TRANSCRIPT

ROAD SAFETY COMMITTEE

Inquiry into serious injury

Melbourne — 11 September 2013

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The CHAIR — I welcome everyone here today to the formal public hearings of the joint-party parliamentary Road Safety Committee's inquiry into serious injury. By way of general background, the commentary given today is protected by parliamentary privilege. Comments made outside the hearing are not afforded such privilege. The transcript will later become a matter of public record. As you commence to speak, it would be helpful if you could give your name and role to assist the Hansard record. Following the completion of your submission you will get a copy of the Hansard transcript, to which you will be able to make any necessary amendments or corrections before returning it to us.

If anyone has a mobile phone, I invite them to switch it to silent. I invite you, David, to direct the traffic, and to commence your presentation. I also add my thanks to everyone who has contributed to the presentations today to assist us in our work. A number of people have put many hours into the VicRoads submission, and I thank you on behalf of my colleagues.

Overheads shown.

Mr SHELTON — Thank you very much for having us along to speak to this very important matter. I want to start by quoting a couple of very short passages from *Victoria's Road Safety Strategy 2013–2022*:

> This strategy includes an Australian-first commitment to developing a specific target to dramatically reduce the most severe forms of injury …
>
> …
>
> Our vision is zero deaths and zero serious injuries on our roads.

I have drawn that out because through this new strategy Victoria has committed to addressing road trauma and the most severe forms of that through developing new measures to focus on serious injury, and we welcome the opportunity that this inquiry brings to focus on this very important area.

Firstly, I will go through what we currently measure. In Victoria a serious injury is currently classified as an admission to hospital. This is consistent with the national definition, and it relies on police data and police validation of the status of admission to hospital. There are a number of issues that we have dealt with over time in relation to that, and those are covered in our submission. I will not go through those in depth here, but you may wish to ask questions about them.

There are also some known levels of underreporting, particularly as it relates to cycling. This occurs particularly where police are not in attendance or it is not brought to their attention that injuries have occurred, but there have been admissions to hospital as a result of crashes on roads.

TAC data, whilst also correlating well with our serious injury data, is a different dataset. It has different definitions around what is captured there. We certainly use it to check for correlation between trends in the two datasets. Of course accuracy in our data is important to know whether we are on track with our strategies to reduce road trauma, but also the detail of data is important to understand what sorts of countermeasures we need to address, particularly to bring down road trauma.

Road trauma has been persistently difficult to bring down in serious injury when compared with the road toll. Over the last 25 years the road toll has come down by in the order of 60 per cent, but the figure for serious injury is 45 per cent.

In relation to measures of the cost of road trauma, we endorse the adoption of the willingness-to-pay method, and we would strongly support a move towards that but would suggest that should happen at a national level. There are a number of reasons for that, which I will go into in a moment. Willingness to pay gives us a much better reflection of a community's valuation of road trauma than does the human capital approach. New South Wales has done some important trial work in developing willingness-to-pay measures. We have had quite a bit of consultation with NSW on WTP and observed, particularly through Austroads, the New South Wales work.

We have some concerns about it. In fact New South Wales also shares the view that if its willingness-to-pay figures were to be adopted nationally, they really ought to be reviewed. I guess it is important to note that the New South Wales data have been put together on a fairly limited survey, both in terms of the number of people surveyed and the scope of the survey participants. There were about 300 people or so in total, and they were

drawn from car users and pedestrians. There were some significant omissions, particularly the heavy vehicle operators, where we believe there would be quite substantial differences in willingness to pay.

The federal, New South Wales and Victorian treasuries already support both human capital and willingness-to-pay costs, so it is not really a question of whether treasuries would accept this shift; it is about us developing appropriate confidence in data to make the shift from our current human capital approach to a willingness-to-pay approach.

We have tabulated here with our presentation and submission to you the comparative costs of approaches, and I guess this really draws out some of the substantial differences that we can see. As a general rule, willingness to pay will actually provide higher levels of value of fatality and value of serious injury. This is intended to throw a much stronger light on the public's concern and indeed willingness to pay for reductions in trauma. The New South Wales figures that are in this table really show us some of the variation that we have, firstly, between human capital and willingness to pay but also some of the variation across willingness-to-pay measures themselves. This further highlights the need for us to have a closer look at willingness to pay.

Of the New South Wales figures probably the two most interesting numbers are a very dramatic increase in the value of life from a fatality perspective and in fact, compared with the current Austroads human capital approach, a slight decrease in serious injury. Interestingly when you have a closer look at their data, the survey respondents in some instances recorded little change in their willingness to pay between temporary and permanent injuries, which again really draws some attention to the need to look very closely at the survey methodology and make sure that it is truly reflecting the public's values.

In regard to data exchange and timeliness, we recommend that there be work, particularly with the Department of Health, to enable Victoria Police to check on admission status. It is particularly important under the current definition of 'serious injury' that admission status be known and reported promptly to allow us to keep a timely check on data. There is a need also to examine opportunities to link with Department of Health data and police crash data to better understand serious injury.

