

TRANSCRIPT

ROAD SAFETY COMMITTEE

Inquiry into serious injury

Melbourne — 22 July 2013

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Witness

Dr J. Garrard, senior lecturer in public health, school of health and social development, Deakin University.

The CHAIR — I welcome Dr Garrard to the public hearings in the inquiry into serious injury by the Victorian parliamentary joint-party Road Safety Committee. I would like to thank you for taking the time to prepare a submission and to appear before us. Evidence given today is protected by parliamentary privilege. Comments made outside the hearing are not afforded such privilege. The transcript will become a matter of public record. You will be sent a copy of the transcript of today's hearing, and you are invited to make typographical and factual corrections and return it to the committee staff. It will then be made available for us to place on our website. We have probably 40 minutes during which there will be a combination of your speaking to your presentation and seven or eight questions that we wish to put to you. We would like to leave half that time for those questions, so could you move further through your presentation reasonably swiftly by speaking to the main points.

Overheads shown.

Dr GARRARD — I will be as quick as I can be. Thank you very much for the opportunity to present some ideas about how to improve road safety for more vulnerable road users — pedestrians and cyclists. I hope you will find them useful. My presentation falls into two broad categories, and I summarise these in the points on the slide. I will not say much about them now, as I will be going into a little more detail as I go along. Basically I will be arguing that cyclists and pedestrians are overrepresented in serious injuries. Walking and cycling are considered vulnerable vehicles. We are not protected by a wonderful shell around us, which means that injuries can be minimised by the vehicle. Often walking and cycling are undertaken by more vulnerable population groups such as children and older adults, so they are doubly at risk. There is potential for further increases in those injuries if we do not take action, because of our ageing population, and I will say a bit more about that. The increased promotion of walking and cycling is another factor.

There are many co-benefits associated with reducing injury, and I will talk a bit about them. I will argue that Victoria is unlikely to meet its target of a 30 per cent reduction in deaths and serious injuries if it does not address serious injuries among cyclists and pedestrians. The causes of them are different, so we need to do different things. Countries that have successfully got very high rates of safe walking and cycling can give us some guidance on where we should be looking.

Just moving to the first point, overrepresentation of pedestrian and cyclist injuries, if we focus on the pedestrians in the graph, the blue column is the proportion of trips that people undertake, predominantly in Melbourne but some regional areas are also included in the VISTA data. They show that 12 per cent of trips by householders are undertaken by walking, but 16 per cent of fatalities are among pedestrians, and 20 per cent of severe injuries — that is, more than 14 days in hospital — are among pedestrians. For cyclists it is a similar picture, from a low baseline: 2 per cent of trips, 3 per cent of fatalities and 4 per cent of severe injuries. This is trip data only. You will appreciate that pedestrians and cyclists do not travel as far as people do by car, so that is not a terribly good representation of the risk according to exposure.

We attempted to get a measure of that increased risk due to increased exposure by looking at the relative risk of bicycle to car injury per kilometre travelled in the greater Melbourne metropolitan area. Based on police data, cyclists have 13 times the risk of serious injury per kilometre travelled. Based on hospital data, which captures more serious injuries, it is a 34 times risk.

This is that double jeopardy that I referred to earlier: unprotected travel modes plus more vulnerable travellers. This is data for old pedestrians. TAC claims data shows that about a third of those claims are for people aged over 60 years. Looking at the second point, for the greater than 14 days in hospital — these are your severe risks — the 70-plus age group has an annual average of 207 cases and the 0 to 25 years age group has 189. Remember that this 0 to 25 group is the one that we tend to focus on a lot in road safety strategies, and we tend not to focus on the others. This is pretty dramatic data, when you look at it, particularly as 14 days in hospital is quite severe. Pedestrians aged over 60 years have the highest proportion of severe injury claims. The data is there. As the age goes up, the proportion of severe relative to total hospitalised injuries increases pretty dramatically.

This slide is just to point out that we should not encourage pedestrians to get off the roads because they are unsafe, because we can tell from what people have achieved in other countries that high pedestrian injury rates are not inevitable. Norway, the Netherlands and Sweden have lower pedestrian fatalities. Sorry; this is fatalities rather than serious injury, because it is hard to get comparable serious injury data. They also have about double

the rate of walking. So they are doing a lot better than we are. Similarly for cyclists injury rates, this is data for injury per 10 million kilometres travelled, and we have a much higher rate than a lot of other countries.

