.g. the prevention of burns, poisoning and sports injuries) and expenditure where injury prevention or safety was considered to be a by-product of the activity (e.g. general policing and the coronial database). The agencies listed in this table are the significant spenders in each priority area. Agencies that contribute less than 10% of the total spend in each priority area are not listed.

FIGURE 7 – GOVERNMENT EXPENDITURE ON INJURY PREVENTION, 2008–09 BY PRIORITY AREA



Over 80% of the estimated government expenditure on injury prevention is sourced from “levies” as opposed to general taxation. These levies are diverse in nature and include direct charges, Crown cost-recovery levies and industry levies.

Funds sourced directly from the Crown	Funds sourced from industry levies, cost recovery levies and other
\$177,905,472	\$946,601,024
15.8%	84.2%

The suicide and self-harm priority area is 100% funded directly by the Crown, but the other areas all contain a mix of levy and Crown sources, with road crashes, workplace injuries, drowning and falls mostly funded from levy sources, and assault mostly funded directly by the Crown.

6.1 Comparison of social and economic costs and government expenditure

TABLE 4 – THE BURDEN OF INJURY AGAINST GOVERNMENT EXPENDITURE BY PRIORITY AREA

Priority area	Social and economic costs (% of total cost)	Estimated government expenditure (% of total expenditure)
Road crashes	\$2.195 billion (23%)	\$854 million (75%)
Suicide and self-harm	\$2.169 billion (22%)	\$25 million (2%)
Falls	\$1.735 billion (18%)	\$9 million (1%)
Workplace injuries	\$1.347 billion (14%)	\$85 million (8%)
Assault	\$0.376 billion (4%)	\$122 million (11%)
Drowning	\$0.295 billion (3%)	\$10 million (1%)

6.2 Cost effectiveness of government investment

The amount of money the government spends on injury prevention is a small proportion of the social costs associated with injury, suggesting that the level of government investment might be inadequate to tackle the size of the problem. However, it is important to be able to achieve value for money from what is already a considerable amount of public funding.

6.2.1 Cost-effectiveness models used in injury prevention

There is a range of methods that can be used to assess the cost effectiveness of expenditure in injury prevention. All rely on an assumption of the effectiveness of interventions, which can be measured in different ways. These might be by the number of lives saved, the number of hospitalisations avoided, the reduction in claims to ACC or, more sophisticatedly, the number of disability-adjusted life years (DALYs) saved.

Estimating effectiveness becomes more difficult where there are multiple interventions as well as external factors at play. Furthermore, interventions effecting behavioural change through education are difficult to measure because of the long time period leading up to any expected change. For many injury prevention interventions, there is a lack of evidence about effectiveness. This does not necessarily mean that they are ineffective, but rather that they might not have been rigorously evaluated, or it is difficult to attribute an effect to a particular intervention. The strongest evidence base on the effectiveness of interventions can be found in the areas of road crashes.

6.2.2 Case study: ACC

ACC is required by Section 263 of the Injury Prevention, Rehabilitation and Compensation Act 2001²⁹ to focus its injury prevention interventions on those expected to result in levy reductions, rather than those that could also result in wider social benefits. Therefore, ACC assesses the cost effectiveness of injury prevention investment by calculating return on investment (ROI), based on the number of claims reduced divided by the cost of programmes and associated overheads. ACC's funding decision model does not measure any social benefits.

A limitation of this approach is associated with the variable impacts and returns of the injury prevention programmes themselves, where the injuries targeted can be caused by factors that can take years to present themselves. A key example of this is noise-induced hearing loss. This injury type can take 20 years to become evident and investments made today can take equivalent timeframes to realise a return; nevertheless, it represents a key injury and cost concern that needs to be addressed.

ACC's Injury Prevention group has calculated ROI for the 2008–09 year as follows:

- ❖ All programmes³⁰ – \$1.12 per dollar invested (12% return);
- ❖ Levy-driven programmes only – \$1.23 per dollar invested (23% return).

