Parliament of Victoria
Road Safety Committee

INQUIRY INTO SERIOUS INJURY
PUBLIC HEARING 23 JULY 2013

Road Safety Action Group Inner Melbourne

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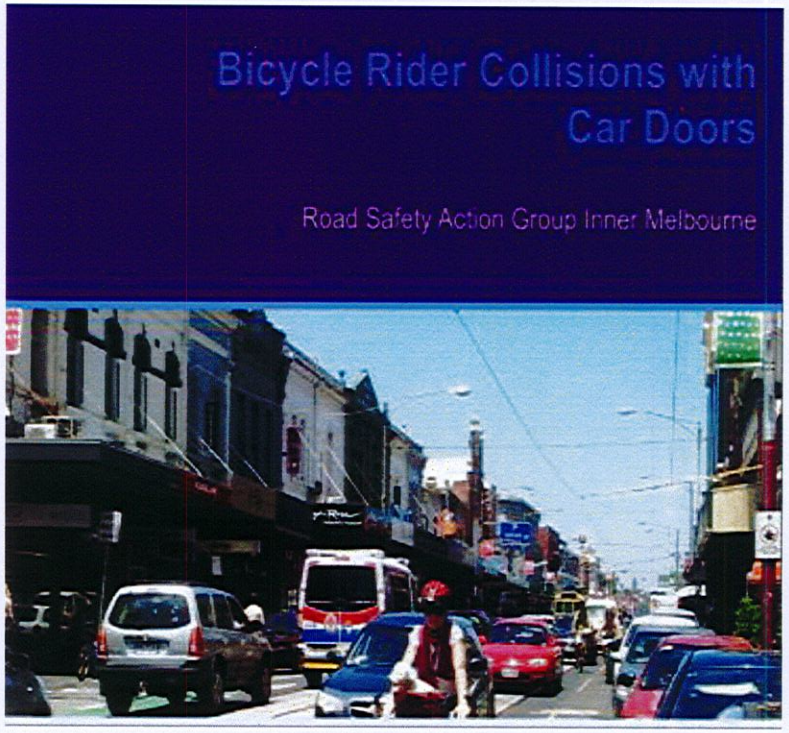
RSAGIM works to

- Overcome safety barriers - real and perceived - to walking and cycling
- Promote respect among all road users
- Support a coherent, coordinated approach to the safety of pedestrians, cyclists and public transport users in Inner Melbourne
- Advocate for a safe speed environment for walking and cycling

RSAGIM is

- A registered group of the **Victorian Community Road Safety Partnership**

- Delivers programs that support the safety of vulnerable road users in Inner Melbourne



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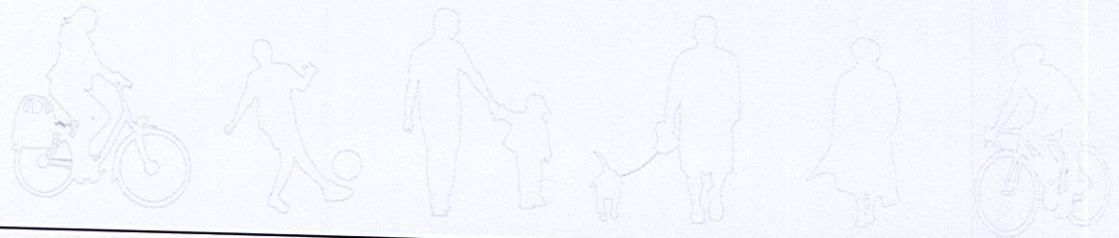
PART 1

The Context

Strategic Context

"[Vulnerable road users] **have been neglected** in transport and planning policy. The world must now increase its focus on making walking and cycling safer, and protecting these road users from high-speed traffic"

Dr Margaret Chan, Director-General, WHO (Global status report on road safety 2013)



The Safe System Approach

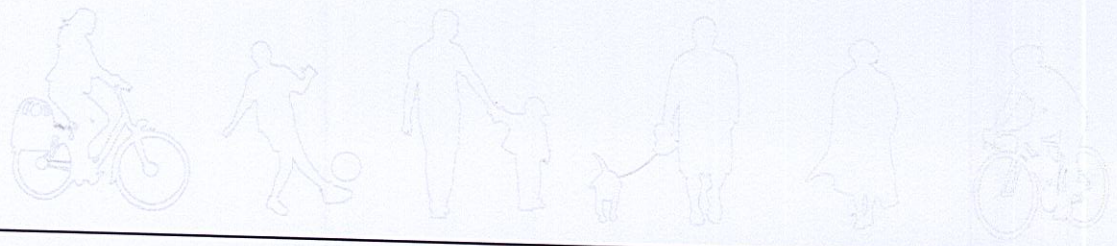
No loss of human life is acceptable!