Moving on to the argument related to our changing demographics, we are probably all familiar with the ageing bulge that is happening in our population. You have seen the data for the risk of injury among older pedestrians and to some extent older cyclists. That means that if we do not do something about it, the population distribution will mean that there will be a steady increase in the injury rate among those people.

This is headed 'Future trends: (ii) transport mode shifts'. As Robert Doyle said, 'No city in the world is trying to encourage more cars to come into the centre'. We have federal, state and local government policies across several sectors, from transport, health, environment and sustainability, all saying that we should be trying to improve and increase the rate of active rather than motorised travel for small to medium distance trips. I would also argue that improving the safety of pedestrians and cyclists is a good way of doing it. It is the gift that keeps on giving, because not only does it reduce road trauma, which I think is a fantastic gift to people and their families and everybody in the community, but it also removes a major barrier to increasingly using active modes of travel. It increases physical activity levels and all the health and wellbeing that goes with that. It reduces traffic congestion, air and noise pollution and greenhouse gas emissions, and it improves community livability.

Next is a summary by a colleague, Todd Litman, over in Canada. A lot of our public policy planning objectives are listed in the left-hand column. These are a lot of the public policy things that we want to achieve and things that challenge us. Expanding roadways ticks one box — although some people debate the extent to which expanding roadways does reduce traffic congestion. We hear a lot about efficient and alternate fuel vehicles. They tick the energy conservation and pollution reduction boxes. Mode shifts, which means moving to more non-motorised travel, and smart growth, which encourages more active travel, tick a lot more boxes.

Achieving Victoria's road safety strategy goal of a 30 per cent reduction is going to be hard if we do not do something about pedestrian and cyclist injuries. I have data there for cyclists, showing over the past decade or so an annual 9 per cent to 10 per cent increase in serious injuries. For pedestrians it is about a 1 per cent to 3 per cent annual increase in serious injuries.

How we do it? Coming to the 'How?' part of my talk, we have to understand that there are different characteristics and causes of both serious injuries compared to fatalities and serious injuries among pedestrians and cyclists compared to motor vehicle occupants. In particular, most pedestrian and cyclist serious injuries are not for young men speeding, drinking, not wearing seatbelts and hooning. These tend to be the focus of a lot of our current road safety strategies. On the other hand, serious cyclist casualties are more common among middle-aged men, rather than young men, cycling in urban areas and on main highways with lower speed limits, at intersections, on weekdays and during daylight hours.

Next, this is from a lovely study that was done in Queensland — lovely in that it has a lot of data; not lovely in terms of the outcomes. In the more than 6000 crashes between cyclists and motorists, they looked at the problem when the motorists were at fault. Once again, it was primarily failure to take care and failure-to-yield violations. They were undue care and attention, disobeying give-way signs, failing to give way — and you can read the rest.

My argument is that multiple diverse causes require multicomponent interventions. The things that we have done in the past have been very effective and we should keep doing them: seatbelts, drink-drive laws, random breath testing and speed controls. We are now at the limit of probably no longer having any more silver bullets. The things we have done were silver bullets to some extent. They produced measurable, substantial improvements. We have probably run out of our silver bullets, and now we need to think about what I have called a 'chipping away' strategy, looking at the multiple strategies that individually might have only a small impact but when combined into a package can have a substantial impact.

How do we do it? I think Vision Zero and the safe system provide a very good framework for planning it. Vision Zero has a lot of benefits. The one I am focusing on here is that it reminds us not to fall into the 'only 1 per cent' trap. It might be only 1 per cent, 2 per cent or 3 per cent. I have heard people in road safety say it: 'Oh, we don't worry about that too much; it's only 3 per cent'. Vision Zero reminds us not to do that, because there might be multiples of those 1, 2, 3, 4 and 5 percenters. Often they are cost-effective strategies, so it is not

as if we are throwing a lot of money at a 1 percenter. Many of the 1, 2 and 3 percenters are quite cost-effective strategies. There is an example there of a review of 16 economic valuations of walking and cycling infrastructure or policy. The calculated benefit-to-cost ratios with a median value of five, so you spend \$1 and get back \$5, had a range from minus 0.4 — only one was negative — and some that were considerably greater, with \$32 for every \$1 invested. The safe system framework is a good reminder of where the 1 percenters are hiding — and I say ‘hiding’, using it figuratively. It is because people do not seem to be able to see them or take action on them.