6.2.3 Challenges in assessing cost effectiveness of injury prevention investment

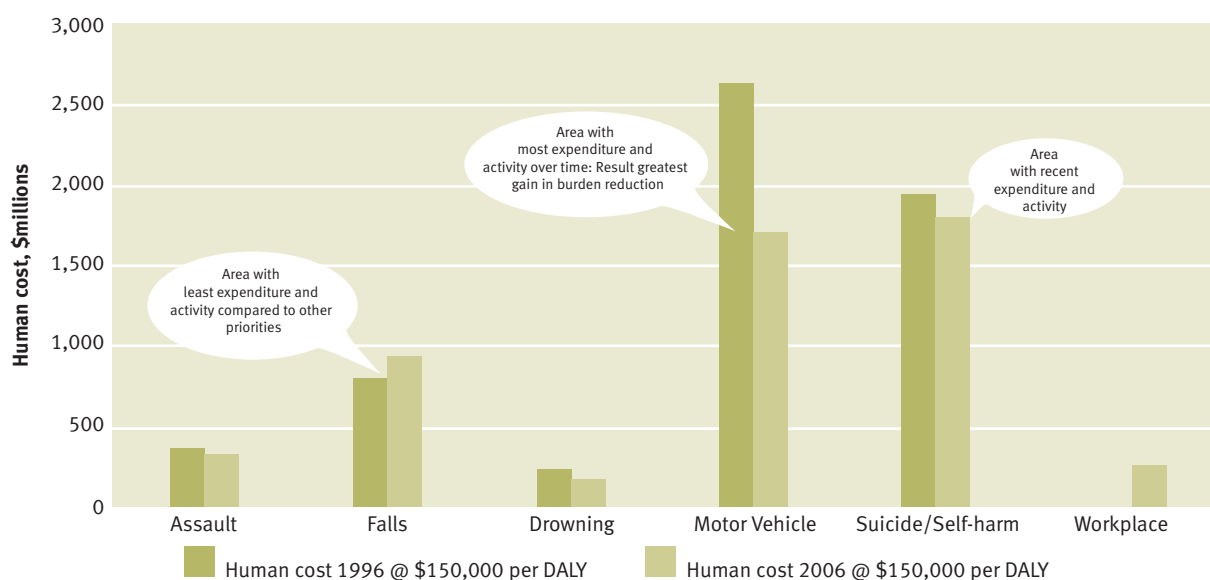
A full cost-benefit analysis of the government spend in each priority area is beyond the capacity of this report, and would require significant work to complete because of current limitations in the available evidence of the effectiveness of some of the interventions.

However, it is possible to get a general picture of the cost effectiveness of New Zealand's public injury prevention investment by comparing changes in the human cost injury burden over time, as shown in Figure 8. The bars in the graph show the change in the size of the cost burden for each of the priority areas over time, and the balloon gives a general indication of government expenditure and activity over that period.

29. Now referred to as the Accident Compensation Act.

30. Including socially driven programmes as directed by the government.

FIGURE 8 – ILLUSTRATION AND COMPARISON OF LEVEL OF EXPENDITURE ON INJURY PREVENTION IN RELATION TO ESTIMATED ANNUAL HUMAN COST OF INJURY IN 1996 AND 2006, BY PRIORITY AREAS (SOURCE J WREN FOR NZIPS 2009)



It should be noted that the time period of the expenditure data collected does not match the time period of the cost burden data, which prevents a clear comparison. However, in the absence of more accurate data, what the graph does suggest is that in the priority areas with the most investment, such as road crashes, there has been a reduction in the cost burden, while in falls – an area of limited investment – the burden has increased. It is recommended that further work be done in this area to gather the required data sets to improve the evidence base on which decisions are made.

It is recommended that the Secretariat:

- a. ***Collect information on government expenditure and burden of injury information on an annual basis, and track that over time to improve knowledge of the cost effectiveness of government spend. It is also recommended that all agencies collect information about the effectiveness of their own injury prevention interventions;***
- b. ***Build the injury prevention knowledge base and share learnings across the sector to drive efficiencies and cost-effective interventions.***

7. Potential new approaches

7.1 Potential new approaches

This section presents new approaches identified during the evaluation that might result in efficiency gains in the injury prevention sector, or lead to a reduction in injury rates. New approaches that were identified include:

- ❖ ACC to create incentives to engender greater levels of individual responsibility for avoiding injury;
- ❖ Creating a central oversight of government funding to enable better funding decisions and improved consistency of delivery;
- ❖ Integration of injury prevention and health promotion.