Whilst our current systems are very responsive under the current measure, the current measure is a surrogate for injury being admission to hospital, and it does not suitably act to differentiate between different levels of injury severity. It is, however, consistent with the current national definition, noting also that there is a commitment in the national road safety strategy to in fact work towards national measures of injury severity.

Nationally, pretty much all the jurisdictions are observing what is happening in Victoria as we have this debate. They report a consistently high interest in the ICISS measures, which we will talk about in a moment, acknowledging that they are currently the best available measures that we have for severe injury from road crashes.

The underreporting that I mentioned earlier, particularly off-road crashes as they relate to motorcyclists and cyclists, are not issues that are confined to Victoria but are replicated both nationally and internationally.

I mentioned earlier the current measures relating to hospital admissions as being a surrogate. We have started monitoring the 14-day stay in hospital as another surrogate of severe injury. It is not an indicator of the permanency of disability or the long-term disability that people might suffer, but it is an improvement over the simple status of whether people are injured or not. That is a figure that we draw from the TAC's data.

Data linkage is clearly a challenge if we want to better understand severity in particular to be able to match identified data between health datasets and police datasets. This raises a number of key issues for us. Amongst those are, firstly, that we need to understand that the datasets do in fact hold the data we need to draw insights; and secondly, to check that the matching can occur. We do not have personal identifiers in this country to do simple data matches across these datasets, so we use probabilistic approaches. There are losses as we do that. Whilst there is some evidence that some level of matching is possible, there is also clear evidence that there are high levels of losses as we do that.

From there, given that we can satisfy ourselves that the data is available and matching is possible, there would need to be a proposal put forward to do that work with appropriate governance over privacy of information and exchange of data between agencies. I suggest in the first instance it is probably more likely to be a one-off matching of data to give us insights rather than a continuous and high-cost matching of data over time.

These are two recommendations in relation to measures of serious injury and severity: firstly, that we retain police-reported serious injury validated by TAC and that we adopt ICISS as the measure of injury severity; and secondly, that further research be done to develop a measure that incorporates a threat-to-life and a non-fatal measure. In particular, the further work on a threat-to-life and a non-fatal measure needs to examine the feasibility of using a measure such as DALY to measure the ongoing disability that the people incur from road trauma. We would propose in the first instance that we continue to report the current measure but add to it a measure of severity such as the ICISS measure.

Threat-to-life measures fall broadly into two classes, as we have shown in this graph. The grouping on the left-hand side of that branch are derived largely from expert-based assessments of survivability, and those on the right are based on evidence drawn from rates of demonstrated survivability from injury.

There are a number of these measures, and in Europe they have adopted the MAIS — the maximum abbreviated injury scale, on the left-hand side — setting their threshold for severe injury at MAIS 3+. In Australia the data that is typically held by the jurisdictions is the ICISS data, which is down on the right-hand side, so different sets of data. On the rationale as to why the Europeans have gone for MAIS, I do not know specifically the answer to this, but I suspect it is quite strongly what is most conveniently available to them. Just as here the most conveniently available data might be ICISS, in Europe I understand it is the AIS data.

There are some sophisticated tools to map between these two datasets. There are losses in translation between one dataset to the other. Whilst it is feasible, I think substantial work would need to be done to allow us, if we were to adopt ICISS, to make direct comparisons to the Europeans with their MAIS 3+.

I will probably skip over this slide. We can come back.

I mentioned earlier the disability adjusted life years over and above a measure of survivability through the ICISS approach. We would also be interested in pursuing some measure of the ongoing disability and cost suffered by individuals through permanent impairment from road crashes. The DALY offers us an opportunity to do that.

On countermeasures and effectiveness, as we move towards serious injury there would be a very substantial amount of work to better understand the mechanisms of injury and translate those into road safety countermeasures specifically to address serious injury. An important first step would be to enhance our modelling capabilities to give us a much better definition of 'serious and severe injury' over and above the current METS model. That could be done through either an expansion of METS, as it is now, or an alternative modelling approach.

In future our project evaluations would also need to give us a much more in-depth understanding of their impact on bringing down injury rates and injuries of different severity levels, as distinct from at the moment when we tend to bundle together injury and fatalities into a total casualty crash rate for countermeasures.

I want to talk about evaluations that we have done. There are a few areas where we have differentiated in our evaluations between serious injury and fatality reductions. Our Safer Roads Infrastructure Program is perhaps the best example of this. As you can see from these figures, the data shows us that these interventions give us differing returns on fatalities as they do on serious injuries. While they return quite strong benefit-cost ratios overall, the ratio of fatality to serious injury reduction differs there from 1 to 7 and 1 to 12 between the SRIP1 and SRIP2 programs, as an example. We have done some similar analysis work for our graduated licensing system. Perhaps the third area where this sort of data is available is the performance of the road safety camera system in reducing speed-related crashes.