In terms of the first pillar, the safe roads approach, we need to integrate ‘safe mobility’ goals for pedestrians and cyclists into urban planning — in other words, plan it from the outset. When we are planning communities and developments, how can we integrate safer mobility for those users within that planning?

About 50 per cent of our household trips are less than 5 kilometres, so how can we plan neighbourhoods that allow children, older people and some women who have more concerns about safety to move around pleasantly by foot and by bicycle? We should actually prioritise pedestrian and cyclist mobility in access areas where they move around frequently, such as residential, shopping and service areas. Then there are the things that we are a bit more familiar with: extend our network of high-quality footpaths and bike routes, and there should be good separation and good management of interactions.

The second pillar of the safe system approach is safe vehicles, and I like this quote from the *Windsor Star*, over in the USA:

Occupants of a car are protected by seatbelts, airbags and dashboards devoid of sharp objects. A pedestrian’s only defence generally is to get out of the way.

We are not quite that bad, but there is a tendency to think it is up to the pedestrians and cyclists to look out because they are more vulnerable.

We can improve vehicle design through improved bullbar regulation, window tinting, side underrun protection for heavy vehicles and energy-absorbing bonnets, windscreens and pillars. These developments are fairly new. There is also blind spot mitigation and windscreen airbags, and two quotes there say that these sorts of things are a bit more than the 1 percenters, with 21 per cent for the improved vehicle design, although that is going a bit back in time. It may not be quite as good these days, as we have made some improvements.

The European Transport Safety Council says around 20 per cent of pedestrian casualties can be improved through intelligent speed assistance technology. There are many, many ways of doing that, and I do not have time to talk about them now.

Safe speed is the third pillar of our safe system approach, and I want to highlight that speeding includes when both travelling above the speed limit as well as going faster than the conditions would warrant. Lower speed limits mean that exceeding the speed limit, both deliberately and inadvertently — and we have to acknowledge that a lot of exceeding the speed limit is inadvertent — occurs at a lower speed, and therefore a safer speed, if you do it inadvertently.

Traffic-calming measures including street design can also assist in reducing speed, and a lot of people say you should not just reduce speed limits unless you concurrently implement traffic-calming measures. Victoria’s speed limits are high by international standards, and I have the data if you want to have a look at it. This applies to most areas, probably except our freeways. Our freeways tend to be a little lower, but our urban speed limits — residential, arterial, feeder roads — all generally have much higher speed limits than by international standards.

You may well be familiar with this next slide, so I probably will not dwell on it if you are. Basically it looks at the probability of fatal injury for a pedestrian struck by a vehicle at different vehicle impact speeds. Some people have now moved that curve slightly to the right with revised vehicle design, better trauma care and things like that. This is a little bit old, but if we are looking at serious injuries rather than fatalities, the curve would certainly move to the left.

The other key thing about that graph is the non-linearity of the relationship between the probability of fatality and speed. A lot of people do not understand that a few kilometres more can make a big difference, and it is that non-linear relationship that makes that difference. It is not as if you go up and you double the speed, you double

the risk. Non-linearity, which is that sharp, steep bit in the middle, says you only have to increase speed by a little bit to get a much, much higher risk of severe or fatal injury.

Looking now at impact at particular speeds, this is how you actually prevent the contact occurring in the first place or reduce the speed of contact if possible. Having a look at the bottom line there, at 50 kilometres an hour driving along a suburban street, if suddenly a child runs out onto the road from the footpath chasing a ball or rides a scooter down the driveway, the driver reacts, it takes at least a second to react to that potential hazard, and in that second the driver at 50 kilometres an hour has travelled 13 metres — 43 feet, which is about your average suburban house block — before they even react. The foot goes on the brake, the braking system of the car kicks in and it takes about another suburban house block to actually stop, to avoid that child or elderly person stepping onto the roadway or something unusual happening. At 30 kilometres an hour, the bar above it, it does it in half the space. So the reaction time is quicker and the stopping time is quicker so the distance travelled is a lot less.

Moving on to safer road users, the fourth pillar, it is going to be important — and this is what happens overseas — to put a much greater responsibility for avoiding harm back on the motor vehicle occupant. So we need a higher duty of care, stricter liability and extensive driver education on the importance of interacting with cyclists and pedestrians — we do not do much on that in our licence testing and education programs. There should be greater attention to traffic offences that are hazardous. We do not do much about dooring, safe passing distance and yielding to pedestrians when cars are turning at intersections. It happens all the time.