7.1.1 Create incentives that support greater levels of individual responsibility

The current model applied by ACC for levy collection is relatively straightforward to administer. However, it provides little incentive or deterrent for levy-paying individuals (as opposed to employers) to limit or reduce their exposure to injury risks in return for reduced injury levy rates.

This lack of experience-based incentive or deterrent provides limited leverage for injury prevention initiatives to motivate individuals into safer practices, particularly in uncontrolled environments such as the home or places of recreation.

There is equivocal evidence to support that experience rating decreases injuries; however, it is proven to reduce the propensity to claim, resulting in controlling injury costs. It has therefore been included as an option for consideration.

Incentive options include:

- ❖ **Individual experience rating:** This would recognise the number of ACC claims an individual has made, with correspondingly higher or lower levy rates applied. Individual levy rates would be reassessed annually. Additionally, proof of engaging in injury prevention measures, such as having safety features in the home, owning a car with electronic stability control, and doing the daily recommended amount of physical activity, could count towards which levy rate level was applicable;
- ❖ **Choice of ACC coverage level:** This would allow individuals to select the amount of coverage or risk they are willing to tolerate, while ensuring that a minimum base rate was set to account for serious injuries. For example, someone could choose to pay lower ACC levies and have a four-week stand-down period before being eligible for weekly compensation.

Wider consideration regarding equity, logistical and financial issues for these options would need to be thoroughly debated. Note that these proposals are currently being considered as part of a broader ACC stocktake.

7.1.2 Integrated community funding streams

Government funding streams for injury prevention delivery by NGOs currently have no centralised oversight. This can lead to funding decisions being made by agencies in isolation, an inconsistent delivery of services across the country and potential duplication of programmes and funding.

For example, the funding of Safe Communities coalitions varies widely across regions with no coordination between agencies, as shown below:

- ❖ **Community 1:** The North Shore City Council (\$10,000) and the Ministry of Health (\$40,000) jointly fund the coordinator position, with ACC withdrawing funding in 2009–10. The organisation is not leading any programmes or initiatives;
- ❖ **Community 2:** ACC and the Porirua City Council fund \$20,000 each. Projects and programmes are funded by seven key partners: Porirua City Council, ACC, Porirua Health Safer City Trust, New Zealand Police, Housing New Zealand, Regional Public Health and Porirua Community Guardians;
- ❖ **Community 3:** Funding from the Ministry of Health (approximately \$300,000) for coordinators and programmes.

A more central oversight of government funding should lead to better funding decisions and improved consistency of delivery. It should also provide greater certainty for NGOs and community groups seeking government funding. A more integrated approach to funding injury prevention initiatives would also provide greater clarity regarding outcomes delivered by the NGO sector.

7.1.3 Prioritisation framework

If central oversight of community funding were to occur, a standardised prioritisation framework should be developed to help guide resource-allocation decisions. Such a framework should include an agreed set of principles in conjunction with the appropriate application of a suitable cost-benefit analysis method, and would be developed and monitored by the NZIPS Secretariat.

Prioritisation principles currently in use by the Ministry of Health are shown below as an example:

- ❖ **Effectiveness:** Extent to which the programme produces a desired health outcome;
- ❖ **Equity:** Extent to which the programme reduces disparity on health status and/or health service experience;

- **Value for money:** Extent to which the programme represents best value for effectiveness and equity possible. (*Ministry of Health, 2005*)

It is recommended that the Secretariat:

- a. ***Develop a standardised prioritisation framework for NGO funding;***
- b. ***Using the above framework, establish a central oversight of community funding streams across all government funding bodies. This would be undertaken by the NZIPS Secretariat.***

7.1.4 Integrate health promotion and injury prevention campaigns

Research has shown there is a strong link between health and risk of injury. In 2007, ACC commissioned a report on the risk factors for non-fatal fall injuries at home among people aged 25–60 years. The report showed that acute alcohol consumption and not having sufficient regular exercise are associated with an increase in the risk of fall injuries at home among working-aged people. This highlighted that the promotion of healthier lifestyles, where people exercise and moderate their drinking, would equate to a reduction in injuries, and obesity and its associated illnesses.