On post-crash countermeasures, firstly I think it is important to note that the Victorian state trauma system has contributed very significantly to reductions in trauma. There is continuing work being done to improve the performance of that system. Most notably there are the current trials of new drugs to address internal bleeding, which hold a lot of promise and are very exciting to see.

There are also new technologies becoming available, particularly one called eCall. There is a set of these that have similar purposes. Effectively they notify emergency services when crashes occur. The most sophisticated ones not only provide an immediate notification but give some information about the type of crash and hence the type of emergency services that might need to be deployed to best deal with the injuries.

There is clearly a need to continue to raise community profile around serious injury. We believe that our communications need to focus more strongly on the burden of serious injury as distinct from the fatalities that occur through road traffic crashes. To effectively do that we need to have much more effective performance measures around serious injuries specifically.

Most of that, Murray, is an overview of what we have presented previously. I just wanted the opportunity to summarise some of the key points there, but I am happy to take any questions.

The CHAIR — Thanks very much, David. I invite Telmo to put the first question.

Mr LANGUILLER — Thank you, David. We thank VicRoads for a very important submission and for your work. The first question is: do you believe it is appropriate to continue using the human capital approach developed by the Bureau of Infrastructure, Transport and Regional Economics to calculate trauma costs? If so, why?

Mr SHELTON — Until we actually have sound measures for willingness to pay, I do not think we have much choice but to continue. Having said that, we are strongly in favour of moving to willingness to pay. It is simply a question of how we actually get there and ensuring that we end up with a better measure. If we do not do this correctly, we may in fact move to another philosophically better measure but, in practice, a poorer measure. So it is important, if we go to willingness to pay, that we understand that the power of that method really depends on having strong survey techniques behind it to get true reflections of the community's evaluation of injury.

Mr LANGUILLER — Thank you. The committee understands that the willingness-to-pay approach is one among many used to assess the cost of injury and death in other policy areas such as health. Would there be any ramifications from adopting the willingness-to-pay approach in the road safety space if it is not used in other policy areas, or where the willingness-to-pay values differ considerably? That is, could those policy areas that do not use the willingness-to-pay approach be placed at a disadvantage when determining the allocation of government resources?

Mr SHELTON — I believe in theory that is possibly a problem. However, having put that question to our economists at VicRoads and to others, I have not heard great concern about that at the moment, particularly in that the key reason for adopting willingness to pay is less about deciding whether or not an intervention is needed; it is really deciding which treatment is the best one to address the problem. For example, in road-related interventions we might find it in fact tips the balance between a road treatment type A and a road treatment type B, even though the decision has already been made and funding will be allocated to upgrade a road — that is, which design we adopt might be influenced by willingness to pay. It would also potentially change the priorities of countermeasures funded in road safety programs and draw out those that actually give us the best return.

Mr LANGUILLER — Thank you. Further, several submissions suggest that interim willingness-to-pay estimates could be used until the national willingness-to-pay study is completed. One possibility is to use the values from the New South Wales willingness-to-pay study. What are your views on taking this approach?

Mr SHELTON — It has been suggested that we could do that. There is also some data from New Zealand that is relevant. Interestingly, my colleagues in New South Wales in fact would welcome a review of their data before it was adopted more generally. Notably, New South Wales is using both human capital and willingness to pay at the moment, if that is an indication that they are really in a pilot phase. If we were to move to adopting it in Victoria, I think that it would best be done as a national approach, and I think that would warrant further surveying to strengthen our confidence in those numbers. As I mentioned earlier, there are some specific areas where the New South Wales figures are, we think, deficient.

Mr LYNGCOLN — If I could just add to that, there are slight concerns about moving to the New South Wales figure. I mean, in theory they are moving to willingness to pay because it captures a broader set of the cost of crashes, but when you compare the New South Wales figure that it uses for serious injury, it is actually lower than the human capital cost we are currently using for serious injury. So in theory it should be capturing a larger set, but it is in fact using a smaller value. That would raise some concerns about that figure that New South Wales is using and would give us reason to perhaps want to look at some of those issues and go through

an exercise of developing a national figure. David mentioned in his presentation some of the reasons that the New South Wales figure might be a bit low — because of the relatively small sample that it used and because of some of the road user types that it perhaps did not quite capture.

Mr SCHOFIELD — I will just add that some of the question techniques that were employed by New South Wales looked at injury severity levels — they looked at four levels — and looking at the results of what they had factored in, there was not much difference between, say, just a general admission to hospital or lifelong impairment. It would seem to suggest that maybe people were not aware of the ramifications of, or understood clearly, what a lifelong disability was as opposed to a normal hospital stay. I think those things need to be clearly looked at, before we embark on any national approach, to make sure that those questionnaires are easily understood by the respondents.