I will not go into the detail of that last one, but it seems that a lot of these crashes that seriously injure and sometimes kill pedestrians and cyclists are seen as unfortunate accidents when they really are preventable actions, and we can do things to prevent them.

Next is an example from Germany of their licence testing program. It states what you should do in those circumstances. The top two and the bottom left are the ones we are familiar with — giving way to pedestrians and cyclists when you are turning at intersections — but the one on the bottom right-hand side is a child on a bike on the kerb, and the correct answer to that one is that I, as a driver, must be extremely cautious because that child might do something unpredictable. So the appropriate mental attitude there is one of caution because you have to anticipate unpredictability among some of these more vulnerable road users who are more likely to make mistakes.

Moving on now to the role of mass media campaigns, we have had some good ones, but with the negative scare campaigns — maybe we keep them going — I think there is room to think about alternatives. For a long time I have been very interested in the notion of using more humour, more ways of sneaking under people's radar and not raising the defence mechanisms to these sorts of messages that they do not want to hear, because we are pretty good at putting up barriers to the shock and the horror and the blood and all the things that we have seen in the past and which have been effective in the past. I think it is time to think about using some alternative approaches and using multimedia channels also.

Let's face it, the media has moved a long way in my time and in recent years, and we need to be making much better use of these more effective channels of communication. The next slide is — you guessed it — *Dumb Ways to Die*. It was the one that struck my attention late last year. I thought, 'Oh, this is interesting'. It is humour, admittedly black humour, and I wondered what would happen with the advertisement. I actually had my students do an assignment on it because I was so interested in it. We read about it and it went viral, it was viewed by tens of millions of people, and the reach of it was fantastic in terms of the number of people exposed to it. But the key fact is: has it had an impact?

A few months ago Metro Trains said yes to that. I have not looked at that 30 per cent reduction in the number of collisions and near misses they are claiming. I do not know about the validity and reliability and rigour of that figure. If it is correct and it can be confirmed, it is amazing to think that one campaign that was apparently fairly low cost could achieve that level of impact. The bit that I have highlighted there in red says, 'The aim of this campaign is to engage an audience that really doesn't want to hear any kind of safety message'. That is crucial to its success. It is that humour that is getting out from under the radar and being creative — not the same old same old but doing something different.

I have had 15 minutes or so this morning. There are many people who have produced quite comprehensive reports that list a lot of strategies and approaches that we can use to make the sorts of improvements that I have been arguing for. This slide is a list of them. The only reason I have put this slide up is that the WHO reports are very practically oriented. They say, 'Yes, these are the things we know we should be doing, but we acknowledge they can be difficult', and they give practical advice in terms of putting these policies and actions into practice. I have put that up as an example of what that report contains.

The one they did in 2008 on speed control is equally good. We know it is hard to reduce speed limits, but these are the sorts of strategies in terms of communication and consultation, working with people, that can help to implement the strategies that we know are effective, but we are not implementing them because we are concerned about how difficult it is and the consequences of doing unpopular things.

Thank you for that, and thank you to Victoria Walks, which paid me to do some work on an earlier submission to the Victorian road safety strategy. That is the link to it there on the last page, and I have used some of the data in my talk today. Along with Victoria Walks, I have affiliations with the Cycling Promotion Fund, the Amy Gillett Foundation and the National Heart Foundation. I am doing a study with COTA, the Council on the Ageing, looking at pedestrian walking. All of those people would be very happy to be involved in discussions, negotiations and planning about improving safety for pedestrians and cyclists. Thank you.

The CHAIR — Thanks very much, Dr Garrard.

Mr ELSBURY — You have already outlined some of the initiatives that can be brought forward to be able to deal with serious injury, but in your view what is the first step that is required to be taken by the Victorian government to work towards reducing the rate of crash-related serious injuries in Victoria?

Dr GARRARD — When you say the first step, I guess you are meaning for more immediate impacts, because I think there are some things we can do immediately and there are some longer term investments.

Mr ELSBURY — The strategy that you think is most urgent and that would get the most results.

Dr GARRARD — I would say urban design and speed control would be two key ones. Some urban design is longer term, but we can also do some work on retrofitting areas that make them more pedestrian and cyclist friendly — certainly walking and cycling infrastructure, particularly cycling infrastructure. I think we are fairly well served by footpaths in most of Victoria, certainly in the metropolitan area if not the rural areas, but cycling infrastructure I think is limited. A lot of our cycling infrastructure tends to be radial and into the city, to cater for the commute into the city. I think we have to go more neighbourhood oriented. We are now having higher density development in some of the middle and outer suburbs and traffic congestion is increasing in those areas, and I think we need to do more about helping people to get around for those short household trips by bicycle and by walking. We could do a lot more for the infrastructure.