Has been adopted by every state in Australia but…

A disproportionate number of pedestrians and cyclists continue to be killed or seriously injured on our roads

The Evidence from Inner Melbourne

Serious Injuries to vulnerable road users 2008 to 2012 Source: VicRoads					
	Port Phillip	Stonnington	Yarra	Melbourne	Total
Pedestrians, cyclists and motorcyclists	410	276	473	997	1159
Pedestrians, cyclists only	295	174	347	728	816



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Strategic Context

A **paradigm shift** in policy is required

One that **prioritises human life** over the efficiency of traffic flow

When this happens, the selection of effective road safety measures **becomes clear**

…and a **step change** in the reduction in serious injuries can occur

The Evidence from Inner Melbourne

CITY OF MELBOURNE

Road Safety Principle
Setting strong policy and strategy

Road Safety Measure
City of Melbourne Road Safety Strategy, adopted June 2013

The goal

- Create a safe, comfortable and richly engaging urban environment **where pedestrians, cyclists and motorcyclists are welcomed and supported** through world leading road safety practices.

Strategic objectives

- Reduce motor vehicle speeds in areas of high pedestrian movement
- Recognise the needs of pedestrians, cyclists and motorcyclists in street design

The Evidence from Inner Melbourne

CITY OF PORT PHILLIP

Road Safety Principle
Pedestrians are the most vulnerable road users

Road Safety Measure
Raised pavement pedestrian (zebra) crossings at a high pedestrian volume roundabout

Before
5 pedestrian crashes 1999-2004
After
0 pedestrian crashes 2005-2013

Cecil and Coventry St,
South Melbourne Market

Serious injuries to pedestrians in Port Phillip reduced by 57% between 2007 and 2011

The Evidence from Inner Melbourne

CITY OF YARRA

Road Safety Principle

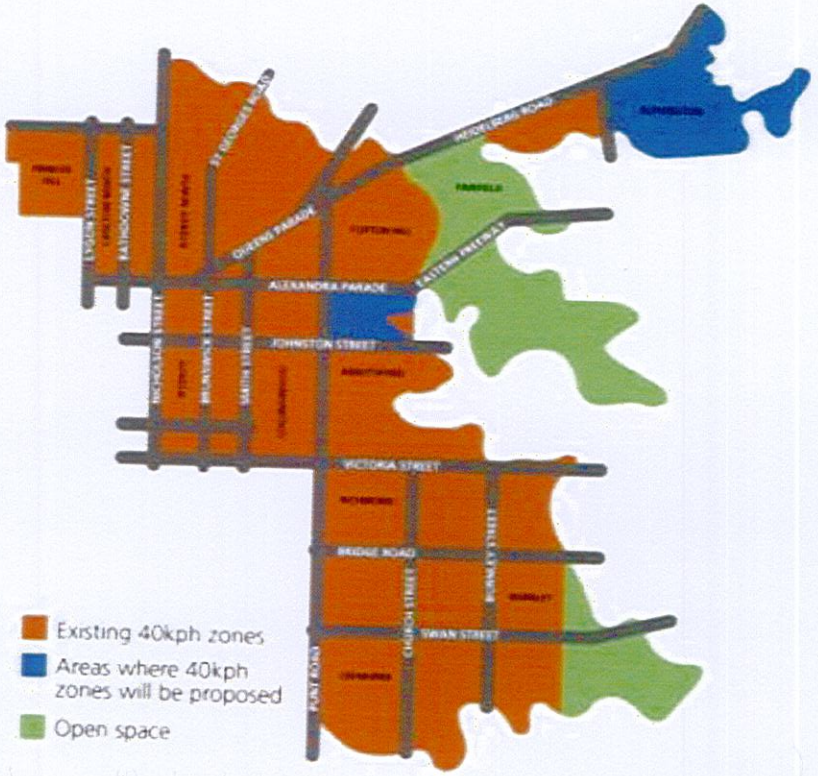
A pedestrian or cyclist hit by a vehicle travelling at 50 kp/h is four times more likely to be killed or seriously injured than if hit at 40 kp/h