It is recommended that in the future, when activities or campaigns such as those encouraging healthier lifestyles are being developed, it would be beneficial to consult health promotion providers (such as the Health Sponsorship Council) and prevention providers (such as ACC). Not only would this be more cost-effective for government – because there would be only one health promotion and prevention campaign instead of two – it would also have the potential to achieve better outcomes.

It is recommended that consideration be given to the implementation of potential new approaches that incentivise reductions in injury or achieve efficiency gains, possibly through integrating health promotion and injury prevention.

8. Governance arrangements for the Strategy

This section is largely informed by the MartinJenkins report reviewing the functional relationships, governance and structures for injury prevention coordination across government. MartinJenkins examined:

- The optimum arrangements for achieving the cost-effective coordination of injury prevention, both across government and between government and the non-government sector;
- Whether or not the current arrangement ensures that clear accountability exists for lead agencies to reduce injuries significantly;
- Whether there are opportunities for government agencies working within similar priority areas to merge functions and structures to achieve more cost-effective outcomes;
- Whether a central coordination role is required to achieve the government's outcomes for injury prevention, and what the structure, role, skill set, funding source and placement should be.

8.1 NZIPS Secretariat

The Secretariat was established in September 2003 and, since that time, has focused on strengthening the infrastructure in the injury prevention sector and commissioning critical pieces of research. Its key roles are:

- Leading the development of the Strategy and Implementation Plan;
- Leading and coordinating injury prevention work as specified by the Implementation Plan;
- Providing secretariat services for the Injury Prevention Ministerial Committee, CEs' Forum and three advisory groups;
- Producing the Strategy's accountability reports;
- Collecting and disseminating information, including managing the Strategy's website.

MartinJenkins noted that there is a lack of clarity about the role and mandate of the Secretariat. It found that stakeholders perceived a conflict of interest between the Secretariat's "independent" role and the mandate of ACC generally, because the

Secretariat's reporting goes through ACC's main channels. The Secretariat's role is generally perceived as managing relationships between various stakeholders involved in the Strategy and providing administrative support to the various committees in the Strategy's supporting structure, rather than driving the Strategy's progress.

8.2 Key findings from the review of functional relationships and structures

A number of stakeholders, mainly from non-government and community organisations, commented on the leadership provided by the NZIPS Secretariat. Specific mention was made of the Secretariat's effort in and commitment to providing a coordinated approach to injury prevention across the priority areas with limited resources.

The Secretariat was perceived as committed, productive and trustworthy by the injury prevention sector. It was noted that, for a small group, it had accomplished a lot and was particularly skilled at "shepherding" injury prevention processes through government, consulting the sector, and distilling and disseminating information.

8.2.1 Limited opportunities to merge function and structures to achieve more cost-effective outcomes

In theory, agencies could work together to prioritise funding and focus on priority areas from a strategic, whole-of-government perspective (such as moving funding from one priority area to another). However, in practice, there is little incentive for most agencies to participate in this way.

Each agency has its own imperatives, driven by the government, of which injury prevention is generally only a small part. There are a number of practical considerations that prevent the strategic prioritisation of injury prevention activities across government, including legislation, accountabilities, silos and funding mechanisms (such as hypothecated funding from road user charges and fuel excise duty in the transport sector). However, a more integrated approach to funding injury prevention activity through NGOs should be considered (a proposal for this is outlined in 7.1.2).

8.2.2 Proposed role for strategic and coordination activity related to injury prevention

There is a general view that a function within government needs to take a genuinely strategic view of injury prevention information in terms of data, research and analysis, with a focus on performance and trends in injury prevention as a whole. MartinJenkins proposed two main potential roles for this function, in addition to the stakeholder management and information dissemination already undertaken by the NZIPS Secretariat, which it considered needs to be maintained.

First, there is potential for the function to take a role in providing whole-of-injury prevention policy advice. MartinJenkins recommends that if this function is selected,

policy advice focus on identifying gaps, overlaps, win/wins and synergies across the injury prevention environment rather than a whole-of-government prioritisation of injury prevention activities. This is because of the practicalities of funding arrangements and the various mandates, focuses, incentives and levers of individual agencies. An early task for such a policy function could be to provide advice on the better integration of funding streams to the NGO injury prevention sector, as noted above.