In terms of the road users, there are certainly things we can do with helping to improve the behaviour of both the pedestrians and the cyclists themselves. We should think about how we can tackle the user end as well as the counterparts in terms of the motorised traffic interacting with them. I think that all children should have bicycle education at school and that traffic education in a general sense, that improves pedestrian and ultimately driver education, should be mandatory. We can look at that as well. They would be the key ones that I would look at initially, I think.

Mr ELSBURY — In your submission you state that 95 per cent of pedestrian serious injuries are caused by collision with a motor vehicle. What is the percentage for cyclists?

Dr GARRARD — Did you say severe or serious?

Mr ELSBURY — I said serious.

Dr GARRARD — For serious injury for cyclists I think it is about a third, when you define 'serious' as hospitalised — because some of them are cyclists running off the road, running into other cyclists or hitting objects. I think — maybe do not quote me directly on the data — it is about a third. If you go up to the more severe of the cyclist injuries, as the severity increases, the motor vehicle involvement level increases. For

fatalities it is probably close to 100 per cent, I imagine; for severe injuries it might be around 70 per cent or maybe 80 per cent, but I am partially guessing on those data.

Mr LANGUILLER — Thank you. Can I first take you back to your presentation. When you talk about speed, is there not a missing chapter that relates to the speed by cyclists, in this case? I am a cyclist, and I know that there are a number of forms of cycling. When you go training riding you go at a high speed parallel to vehicles and the risks increase. Is it fair to suggest as well that we need to deal with and tackle the question of the forms of cycling?

Dr GARRARD — I agree with you. Yes, it is important to distinguish, exactly as you said, the different styles of cycling. I think sometimes some people mix up the two a bit. I think the Yarra trail and some of those routes coming into the city are good examples of where cyclists are perhaps using them for training at a relatively high speed and it is not a good mix with other people on that fairly limited infrastructure. So I agree with you. If you go, as I do, along Beach Road on a Saturday and Sunday morning, where people cycle for fitness and exercise, they tend to be faster. I think in the places where you interact more with both pedestrians and other people using those facilities, cycling speed should be lower. It should be a mindset that it is not a training exercise but is commuting and getting around and it is respecting other path and roadway users. We can do that through regulation or education processes, or there might be an element of both to help to improve that.

Mr LANGUILLER — I know from experience. I rode into a door, and at the time I knew that had I not been riding so fast I would probably have been able to stop. I am just trying to be fair in that it is incumbent on those who go cycling to use speed in a safe way as well and recognise that we are co-sharing.

Dr GARRARD — Definitely.

Mr LANGUILLER — I predominantly drive a car, but I do a lot of cycling and recognise that. What are the sociodemographic, environmental and behavioural factors associated with serious injuries among pedestrians and those associated with serious injuries among cyclists?

Dr GARRARD — You have seen a little bit about the sociodemographics of pedestrians. They tend to be a little bit of a U-shape distribution across age, where there are more among young people — that is, before they are 18, so they are children and adolescents — then there is a dip for middle-aged people and then it goes up very dramatically for older people. The distribution of gender for pedestrians is slightly more men than women, I think. If you move into the demographics for cycling injuries, they are predominantly middle-aged men. That is probably mainly because they are the ones who are out doing it, so they are overrepresented demographically.

On other demographics, particularly walking tends to be a more socially inclusive way of getting around, which means that it is not dependent on socioeconomic status. In a way, that is good from a public health point of view of people getting exercise. We know from sport and recreation that it is usually people in higher socioeconomic groups who get more exercise through sport, leisure, gyms and all that. If we can encourage walking and cycling in the community, it is a bit more socially inclusive because it is done by people across the spectrum demographically. That probably means that they are also being injured at similar rates demographically.

Mr LANGUILLER — Just quickly, is there a geographic dimension to all of this — the western suburbs versus the eastern suburbs, inner versus outer?

Dr GARRARD — That is a hard one. There is certainly a rural/regional and metropolitan one. I know that the fatalities and serious injuries among drivers, particularly fatalities, tend to be overrepresented in rural areas. It is the exact opposite for pedestrians and cyclists. It all happens mainly in metropolitan areas. In terms of geography, in metropolitan areas it is very highly dependent on the particular area and the conditions in the area.