Mr ELSBURY — I am interested that this is the first time we have had anyone give evidence, that I can think of, who has actually said that the New South Wales model was flawed in any way, shape or form. I am a little bit stunned, because everyone we have met has said, 'New South Wales, way to go. You can use their figures, not a problem in the world', and then all of a sudden we are being told today that that is not the case — that we need to go back and relook at it. No-one else has said this to us, so what are you basing that on?

Mr SHELTON — We are basing that on the information we have seen for the New South Wales study. Andrew, I encourage you to have a look at the data yourself, which is in the New South Wales report, and you may well draw similar conclusions. Firstly, it is clear that it has been a very small dataset, and that was largely driven by, as I understand it, it being a costly exercise. They had a certain budget to work with and they achieved what they could. They did not survey all road user types and that is very clear in their report. They have themselves highlighted, I understand, in their presentation to this committee that they were concerned about not having values for heavy vehicle operator valuation of crashes. Particularly the heavy vehicle space is different because it is a commercial space, so those who are paying for some of the associated costs are a different group driven by different motives than the general public might be.

Then, as Peter points out, when you look at some of the figures that the public assigned to their valuation of different levels of injury, it seems not to be as intuitive as what we would expect. You would expect the value to be much higher for a permanent disability than a short stay in hospital. They are the sorts of reasons driving us to ask questions. We are not concluding that we will end up with different figures once we have a look at it, but we are cautious about jumping in and adopting numbers which we have not got full confidence in.

Mr ELSBURY — The problem I have with all of this is that it seems to be very subjective. The whole process seems to be very subjective, putting different values based upon what one person or a group of people think as being of value compared to what they do not see as being of value. Then with willingness to pay it seems we have had a willingness-to-implement notion going through the other witnesses who have participated in this inquiry. So what you are saying is that it is not a bad system; it is just that we need to relook at the data.

Mr SHELTON — Firstly, the system is — if I am understanding your statement correctly — that willingness to pay is a subjective approach; it actually measures subjectivity. That is its strength, in fact, that it does that. In terms of willingness to implement, we have said many times — and it is in our submission already — that we believe willingness to pay is the way to go; it is simply a question of how we get there.

Mr LYNGCOLN — Can I just add, to answer your question as well, that one of the other reasons that I guess we have had some caution about the New South Wales figure is that, when you look at the proportion of the value for a serious injury compared to a fatality in New South Wales and compare that to other countries that have adopted willingness to pay, it seems to be a much smaller ratio than in a lot of other countries. There is some detail in our submission about that. It was just another flag that, when you look around the world at countries that have done this, their ratio for their value of serious injury is quite a bit higher compared to what has been used in New South Wales. You cannot necessarily conclude that it means it is being undervalued in New South Wales, but it leads you to at least ask that question.

Mr LANGUILLER — On the question of adding direct and indirect costs to the reduction of risk values, your submission states that additional costs arising from road crashes, such as emergency services and costs associated with the cleaning up of crash sites, should be separately estimated but added to the willingness-to-pay values for the purposes of cost-benefit analysis. Do you think this is an appropriate approach,

given that some argue that the willingness-to-pay values should only be based on the value for reducing risk? What are the issues, if any, around the potential of double counting of costs?

Mr SHELTON — There is definitely a potential for the double counting of costs, so it is very important that you set up your methodology appropriately around willingness to pay. I am not aware that there is necessarily a hard rule that you should go one way or the other, but it does actually determine what sorts of questions you ask the public as to whether or not some of those underlying real economic costs are included or not. If we take, for example, the real human capital costs that occur when somebody is admitted to hospital and we come to a conclusion that a serious injury actually has a real cost of X in the economy and then a willingness-to-pay approach in fact comes up with a level below that, then we would actually question whether that is an appropriate measure to put into a benefit-cost ratio for infrastructure intervention.

Coming back to the survey question, if we ask the public open questions about total costs, then we can use their answers as being a total willingness to pay for all the costs, provided they are aware of what all those costs are, so educating people about that in the survey process would be important. Alternatively you could say to the public, 'Listen, we're not actually surveying you about your willingness to pay for these real costs, which in fact are well documented elsewhere; what we are asking you about is your willingness to pay for that difficult-to-quantify trauma that individuals go through when they suffer injury?'. I think it is a matter of having an agreed definition, whether those figures are in and out, and then structuring your survey accordingly.

Mr LANGUILLER — When you indicate that you would ask the public, it raises questions as to who you would ask in terms of demographics, income, affordability and being able to pay and how you would structure those questions. There would be sections of the community who would be thinking, 'It's not that I'm not willing to pay, but I can't afford it'. It all becomes very tricky, does it not? As Andrew Elsbury was indicating, it is amazingly subjective.