Second, there is potential for the function to take a lead role in areas not currently covered by any one agency, including the design and implementation of strategies, policies and programmes in these areas, as well as being the “voice” on injury prevention issues. This option would raise the profile of injury prevention, particularly in those gap areas, but would potentially require a significant addition of capacity.

It is recommended that the role of the Secretariat be clarified and enhanced to enable it to perform:

- a. An enhanced stakeholder management and information dissemination role;***
- b. A whole-of-injury-prevention policy function, focused on identifying gaps, overlaps, win/wins and synergies across the injury prevention environment;***
- c. The design and implementation of strategy, policy and programmes for injury areas not covered by a lead agency.***

8.2.3 Placement of the function

The enhanced function could sit in a variety of locations – ACC, the Department of Labour or the Ministry of Health – or with a completely independent agency such as the Treasury. These are all good options, although none is a perfect fit.

An advantage of the Ministry of Health is that synergies between injury prevention and public health could be capitalised on. Meanwhile, the advantage of the Department of Labour is that it is interested in the impacts of injury on any ACC liability increases (as ACC’s monitoring agency), and it also has an interest in the impacts of injury on labour market supply.

Arguably, ACC has the most direct interest in injury prevention outcomes and therefore is likely to be best placed to host this injury prevention function. However, it is important that policy work undertaken reflects a sector-wide view of injury prevention, rather than an ACC-focused view.

It is recommended that the Secretariat function be retained within ACC.

8.2.4 Structure and funding of the function

MartinJenkins suggested that the enhanced function as described above did not require an “independent” Secretariat, and that the recommended functions could be integrated within an agency’s existing infrastructure. Following on from this recommendation, the report suggested that funding be provided by the host agency that has been specifically allocated for that purpose.

An explicit government appropriation to ACC for leading the Strategy and providing the enhanced function as described above would increase the Strategy’s transparency and accountability. It would also enable Ministers to negotiate annually the services they want to purchase to support the Strategy.³¹ Another option is for the funding to be shared across the lead agencies.

It is recommended that further work be carried out in the 2010–11 year to identify possible funding options, including a shared funding model across lead agencies.

8.2.5 Machinery supporting the strategy is ineffective

MartinJenkins suggested there are too many committees supporting the Strategy, with too much overlap among members (see Figure 2). This has reduced the clarity of their mandate and the effectiveness of each committee. Their role in decision-making is not clear for a number of these committees.

In some cases, such as the Stakeholder Reference Group (SRG) and the Government Inter-agency Steering Group (GISG), committees appear to have had a decision-making mandate during the development of the Strategy that has not continued through to the present. For others, such as the Lead Agency Reference Group (LARG), subsequent changes to the machinery supporting the Strategy, such as the establishment of the CE’s Forum, seem to have diluted their decision-making roles.

In general, it is felt that agencies are advocating for their own causes without considering injury prevention issues that cut across agency agendas. There is potential to streamline the number of groups and committees that are serviced by the Secretariat, and clarify their roles and responsibilities. This would also serve to reduce the administrative burden on the Secretariat, freeing it up for other activities.

Feedback from the lead agencies suggests there are advantages to retaining the committee at chief executive level, with a revised mandate. However, MartinJenkins recommended the disestablishment of the CE’s Forum, to be replaced with a committee of lead agency representatives at general manager level. It is proposed that representation at the chief executive level be retained, but reduced to an annual forum, supported by a working group of senior officials to be convened quarterly. The Senior Officials Group would deal with issues such as agreeing on performance measurements for the Strategy, and establishing a new framework for community funding.

31. If recommendation 8.2.2 is accepted it might mean increased resources for the Secretariat. Further costings will need to be undertaken if this recommendation is agreed to in principle.

The Injury Prevention Ministerial Committee would also be reduced to convening on an annual basis, as would engagement with community and wider stakeholders. It is proposed that an annual stakeholder forum be held, including presentations on best practice and Strategy performance, and workshop sessions to share successes and discuss challenges. This workshop would also serve to maintain and develop the link between government and non-government aspects of the sector.