(Victoria's Road Safety Strategy 2012 - 2022)

Road Safety Measure

Speed limit reduction

'About 90% of local roads in the City of Yarra are covered by a 40 kp/h limit'



The Evidence from Inner Melbourne

CITY OF STONNINGTON

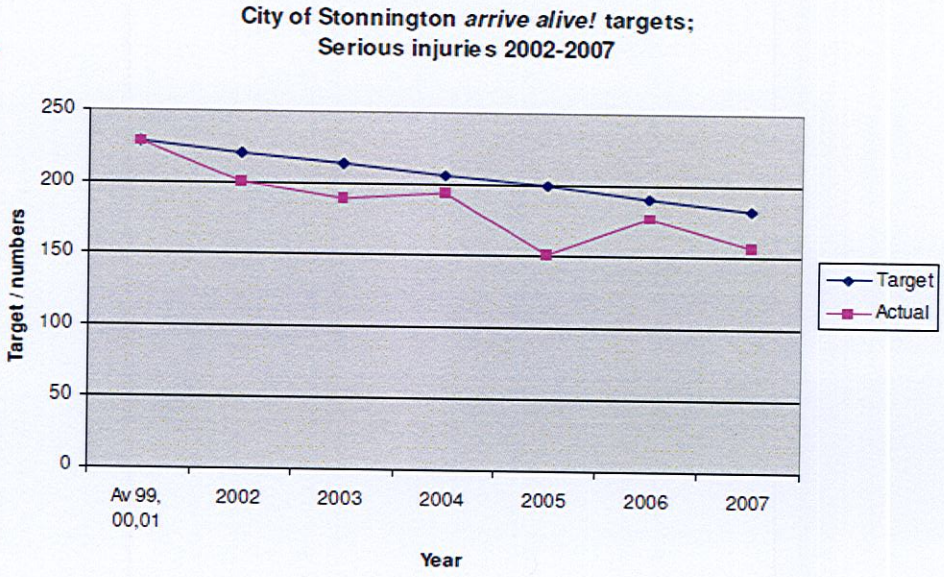
Road Safety Principle

The designers of the system are always ultimately responsible for the design, operatior and use of the road transport system and thereby responsible for the level of safety within the entire system

Road Safety Measure

Between 2001 and 2007, Council allocated in excess of $15m to roads, intersections and roadside improvements. The engineering works included intrinsic road safety improvements.

City of Stonnington Road Safety Policy 2008 to 2017, p8/9)



PART 2

Terms of Reference

Terms of Reference

No.1

Determine the appropriate methodology to identify the cost of a serious injury to the Victorian community and economy

THE PROBLEM

"human capital approach is recognised as understating the human costs of road crashes" and "the willingness-to-pay approach is the theoretically superior approach…"

BITRE, 2009

OUR RECOMMENDATIONS

- The Willingness To Pay (WTP) approach should replace the current Human Capital approach as the primary method to calculate the Value of a Statistical Life (VSL) component of the total cost of road crashes in Victoria.

  WTP is used in **North America**, **Asia**, and **Europe** + It was recently adopted in **NSW** and **WA.**

Terms of Reference

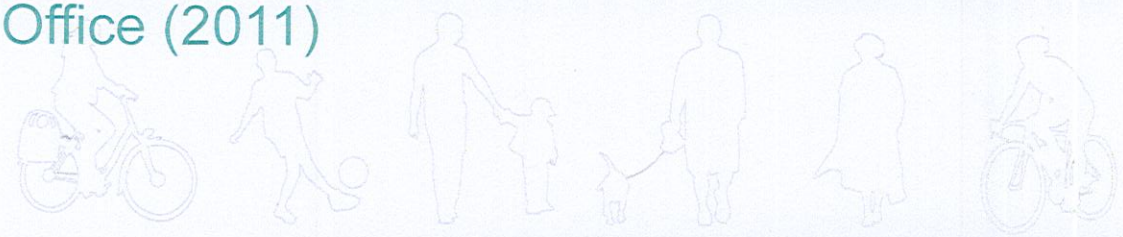
No.2

Identify processes, including the exchange of data and information between agencies, that will facilitate accurate, consistent and timely reporting of road related serious injuries