Mr SHELTON — Yes, that is right. In fact my understanding is that the New South Wales survey was a 45-minute survey and it did not actually cover everything that we believe would need to be covered. It is also my understanding that theirs, however, did include a full cost capture approach. I do not know the extent to which they actually educated people on what some of those other costs might actually be. Clearly that is a matter for the design of the survey.

Mr LANGUILLER — Thank you.

Mr TILLEY — Gentlemen, I just want to move on to have a conversation with you about term of reference (b). We want to ask some questions about identifying processes and to talk about including the exchange of data and information between agencies and so forth. I just want to drill down on the data and sharing of information.

To date the committee has had a significant number of submissions that have identified systemic problems in Victorian road safety data that need to be rectified before a new serious injury measure is derived. The committee's previous inquiry into motorcycle safety also dealt with this issue, recommending that an immediate program to improve inter-agency data cooperation and collaboration on motorcycle crash data and, more generally, road trauma data be instituted by government agencies. That was recommendation 2. Sorry, I do not have a copy of it.

We are aware of previous work by road safety agencies to improve the current data situation, including working groups and data committees. Specifically, I want to ask: what action has VicRoads taken either on its own or in cooperation with other road safety agencies and government departments to improve data collection and data sharing between government agencies and departments in Victoria? What other improvements do you think are needed to increase the quality and accuracy of road crash data? In the evidence you provided this morning you noted the heavy reliance on the police. If you could respond to that, that would be great.

Mr SHELTON — I might pass that to Julian.

Mr LYNGCOLN — I am familiar with the parliamentary Road Safety Committee's motorcycle inquiry recommendations that were made and the government response. I am happy to talk to that as well. There has been a cooperative approach taken with the road safety partners, such as the Department of Justice, Victoria

Police and the TAC, as well as engagement with the Department of Health, which is an important player in this as well.

Mr TILLEY — Could you expand on what you have done with DOJ and the Department of Health?

Mr LYNGCOLN — Sure. If I could perhaps start with the police and the TAC side of things, there is a working group — a TIS data quality group; TIS is an information system. That working group has representatives from across a number of agencies who have been dealing with a number of issues. Some relate specifically to some of the motorcycle issues, particularly around some of the off-road reporting. They have been doing work to improve the ability to locate crashes, which has been a big issue particularly for off-road, to classify those crashes and to come to agreement on common definitions for what various definitions agencies would be using. That work has been happening over the last couple of years. More recently there has been a lot of work done with the Department of Health, and that is mostly around opportunities for data linkage. Earlier in the presentation we referred to the fact that we have police-collected data. Part of that process is police trying to verify the status of an admission with hospitals.

Mr TILLEY — Have you spoken about challenges in that area?

Mr LYNGCOLN — Yes, there are certainly challenges for police in doing that. A lot of that will vary by hospital. It is easier for police to get that information from some hospitals than others. There are also challenges where people might be admitted to one hospital but then moved to another and it becomes a bit more difficult for police to follow up on those people and find out the exact status, so there are certainly difficult challenges that Victoria Police face in doing that.

We are always looking for other sources of data that we can then compare to get a sense of how accurate our dataset is. We referred earlier to the fact that we have the TAC hospitalisation data, which is one source of information that we can use. That suggests to us that in the last few years in particular we are getting more confidence in our serious injury data. Going back a while there were some big changes resulting from changes to processes the police put in place to verify their data. We are getting more confidence now when we compare the police dataset to the TAC dataset.

The other area of opportunity is to link to Department of Health data. The Department of Health is now part of our road safety management group. We have been having discussions with them about opportunities to do that. It is early days for some of that work, but I would say there is a lot of promise there.

Mr TILLEY — You are talking about it being early days with the Department of Health. How long have you had that relationship with VicRoads and the Department of Health?

Mr SCHOFIELD — I can probably answer that. We have had some discussions, particularly in relation to some of the issues for this inquiry around trying to look at what the opportunities are for data linkage other than converting all our driver licence numbers to Medicare numbers. It is a little bit more difficult than that.

Just on the VAGO stuff, I am probably not the right person to respond, but I do know from speaking to the Department of Health yesterday about a number of matters that they have finally released a lot of the information to the TAC to assist in addressing some of those that arose from that inquiry. I do not fully understand what they are, so that might be best directed to the TAC.

Getting back to the other point about data linkage and trying to better understand things, one of the things we said we should try to do with the data linkage project is to firstly pilot it to see if it can be done. Importantly for countermeasure development and understanding the injury severity to parts of the body, one of the things that we see as imperative, apart from an overall matching of process, is to understand from the different crash types that occur between different road user groups what the injury outcomes are that are likely to affect a person involved in a crash.

Some of that might be fairly intuitive, but if you think about a side impact at an intersection crash, you would think head and neck — places like that. But from speaking to various doctors and ambulance people, it is probably surprising that one of the things they look for these days is heart damage from a side impact crash, because it tears the aorta around a fair bit in that. You would not really think that would be an outcome of a side impact crash.