It is recommended that:

- a. ***The CEs' Forum be retained, but engagement be reduced to an annual basis;***
- b. ***The Injury Prevention Ministerial Committee be retained, but engagement be reduced to an annual basis, to receive a yearly progress report;***
- c. ***A Senior Officials Group (at the senior manager level) be established and convened quarterly, comprising members from lead government agencies, with joint accountability to drive the Strategy's performance;***
- d. ***The SRG, GISG and LARG be disestablished in favour of an annual stakeholder forum, bringing together community and government sectors.***

9. Conclusion and summary of proposed new approach

9.1 Conclusion

9.1.1 The strategy is sound

Engagement with a diverse range of stakeholders has affirmed the need for the Strategy and commended it as being an essentially sound framework.

9.1.2 Some progress made across key areas

Although, overall, New Zealand's injury trends have not significantly improved in the past five years, at the time the Strategy was developed there was no expectation that injury rates would have dropped significantly by 2009, as behavioural change takes time.

While there has been a steady decline in fatal injuries, the number of serious, non-fatal injuries has increased in the past five years.

There is a raised awareness of and increased focus on injury prevention among local authorities, government and community agencies.

The Strategy has improved the coordination and efficiency of some injury prevention activities and increased engagement between agencies (at national and regional levels).

The Strategy has led to the introduction of some priority area strategies that might not otherwise have emerged (such as suicide across all ages, drowning and falls).

The Strategy has increased buy-in from local authorities and at the community level, enabling NGOs to link their programmes to the Strategy's outcomes, leading to increased credibility, recognition and potential funding.

9.1.3 The strategy requires stronger, more strategic leadership, mandated by government

In order to achieve strategic leadership and a greater level of collaboration across agencies, roles and responsibilities need to be clarified. An agreed leadership framework needs to be established, with a government mandate positioning a lead agency to drive performance through and across individual agencies. ACC is well placed to take this lead, through the Secretariat adopting an enhanced policy role.

9.1.4 The governance arrangements supporting the strategy need to be streamlined

The sheer quantity of committees comprising the Strategy's supporting structure has reduced clarity about why each exists and the nature of its mandate. Reducing the number of committees and clarifying their roles would increase their effectiveness in supporting the Strategy to achieve optimal results.

9.1.5 Cross-cutting injury issues need more focus

It is a timely opportunity to improve the accountability of lead agencies for injury issues that represent a gap in the current Strategy, such as child injury, alcohol, Maori and community engagement considering the significant impacts these issues have on injury rates.

9.1.6 There are savings to be gained by getting it right

New Zealand's burden of injury is high. The social and economic costs of all injury to the country are substantial at \$9.67 billion a year. Realigning some aspects of the Strategy and reaffirming others will be critical in helping to reduce the costs of injury borne by the New Zealand public. The Strategy should be seen not only as the foundation of New Zealand's approach to preventing injury, but also as an integral component of a healthier and more productive New Zealand.

9.2 Summary of proposed new approach

It is recommended the Strategy be continued in order to address the high burden of injury borne by New Zealand. The original six priority areas (road crashes, workplace injuries, suicide and self-harm, assault, falls and drowning) should be maintained, including performance targets being set for each strategy area. Consideration should be given to setting performance targets for each priority area.

There needs to be an increased focus on the four areas of child injury, alcohol, Māori and community engagement, with lead agencies required to include specific actions in their plans to address these issues.

The mandate of ACC as leader of the Strategy must be strengthened in order to hold other agencies to account and drive the performance of the Strategy. Meanwhile, the role of the NZIPS Secretariat within ACC should be enhanced so that it can perform a whole-of-injury-prevention policy function, focused on identifying gaps, overlaps, win/wins and synergies across the injury prevention environment.

Structural arrangements can be streamlined by retaining the engagement of the Injury Prevention Ministerial Committee and CEs' Forum at a reduced frequency, supported by a Senior Officials Group, which will have joint accountability for driving the Strategy's performance.

The SRG, GISG and LARG are disestablished in favour of an annual forum bringing together community and government sectors, perhaps in conjunction with IPNANZ. The participation of Māori in the Strategy should be increased by inviting representation from Te Puni Kōkiri on the Strategy's governance groups.

Finally, government agencies in the injury prevention sector must continue to improve their knowledge of the cost effectiveness of government spend in this area. They must support the Secretariat to collect information on government expenditure, intervention effectiveness and costs of injury on an annual basis, and track this over time.

New Zealand Government