THE PROBLEM

""VicPol's records understate the number of injuries by at least 50 per cent and the scale of under-reporting is much higher for off-road injuries. Less than a third of motorcycle riders and passengers injured in a crash made a TAC claim." "

Victorian Auditor-General's Office (2011)



OUR RECOMMENDATIONS

- **Ideally,** create an independent agency with responsibility for the collection, collation, interpretation and sharing of road safety data.
- **In the interim,** ensure the linkage of police and hospital records through a central database.
- This agency should adopt the following recommendations from the D'Elia and Newstead (2010) feasibility study on linking datasets for road injuries.

Terms of Reference

No.3

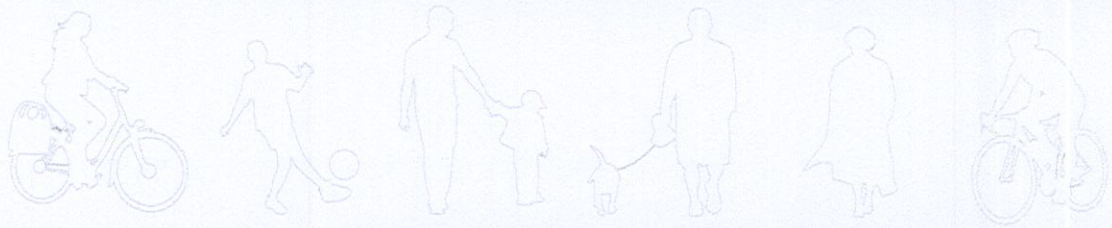
Consider best practice definitions and measures of road related serious injury and injury severity, and recommend how road related serious injuries and their severity should be identified and reported in Victoria

THE PROBLEM

- Misreporting of injury severity leading to underreporting
- A failure to link critical police and hospital datasets
- Resulting in poor analysis of crash trends and poor selection of countermeasures.

OUR RECOMMENDATIONS

- Encourage a consistent approach across Australia to definitions to improve data comparison.
- In the short-medium timeframe, adopt ICD Injury Severity Score (ICISS) as the most practical definition of serious injury.
- Commission a study to compare the effectiveness of Maximum Abbreviated Injury Score Above 3 (MAIS 3+) against ICD Injury Severity Score (ICISS) to determine the most appropriate method for Victoria.



Terms of Reference

No.4

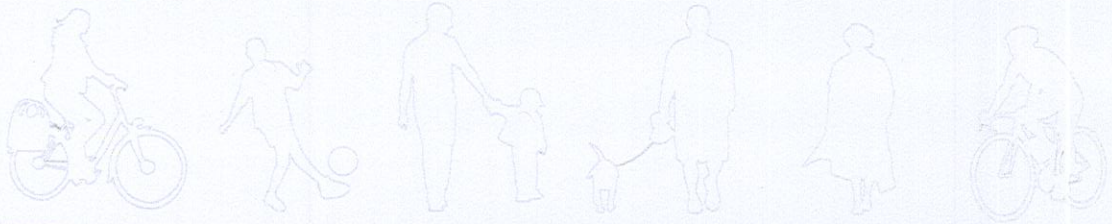
Determine the correlation between reductions in fatalities and serious injuries (including for different levels of severity) resulting from different road safety countermeasures

THE PROBLEM

"lowering speed limits will bring about considerable reductions in road trauma with a relatively minor impact on average travel times…vulnerable road users are likely to benefit most from reductions in average travel speeds"

MUARC, 2008

The Impact of Lowered Speed Limits in Urban/Metropolitan Areas



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OUR RECOMMENDATIONS

- Expedite the current VicRoads guidelines to allow 40km/hour speed limits to be implemented in areas of high vulnerable road user activity.
- Support the further reduction of speed limits in areas of high vulnerable road user activity (an action of the new City of Melbourne Road Safety Plan).
- Guidelines should be created to support the implementation of schemes that prioritise the safety of pedestrians and cyclists.

Terms of Reference

No.5

Identify cost effective countermeasures to reduce serious injury occurrence and severity

THE PROBLEM

There are clear gaps in the current approach that must be addressed:

- how the cost-benefit and cost-effectiveness of road safety countermeasures are estimated; and
- the rigour, consistency and transparency (sharing) of post implementation evaluations of road safety countermeasures.