Mr LANGUILLER — In your submission you refer to European data which indicates that when road systems are made safer for vulnerable road users they are made safer for everyone. Can you please expand on that?

Dr GARRARD — I can. I have a graph which I did not show you today. Basically it is a correlation between levels of walking and cycling and overall road fatality data for countries. It shows an inverse trend. In other words, the more walking and cycling there is in a country, it tends to have a lower overall road fatality

rate. Injury data is hard to get across all those countries. So if you make the road system safe for pedestrians and cyclists, you make it safe for everybody.

Mr LANGUILLER — Can you cite any particular cities that come to mind?

Dr GARRARD — Probably the best performers internationally would be in the Netherlands. It was great to hear that some members of this committee had actually done a study tour of those countries.

The CHAIR — You might have read that.

Mr ELSBURY — You read that in the *Age*.

Dr GARRARD — I read that and I thought, ‘I cannot recommend that more highly, that that group should go to those countries’ — because reading about it and reading the reports is one thing, but seeing it in practice is another. I hope that you had an experience similar to the one I had two years ago.

Mr ELSBURY — Can we give your phone number to a journo at the *Age*?

Dr GARRARD — I will say that to any journo who comes near me. You must go and see how this happens in practice, and I am so glad to hear that you did. I also did a study of the Netherlands two years ago, where for two weeks we cycled around the Netherlands and talked to all the key people who had been implementing cycling infrastructure and safety in the Netherlands. It just blows your mind to see what can be achieved when a country really focuses on achieving a particular outcome, so I hope you had a similar experience.

Mr LANGUILLER — We can assure you that that part will certainly be quoted in our report.

Dr GARRARD — Go for it; absolutely go for it. I cannot think of a better investment of taxpayers money. What could be better than going to learn from the countries that have done it successfully? I know people say, ‘Look, Europe’s different to Australia’, and all the rest of it. It is in some ways, but we should not be saying that because they are so different we cannot do it here. The report Fred Wegman did — he is an absolute international guru on road safety; he is Dutch — for the South Australian government is good because it brings that international experience and expertise to a more local context, which is the Australian context. I highly recommend that report as an example of bringing that sort of experience.

Lots of countries, cities and regions are now learning from that international experience, including ones just like us. America is very patchy. Some cities in America are doing extremely well in terms of doing the sorts of things they do in Europe. The UK is definitely moving in that direction, as is another Anglo country very much like ours, Canada. There is some interesting stuff happening in New Zealand. They do it well, we can learn from it, it can happen here. It is a matter of translating their expertise and experience and the knowledge they have gained to our local setting.

It does take, dare I say it, courage and leadership sometimes, particularly because there are some interests that do not support, for a whole lot of reasons, the sorts of safety issues that we are focused on. My other argument would be that we should not be allowing some of these interest groups to have precedence over the safety of our community — particularly our kids, our older people and people who choose to get around by foot or by bike. That is why I get concerned about things like bullbars and window tinting and some things that people do not want to happen because it might interfere with the business that they run. I think that we have to set some priorities.

Travel speed is another example. We sacrifice pedestrian and cyclist safety to save seconds in travel time for motor vehicles. To me we are getting our trade-off at the wrong point. There has to be a trade-off, clearly, but we are moving it too far in the direction of improving travel times. Getting from A to B, which might be 10 or 20 or 30 kilometres, to save a few seconds, literally, per kilometre, means we are sometimes compromising pedestrian and cyclist safety. Vision Zero helps us not to do that because it says, ‘If you really do want to reduce the injury and fatality rate to zero, then why are you trading off pedestrian and cyclist safety for slightly improved travel time for motor vehicles and other motor vehicle safety?’.

A couple of studies in Europe showed that reducing the speed limit on feeder roads into a town from 50 to 40 resulted in increased travel time of about 3 or 4 seconds per kilometre, from memory. Once again my memory

might not be correct there, but sometimes it is a small improvement in travel time and we pay for that in terms of increased injuries. Have I answered your question?

Mr LANGUILLER — Thank you. Absolutely.

Mr PERERA — Your endorsement will be on the Hansard transcript. Thank you, Dr Garrard. In your submission you intentionally do not outline a detailed list of cost-effective countermeasures to reduce serious injuries among pedestrians and cyclists on the basis of these being numerous and context dependent. If asked to choose, which three countermeasures would you identify as effective in reducing serious injuries among pedestrians and cyclists as a result of collisions with motor vehicles?