For us the important thing would be to understand, in the event of a particular type of crash, what the injury outcomes are likely to be from those. We see that as the first step in a data linkage project, noting that the Department of Health's submission said any data linkage project is fairly resource intensive. By that I am sure that means cost. So we need to be very careful that we agree on the methodology — what are the identifiers we can use between the two datasets, whether between a police dataset or the RCIS dataset; and secondly, what is the approximate matching rate — and then try to find out that particular key question of injury and accident type.

The other thing we have done recently in helping us to assist this inquiry and our submission is that, whilst we received considerable advice ourselves, as did the TAC, from MUARC on injury severity scores and threat-to-life measures, we also commissioned the Victorian Injury Surveillance Unit to do some analysis for us on the VAED data, which is the Victorian admitted episodes dataset. They are the repository of all de-identified health department records. We got a pretty useful set of information from them that looked at the ICISS scoring, the severity scoring for road user groups and the likely injury outcomes, or where the particular injury to the body part was and how it related to the road. It gave us a fairly good understanding for the first time of just some general issues surrounding different road user groups.

Mr LYNGCOLN — Just one other thing I might add, in terms of challenges, is that the other one is around timeliness. At the moment the road toll is reported on a daily basis. It is very easy to communicate to the community how big the scale of the fatality problem is, because they see it daily in the newspaper. In the strategy we want to put a bigger emphasis on serious injury and help the community understand the scale of that problem as well. That becomes more difficult when there is a lag in the data, which there is anyway for serious injury. With the current methodology any other sort of methods that might involve linkage would have a time component as well, which makes it even more challenging. So we need to think about what sets of data we use for what purposes, our own internal management purposes but also what we communicate to the community, and timeliness becomes a big factor in that. We just need to keep that in mind in any arrangements we try to come to in terms of linkage and all those sorts of things that we might like to do.

Mr TILLEY — We have been made aware of that. In view of your presentation this morning, I think in your submission VicRoads suggested there is something in the order of 1511 serious injury crashes annually — and we are talking about the whole range of data and sharing and things. Do you think there is possibly a significant underreporting? I know you spoke to us about off-road crashes, cyclists and pedestrians. Do you think there is potentially the possibility for significant underreporting of passenger vehicle crashes as well, considering those challenges we have just spoken about?

Mr SCHOFIELD — I am happy to answer. I think in our submission we showed the disparate nature of, say, particularly VAED data, which encompasses everything, and our data. It showed that the vulnerable road user groups were largely less represented in police reports than vehicle occupants. That trend seems to be not just here in Victoria but overseas as well. I think one of the important things to mention, which Julian touched on, is the ability to have responsive data. A data linkage project — I cannot see at this stage — is a dynamic link, so it is not capable of being upgraded on a daily basis. That is why it is very important to have the police data. One of the things that we have done as an agency group through the TIS steering committee is put forward a process to have the police report a serious injury validated by the TAC claims data. I think that is going to be an important step, and there have been some 12 months in the development of that process to enable that to happen.

My last advice, as of perhaps a couple of days ago, was that that process will be in place by the end of the year. Essentially that will mean that there will be the TIS data system within the police and there will also be a holding point for TAC, which will allow us to look at how many police reports there are and look at the TAC validations and see where the missing links are. Also, in time we can actually change the status of police reports of maybe not a serious injury to a serious injury et cetera. It is about improving the quality of the data we have currently and trying to make that work in the best possible way we can, within a reasonable amount of resource required for that. I think that is important.

The other important thing about why we still need police serious injury data at that one level is that for them very much in the road safety space it is about enforcement and targeting resources. They need to know where they have to target their resources more effectively, and they are looking at that serious injury component as one of the areas that they focus operations on: where are the areas that are having large numbers of serious injury

crashes? It is important for them in their targeting, and I am probably speaking on their behalf and they can probably elaborate on that further when they make their own submission. Databases do different things for different people, and everybody has a need for certain amounts of information in the common good.

Mr TILLEY — Yes, they certainly do. I noticed in the conversation then that you spoke about quality and you also spoke about the demand for public consumption and wanting to know what the current road toll and road figures are. Do you have a view or comment in relation to that? Does it make that much difference, having expedient, timely information for public consumption versus having accurate, exact data that will assist governments in making policy decision changes to legislation? Where do you see the imperative and the importance? Where would that lie?

Mr SHELTON — That is a really good question, Bill. I think, firstly, they are both important. Probably the key gap for us at the moment is in the detail and quality relating to serious injury. At the moment we have about 98 per cent of our serious injury data validated within four months. We do not throw much of a spotlight on that, so we could in fact use that data perhaps more than we do already. You would not have a daily update that would be meaningful, but you would at least have a monthly update or something like that.

Mr TILLEY — Indicative.

Mr SHELTON — There are messages you could use that for right now. The focus, we believe, is if we want to make real inroads into the reduction of serious injury, then it is the quality of data that is important and making sure that we are capturing the fields of data that are going to inform us about what countermeasures we need to design.