OUR RECOMMENDATIONS

Address the issues associated with estimating the cost-benefit and cost effectiveness of road safety countermeasures by:

- Replacing the Human Capital approach with the Willingness To Pay approach;
- Linking Police and Hospital datasets for road crash injuries; and
- Adopting ICD Injury Severity Score (ICISS) as the most practical definition of serious injury.

OUR RECOMMENDATIONS continued

- Develop guidelines for monitoring and evaluating road safety countermeasures in Victoria for use at both State and Local Government level.
- Require a Monitoring and Evaluation Plan (MEP) to be prepared for all road safety plans/strategies and individual measures.
- Create a reporting mechanism to collate evaluation reports through an independent road safety agency.

Terms of Reference

No.6

Identify best practice in managing long term reductions in serious injury including raising the profile of the serious injury burden

THE PROBLEM

"road traffic injuries are a major but neglected global public health problem, requiring concerted efforts for effective and sustainable prevention" and "the road traffic death toll represents only the "tip of the iceberg" of the total waste of human and societal resources from road injuries".

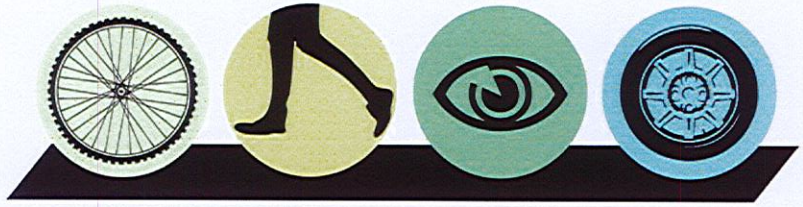
World Health Organisation, March 2013

OUR RECOMMENDATIONS

In addition to implementing our recommendations for TOR 1-5, we propose that:

- the focus on the "Road Toll" (deaths only) is replaced with a focus on "Killed and Seriously Injured".

Thank You



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References

Terms of Reference No.1

1. Hendrie, D. and Miller, T., (2012), Measuring the cost of road trauma and its longer-term consequences, MUARC Report No. RR09-002, Monash University Accident Research Centre, Clayton, Victoria.
2. Tooth, R., (2010), The cost of road crashes: A review of key issues, LECG for the Australian Railway Association.
3. Henry, L. van Geldermalsen, T, Ling, W. and Murphy, P., (2011), Deriving Accident Costs using Willingness-to-Pay Approaches - A Case Study for Singapore, Australasian Transport Research Forum 2011 Proceedings, 28 - 30 September 2011, Adelaide, Australia
4. Bureau of Infrastructure, Transport and Regional Economics [BITRE], 2009, Road crash costs in Australia 2006, Report 118, Canberra, November.

Terms of Reference No.2

5. Garrard, J., Greaves, S. and Ellison, E., (2010) Cycling injuries in Australia: Road safety's blind spot?, Journal of the Australasian College of Road Safety – August 2010, Pg 37-43
6. Sikic, M., Mikocka-Walus, A., Gabbe, B., McDermott, F. and Cameron, P., (2010), Bicycling injuries and mortality in Victoria, 2001–2006, MJA 2009; 190: 353–356
7. Boufous S, Finch C, Hayen A, Williamson A. (2008) Data Linkage of Hospital and Police Crash Datasets in NSW. Sydney: New South Wales Injury Risk Management Research Centre
8. Victorian Auditor-General's Report (2011) Motorcycle and Scooter Safety Programs, PP No 7, Session 2010–11
9. D'Elia, A. and Newstead, S., (2010) De-identified Linkage of Victorian Injury Data Records: A Feasibility Study, MUARC Report No. 296, Monash University Accident Research Centre, Clayton, Victoria.
10. D'Elia, A. and Newstead, S., (2009) Probabilistic Linkage of Victorian Injury Data Records, 2009 Australasian Road Safety Research, Policing and Education Conference, 10 -13 November 2009, Sydney, New South Wales
11. Parliament of Victoria (2012) Parliamentary Inquiry into motorcycle safety in December 2012. Road Safety Committee, Subject: Inquiry into Motorcycle Safety, ISBN: 978-0-9807166-2-7, December 2012