Dr GARRARD — I would pretty well argue that you have to do a lot of little things, but to the extent that there are some major things we can do, I think for me — and the evidence is pointing in that direction — speed is the key one. There is no doubt about it. Speed is a proven measure for reducing injuries, particularly among our more vulnerable road users. It is not quite so much the case for motor vehicles because of that protection, but remember that pedestrians and cyclists do not have that protection. Speed is key. That is why I said that the WHO 2008 report is good.

We acknowledge that it is difficult. It is contentious. The shock jocks are going to go mad: ‘What? You’re going to walk out in front of a car waving a red flag. We’re going that slow?’. I think we have to think about how to counter media attention. We have to do as much as we can to get strong, consistent, bipartisan support for speed camera programs because they are effective and they will also be effective for pedestrians and cyclists. Often it is not just having a cost-effective strategy; it is about how you implement it because of the challenges that can be involved in that. Speed is the key one.

Mr LANGUILLER — Just a tiny interruption if I may: did you say for motorcyclists and cyclists?

Mr PERERA — For motor vehicles.

Dr GARRARD — Probably for motorcyclists some of the factors would be similar, yes. I do not know the motorcycle injury data as well as I do for pedestrians and cyclists, but it could well be similar.

Mr LANGUILLER — Sure.

Dr GARRARD — That is probably why those countries that have these lower speeds, better urban design, more planning for pedestrians and cyclists and better infrastructure have better road tolls overall, because those sorts of things benefit many road users. So if you think vulnerable, you are looking after some of the other ones as well, whereas if you just look after the other ones — the majority, who are the motor vehicle occupants — there is a tendency to neglect the more vulnerable ones. But if you think vulnerable, then everyone benefits.

Mr PERERA — So this is speed in terms of motor vehicles?

Dr GARRARD — Yes, motor vehicles.

Mr PERERA — Not cyclists — —

Dr GARRARD — For cyclists, bicyclists, there is a factor in some injuries. They are more likely to harm themselves than other people, although in Victoria’s history there have been two fatalities of pedestrians who were struck by cyclists. That is of course far less than the number of pedestrians struck by motor vehicles, but it can happen.

Mr PERERA — Are you pleased with the speed measures implemented in Victoria and Australia?

Dr GARRARD — I could not support them more. It can be disappointing sometimes that people sometimes buy into that argument that it is just revenue raising. We have demonstrated time and again that it is not; it is a road safety factor. I think sometimes people can play political games a little bit with the fact that speed control can be unpopular. I think we have to stop that and get together this bipartisan support for speed reduction, speed control, including the road camera program, and do that effectively, sell the benefits of it.

When you get down to the lower speeds that I am recommending in residential, service and those sorts of areas, you need traffic calming as well because that is more intuitive. If you leave wide open roads in a suburban street and say, 'It's 30 kilometres an hour', people say, 'What?', because line of sight is good and everything in their brain is telling them to go for it and you are trying to tell them to go at 30, so often the street design, which is another traffic-calming measure, has to accompany the regulation of speed limits and also the enforcement of speed limit control.

Of course all of that is helped by the internalisation of safety in people's minds. I think we have to develop a culture of road safety. It has to be a culture of not just looking after me and my kids strapped in the back seat; it is about looking out for all those other people out there and those kids who might be walking or cycling to school, not strapped safely in the back of my car. We have to think in a more community-minded way about the public benefit as well as the private. We hear so much about buying a car with a five-star safety rating. What about its aggressivity rating? Some cars are much more likely to cause damage to other people than others. We focus on buying a safe car for 'you and your family', but what about buying a safe car that will benefit other people in the community? I think that is something we should also look at.

Mr PERERA — Do you envisage any further measures, or are you happy with it as it is?

Dr GARRARD — I think infrastructure could definitely be improved, particularly for cycling. I think in metropolitan Melbourne pedestrian infrastructure in terms of the footpaths is quite good. That is the separation part of it. I think the interaction part of it we could do better — for example, when people have to cross roads. I am working for the Council on the Ageing and Victoria Walks. Some elderly pedestrians do not have time to cross roads in the time that is allocated at signalised crossings. Improving that sort of infrastructure for older pedestrians I think is important. Infrastructure is important. While we have done quite well, I think there is a lot of room for improvement.

Mr ELSBURY — And that would include motion sensors on traffic lights?