Mr LYNGCOLN — I think the other thing that becomes really important for the policy decisions and the planning of our infrastructure programs and enforcement is getting a better understanding of severity levels. At the moment we just report a serious injury number, and there is a whole range of injury types in there — from someone who goes into hospital but might recover very quickly and gets on in life to someone who is affected for the rest of their life. If we are going to better target our countermeasures and our policy, we need to get a better understanding of that sort of higher severity end so that we can start to target our countermeasures to that and reduce the part of that serious injury problem that is having the biggest impact on the community.

Mr SHELTON — I might just make one last comment, Bill, about the data matching stuff. I think quite often we reflect on what we have for the road toll, and we see this sort of daily update, this continuous feed between police and VicRoads, which is terrific. When we talk about in-depth data and quality of data, it is a very costly exercise, and perhaps aiming for a continuous feed of data is not what we can afford and perhaps not what we need. But we need to be able to take a snapshot in time, get some insights, do some work, come back in a few years time and do it again. We are doing it on more of a snapshot in time, on a project-by-project basis. We can perhaps, I think, get better value for money with that sort of approach.

Mr TILLEY — Infrastructure investment versus data collection; is that what you are saying?

Mr SHELTON — Yes. What I am saying is you can build a very expensive system and you then have to maintain it. And is it actually giving you continuous insights, or do you get sufficient insight from doing it in depth at one point in time, working that through, coming back and doing it again later? It is about cost-effectiveness.

Mr TILLEY — I have another point. I want to have a conversation in relation to your awareness and knowledge of what occurs in other jurisdictions, and particularly Western Australia and New Zealand, which have linked medical and crash datasets or hold such data in one database so that the information is integrated. The committee is keenly interested to hear your views on the approaches taken in those jurisdictions and whether those approaches could be used in Victoria.

Mr SCHOFIELD — I am happy to talk just briefly about the Western Australian system. I have not looked in depth at the New Zealand system, but the Western Australian system provides a useful template for Victoria. When we spoke to Monash about that, they pretty well suggested the same thing. It is the application or how it is undertaken that will be the important part, but there is nothing to say that that system could not be in place in Victoria.

Mr TILLEY — What is the size of their fleet and their rate of restructure in comparison to Victoria, on a scale?

Mr SCHOFIELD — I know they have more fatalities than us — no, they do not.

Mr SHELTON — On a per head basis they do, but they also have issues of remoteness as well. We would have to take that as a question on notice; that will be a question of scale.

Mr SCHOFIELD — I think one of the observations that we have had from the WA system is that whilst in principle it was great, while they had got the linkage and while resolving the legal issues surrounding privacy and health records is important and there are important lessons for anybody to study, that system in a way has probably not developed as far as they would have liked because of the resourcing issue. Whilst it is a great model and they have overcome some severe obstacles which would be useful lessons for anybody to pick up, I am not sure it is delivering what they expected it to at this particular point in time.

Mr TILLEY — What sort of resourcing or manning does VicRoads currently have in relation to the things we are doing in Victoria?

Mr SHELTON — We have recently restructured our road safety strategy area to pull together a more substantial team around data management generally. That team has only just come together, though, so it is really too early to look for them to have actually produced a great deal. But it puts us in a much stronger position to do further work on this in future. We have a relatively small team, however.

Mr TILLEY — What is the reality?

Mr SHELTON — Within the road safety data area we have two full-time analysts and we have others who are contributing part time. But then we also have people who are doing the back office validating and clarifying of data that comes from TIS as well.

Mr LYNGCOLN — I think when we are looking at the resources to tackle this we also have to look at the set of resources across the road safety partners. I mean, while we manage with a couple of analysts and some other help we can call on, when you put that together with the resources that the TAC and the police have around data, it is an issue we will have to tackle together; it will not be VicRoads tackling it on its own.

Mr TILLEY — So at this point in time it is probably best described as not totally committed but maybe a little ad hoc at this stage?

Mr LYNGCOLN — I would not describe it that way. It is an active part of the road safety management group agenda. There is a subcommittee of that set up to tackle some of these data issues. There are massive challenges to overcome in doing it, but there is a pretty strong commitment to take it on.

Mr SHELTON — It is also important to break up the overall resource needs. Our resourcing within the road safety strategy area is principally about analysing the data that comes in. It is a whole different question as to how you actually put the data in at the other end and where that is best done. It is clearly not going to be best done at VicRoads; it is best done either at the point of treating a patient or at the point of attending a crash scene.

When those people are treating patients or attending crash scenes, they clearly have very high priority tasks that they have to do at the same time, so we need to make sure that any data collection there does not impinge on their performance in other areas. Designing efficient and simple systems to use is very important, but it is important also to know what you want to collect, because it all comes at a cost.