Terms of Reference No.3

12. D'Elia, A. and Newstead, S., (2011) Alternative Measures of Serious Injury for National Road Safety Strategy Target Setting, Monash University Accident Research Centre, Clayton, Victoria.
13. Chapman, A. and Rosman, DL., (2010), An evaluation of ICISS methodology for determining the severity of road crash injuries using linked data", Proceedings of the 2010 Australasian road safety research, policing and education conference, Department of Infrastructure, Transport, Regional Development and Local Government, Canberra.
14. IRTAD (2011) Reporting on Serious Road Traffic Casualties: Combining and using different data sources to improve understanding of non-fatal road traffic crashes, International Traffic Safety Data and Analysis Group for OECD.

Terms of Reference No.4

15. CEDR., (2008) Best practice for cost-effective road safety infrastructure investments, Conference of European Directors of Roads
16. Van Schagen, I. and Machata, K,. (2010) Handbook for measures at the country level, Luxembourg: Publications Office of the European Union, 2010, ISBN 978-92-79-15257-3, DOI:10.2832/16225
17. Archer, J., Fotheringham, N., Symmons, M,. and Corben, B., (2008) The Impact of Lowered Speed Limits in Urban/Metropolitan Areas, MUARC Report No. 276, Monash University Accident Research Centre, Clayton, Victoria.
18. NHTSA, (1999) Literature Review on Vehicle Travel Speeds and Pedestrian Injuries, U. S. Department of Transportation, National Highway Traffic Safety Administration, DOT HS 809 021 October 1999 , Final Report
19. Marceau, C., Bradbury, A., Hickman, R. and Hamilton-Baillie, B., (2010) Designs for life: Learning from Best Practice Streetscape Design
20. Litman, T., (2013) Evaluating Complete Streets: The Value of Designing Roads For Diverse Modes, Users and Activities, Victoria Transport Policy Institute
21. HSIS (2010), Evaluation of Lane Reduction "Road Diet" Measures on Crashes Summary Report Research, Development, and Technology, Highway Safety Information System (www.hsisinfo.org); summary www.hsisinfo.org//pdf/10-053.pdf.
22. Webster, D. and Layfield, E., (2003) Review of 20 mph zones in London, Unpublished Project Report, PR/T/077/03
23. WHO (2013) Global Status Report on Road Safety 2013: Supporting a Decade of Action, ISBN 978 92 4 156456 4

Terms of Reference No.5

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

National Research Council. Transportation Research Board Special Report 300: Achieving Traffic Safety Goals in the United States: Lessons from Other Nations. Transportation Research Board Washington, D.C. 2011

Elvik, R., Vaa, T. eds (2004) Handbook of road safety measures, Elsevier

Grosse, S.D., Teutsch, S.M., & Haddix, A.C. (2007). Lessons from Cost-effectiveness Research for United States Public Health Policy. Annual Review Public Health, 28, 365–391.

SafetyNet (2009) Cost-benefit analysis, retrieved 15/03/2013

CEDR., (2008) Best practice for cost-effective road safety infrastructure investments, Conference of European Directors of Roads

Terms of Reference No.6

Peden, M., Scurfi eld, R., Sleet, D., Mohan, D., Hyder, A., Jarawan, E. and Mathers, J., (2004) World report on road traffic injury prevention, World Health Organisation (WHO) and World Bank

Meuleners, L., Lee, A., and Haworth, C., (2006) Emergency presentations by vulnerable road users: implications for injury prevention, Injury Prevention 2006;12:12–14. doi: 0.1136/ip.2005.010389

Constant A, Lagarde E (2010) Protecting Vulnerable Road Users from Injury. PLoS Med 7(3): e1000228. doi:10.1371/journal.pmed.1000228

Shanley C, Poulosb, R., Oliviera, J., Watsona, J., and Grzebietaa, R., (2010) Relative injury severity among vulnerable non-motorised road users: Comparative analysis of injury arising from bicycle–motor vehicle and bicycle–pedestrian collisions, Accident Analysis & Prevention, Volume 42, Issue 1, January 2010, Pages 290–296

WHO (2008) APOLLO Policy briefing: Road traffic injuries among vulnerable road users

WHO (2013) Global Status Report on Road Safety 2013: Supporting a Decade of Action, ISBN 978 92 4 156456 4