

Serious Injury

Presentation to the Parliamentary Road Safety Committee
Inquiry into Serious Injury

11 September 2013

11 September 2013



Overview

Inquiry presents a unique opportunity and challenge to improve our knowledge and understanding of serious injury in Victoria.

Will provide direction for Victoria to further reduce road trauma and inform National efforts to understand serious injury

No accident that the new Victorian road safety strategy has a commitment to develop an injury severity measure

11 September 2013

What we measure now

Serious injuries – Police reported crashes admitted to hospital

- A serious injury is classified as someone admitted to hospital
- Police data – validation issues
- Currently under reporting consistent with various studies in other jurisdictions
- TAC data - does not capture all road trauma
- Important to have accurate and reliable data

11 September 2013



Costs of serious injury

Recommendations

1. Endorse willingness to pay method
2. Jurisdictions collaborate to adopt a national willingness to pay methodology and consider the higher costs associated with life long injury and care

11 September 2013



Willingness to pay

Issues

- NSW WTP costs of fatalities high compared to serious injury
- Need for national (Commonwealth) development of WTP costs for national adoption rather than NSW WTP costs as an interim measure
- National WTP methodology needs to take into account life long costs and life long impairment

15 April 2013



Costs of serious injury

Comparative costs of approaches

Method	Cost per person – Fatality (June 2010 prices) \$	Cost per person – Serious Injury (June 2010 prices) \$	Cost per person – Other Injury (June 2010 prices) \$	Serious Injury cost/person as proportion of fatality cost/person
Austroads Human Capital Approach (current methodology)	1,838,785	440,823	17,277	24%
BITRE Report 118 Implied Unit Injury Costs (Hybrid HC)	2,719,600	243,000	2,400	9%
NSW Willingness to Pay - Urban	6,919,993	337,101	17,982	5%
NSW Willingness to Pay - Rural	6,842,214	210,634	22,066	3%

11 September 2013



Data- exchange, accuracy & timeliness

Recommendations

1. Work with Department of Health to enable Victoria Police to check on admission status
2. Work with the Department of Health on data linkages between hospital data and police-reported crash data

11 September 2013



Data- exchange, accuracy & timeliness

Issues

- Current system most responsive. A higher level of accuracy when validated by TAC data
- National definition = Victoria's current definition
- Under reporting an issue not just in Victoria. Particularly off road. Motorcyclists and cyclists have higher levels of under reporting.
- Victoria Police best endeavours on confirming admission compromised by privacy issues

11 September 2013

Data- exchange, accuracy & timeliness

Issues

- Hospital data set records all admissions (seperations – person may be admitted to a health care facility more than once for same crash outcome)
- 82% of hospital admissions resulted in a stay of more than 14 days – not necessarily a good proxy for severity
- Data linkage projects essential to understand key injury and severity issues
- Consider a data linkgape pilot for injury severity and body region to crash types