Dr GARRARD — Yes.

Mr ELSBURY — In the Keilor area near an aged-care home there is a motion sensor that actually makes sure that the area is clear.

Dr GARRARD — Excellent.

Mr ELSBURY — Well, it does not make sure, but there is a better chance.

Dr GARRARD — There is evidence which found that elderly people are not just concerned about traffic danger; they are concerned about falling as well. They spend a lot less time actually looking at the traffic around them when they are crossing the road because they are very busy looking at the surface to make sure that they do not have a fall injury. Acknowledging the limitations and taking measures to address those limitations — for example, among elderly pedestrians — is going to be an important part of it.

The other thing we should not do, but which we tend to do, is say, 'Those dear old folk — we have to teach them how to cross the road properly'. There is no evidence — systematic reviews have shown that there is really not much effect from teaching older people how to cross roads safely. What we have to do is create the environment that enables them to cross safely. We should not be discouraging them from doing it because independent mobility is hugely important as people get into that older age group; the last thing they want to do is not be able to get outside their house because they cannot walk.

The other thing is that physical activity at all ages is beneficial. If we can encourage people to stay active, that actually prevents falls and can help prevent older people from being injured — if they remain active and supported. Putting effort into promoting physical activity among older people would have more benefit than taking them to road crossing school to teach them how to cross safely. There are some cost-effective measures.

Mr PERERA — I have a supplementary question. What have other parts of the world done better than us in terms of speed control measures?

Dr GARRARD — Most other countries, actually, mainly OECD countries — there is a table, which I did not have time to put in the talk — —

The CHAIR — If you could arrange to have that forwarded to us, that would be very helpful.

Dr GARRARD — I will. MUARC did one in 2006. I have that data; it is readily accessible. This update has just been done by the international transportation forum of the OECD. It is a lovely long table showing speed limits for different types of roads. It looks at residential, service areas, major roads and freeways. Many countries have much lower speed limits, particularly in residential areas — 40 kilometres an hour or 30 kilometres an hour is fairly common. Similarly they do not have too many feeder roads and arterial roads within urban areas that are 80 kilometres an hour, like we do. They do have higher speed limits for their expressways. Sometimes they are around 110, 120 — even higher.

Mr PERERA — You claim in your submission that it is difficult to specify the cost-effectiveness of individual measures, as an integrated package of measures is required to reduce the burden of injury at the population level. How does this work at the policy level, where the allocation of resources and priority settings are sometimes based on comparing the cost-effectiveness of individual road safety measures?

Dr GARRARD — That is a really tricky one. There was a big review of cycling measures and cycling infrastructure done by some of my US colleagues a couple of years ago. They looked at individual measures that can improve and promote both cycling and its safety. What happens is that if those measures have a 1 per cent, 2 per cent, 3 per cent, 4 per cent, 5 per cent or maybe even a 10 per cent impact, scientifically it can be difficult to measure that precisely and get a statistically significant finding for that. But if you combine a lot of these, you get a much bigger effect size and you can then measure the effect size from the combination of efforts.

That is why sometimes with a policy analysis where you say, ‘Okay, what can we learn from best practice? It seems as though the countries that have done it well or the cities that have done it well or the regions that have done it well have done this, this, and this’, it is scientifically hard to measure that that produced 8 per cent, that produced 12 per cent, because they are not big effects; it is the combination. In more of a policy evaluation you would say, ‘Okay, let’s base our policy on what we know about world’s best practice, because this does seem to have been effective, and let’s monitor the impact’. That is what some cities have done. That paper had a list of 15 cities that had implemented various packages of measures promoting cycling and safety. It basically said, ‘This is the before and after measure of the implementation of that policy’.

By all means try to do, ‘What is the effect of A, B, C and D separately?’. It is challenging. In the absence of that I think we have to act not just on evidence of a percentage change and a cost effect for individual measures but to also bring other levels of judgement to the policy decision-making. It can be, ‘Our best evidence is that this is going to work. Let’s do it and monitor it, maybe pilot test it’, but I think trying to put that ‘Is it 5 or 6 or 7 per cent?’ on lots of different things and not doing anything in the meantime because you are not getting the answers that are going to be useful is a bit constraining.

The CHAIR — Dr Garrard, thank you very much for the comprehensive nature of your submission which you spoke to, for responding to our questions and for your detailed insight into this very important area of road safety. Thank you for your time.

Dr GARRARD — Thank you very much for listening to me.

Witness withdrew.