11 September 2013

Definitions and measures of serious injury & severity

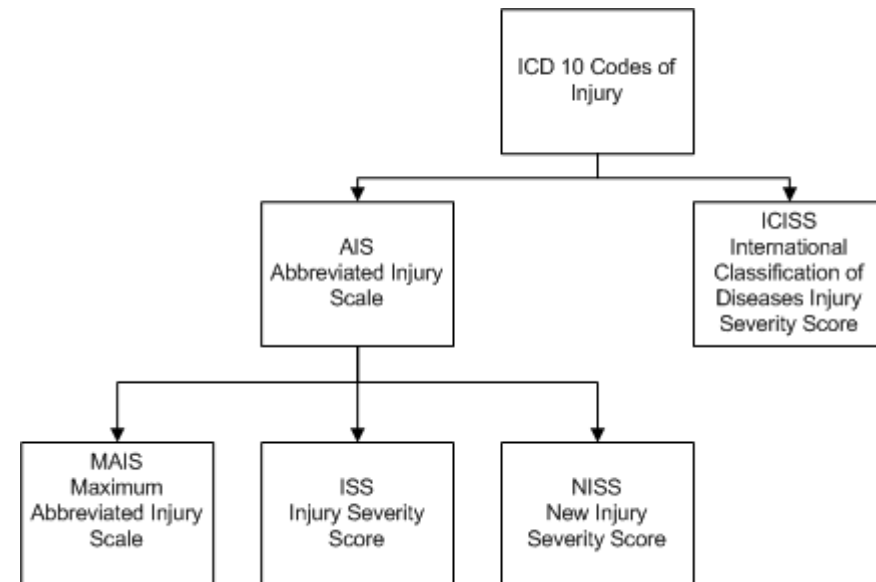
Recommendations

1. Retain Police reported serious injury validated by TAC and adopt ICISS as the measure of injury severity
2. Further research to develop a measure that incorporates a threat to life and a non-fatal measure

Definitions and measures of serious injury & severity

Threat to life measures

- Threat to life measures – AIS, MAIS, ISS, NISS, ICISS
- European Union – MAIS 3+
- Not all hospital admissions coded with AIS
- Unable to map ICD 10 to ICD 9 to AIS without substantial loss of data integrity



Definitions and measures of serious injury & severity

Threat to life measures

- International Classification of Diseases Injury Severity Score (ICISS) – preferred measure of severity
- Readily available from VAED
- A severity threshold can then be used to classify hospital admissions as either “serious” or “non-serious”. For example, serious non-fatal injury can be defined using a severity of injury threshold less than or equal to 0.941 with those cases with an ICISS score greater than 0.941 considered to be “non-serious”

11 September 2013

Definitions and measures of serious injury & severity

Burden of injury - Disability Adjusted Life Year (DALY)

- Disability Adjusted Life Year (DALY) could be considered as a measure of long term injury consequences. Measures such as DALY still require appropriate validation
- In the long-term research is warranted to investigate the possibility of incorporating threat to life measures with those that constitute physical and psychiatric impairment and quality of life loss

15 April 2013

Countermeasures & effectiveness

Recommendations

1. Enhance the METS model to fatalities, serious injuries & severity
2. Future major project evaluations to take into account benefits in reductions fatalities, serious injuries and injury severity

15 April 2013

Countermeasures & effectiveness

METS model & evaluations

- The Macro Estimates for Target Setting (METS) model was developed originally in 2006 for VicRoads and has been since been updated and improved for application to the development of long-term road safety strategies throughout different states within Australia
- Updating METS through Baseline research program to include:
 - contributions by strategic theme in new strategy
 - contributions in serious injury and fatalities overall and by issue area
 - contributions in serious injury and fatalities overall and by metropolitan and country Victoria statistical divisions

Countermeasures & effectiveness

Infrastructure improvements - results

	Crash reduction	Ave treatment life (yrs)	BCR	Fatal injury crashes prevented over life*	Serious injury crashes prevented over life*	Ratio F:SI
SRIP 1	31%	16.9	2.1	131	905	1:7
SRIP2	34%	14.6	3.6	105	1296	1:12
SRIP3#	31%	16.4	2.4	NA	NA	NA

all casualty crashes

15 April 2013

Countermeasures & effectiveness

Post crash countermeasures

- Victorian State Trauma System has contributed significantly to reductions in trauma
- New drug (Tranexamic) being trialed to stabilise patients internal bleeding has potential to reduce trauma particularly in rural environments
- Need to examine potential of systems like e-call to provide automatic crash notification

15 April 2013

Managing reductions & raising the profile

Recommendations

1. Communicate more effectively the scale & burden of serious injury
2. Developing more effective performance measures

15 April 2013

Managing reductions & raising the profile

Issues

- Focus on road toll diverts attention from injury issue
- High levels of public interest in road safety could diminish over time if road deaths keep falling
- Developing a severe serious injury definition, measuring and reporting performance will bring the issue to front of mind