Mr LANGUILLER — Up until yesterday afternoon the committee kind of assumed, I think, that we were talking about the same definitions in terms of data linkage, but towards the end of the afternoon yesterday Western Australia put something else on the table, talking about linked data, which is not necessarily the same as linkable data, and also a data pool. At that point I thought, 'I'm tired', and I thought I would probably wait and ask you. Quite seriously, can you give us, for the record, a definition of what we are actually talking about, given that WA kind of put the spanner in the works by suddenly coming up with other terms? I am hoping we are talking about the same thing.

Mr SCHOFIELD — I think what we are talking about — and we might take some of this on notice — pretty simply is that if you have database A here and database B there on which you want to get some information that has some commonalities, you have a range of identifiers in that, and you try to match that data. Then it goes into bucket C, which is completely de-identified but just has the matched data. I think that is what we are talking about. It is not about linking of databases. It is about a data linkage project. It is about trying to link separate pieces of information to give a complete picture in total anonymity of that person who is involved.

Mr TILLEY — Talking about integrated medical data, 'integrated' being a word that has not been used too often in separate organisations — I do not know whether it might be a dirty word with the Transport Accident Commission — do you believe that integrating medical TAC claims and police crash data would ultimately be the most beneficial way of monitoring road safety in Victoria?

Mr SHELTON — They are certainly the datasets that we are currently interested in. However, I would probably step back a little bit and say, firstly, we need to be confident that there is value in linking those datasets. So we need to ask: do they in fact hold all the information that we can really make the best use of? My first response to that would be that, yes, we believe there is value in it, but we would probably also find once we did it that there was more information that we would like to have here, so would look at what else we could draw that in from.

The important point that Peter made is the difference here between linking systems in a sort of continuous way or actually doing a match with identified data which has appropriate controls over privacy and distilling de-identified data from that. We do not need identified data; what we do need is matched data.

There are a whole lot of controls in place, appropriately, around people's privacy. There will be a set of controls in the health arena and a set of controls in the policing arena. Sometimes they will inhibit people from sharing information. The challenge for us is to get an agreed process by which we can say, 'Let's allow some matching of data to occur with identified data, as appropriate', and then draw out of that a separate database which in fact has de-identified data which we can work with.

We have no interest in getting access to information of a private nature. What we are interested in is understanding crashes. Perhaps there are some barriers in that privacy space that we need to examine closely because I think it is in the best interests of the community that we have that matched database.

Mr TILLEY — That is exactly where I wanted to go next: that dirty little word, 'privacy'. Is it a culture or a lack of education — not necessarily at VicRoads, but across the whole of government — that affects the understanding of exactly what privacy means in the legislation, the rules and regulations and all the other things behind privacy? Is it that, for example, VicRoads has a different interpretation on privacy matters and issues compared with other people that you have to work with in the whole of government?

Mr SHELTON — I think with the privacy principles, the whole of government approach gives us a consistent oversight of what is important in protecting information. We will each be operating under different, specific pieces of legislation that give us certain opportunities to share data or not, and where we share data there is almost always a process of reviewing whether it is appropriate and then overseeing that it is done with adequate protections in place.

Mr TILLEY — But how do you determine whether an issue of privacy is appropriate? I think privacy would be very clear; it would be about divulging personal details of people.

Mr SHELTON — Yes.

Mr LYNGCOLN — We obviously take advice from our legal area. They are judgements that we have to depend on as legal advice, and obviously different organisations will take advice from their own legal areas. Whether there is always 100 per cent correlation of the advice everyone is getting, I am not sure. You would expect the legislation to be hopefully clear enough so that there is a fair degree of consistency in that.

Mr SHELTON — We have an active relationship with the Privacy Commissioner as well to test those things as I presume the other agencies also do.

Mr PERERA — Just a clarification, David. When you match data you said you do not need the personal information. Basically what are you trying to achieve? You have the police database, then the help from the hospital. Say Joe Blow met with an accident; in the health database you may not have certain things that the police have recorded, so you chain or match by the name or date of birth and pick up the information from the police database, then you put it into a different database or database file. Do you have all the information there or do you have a summarised version of X number of people who had an accident? How do you do it?

Mr SHELTON — No. We would still have single entries for each crash that had quite a lot of detailed data in them, which, if it was connected to an identifiable person, would definitely be of a personal nature. But given that it is not connected to a person — we do not know who the person is — it becomes de-identified and hence not private information.

Mr PERERA — So the person is not identified by their name or date of birth?

Mr SHELTON — No. We do not have any need for that information. You need some sort of link like that to make the match in the first place, but once you have made the link you can strip that private information out.

Mr PERERA — So you have a number of single records sitting there with information in them?

Mr SHELTON — That is right.

Mr PERERA — This accident took place on a particular date?

Mr SHELTON — Yes. That is right.

Mr SCHOFIELD — I think that is pretty right. In both cases what is not wanted to happen is that we would have the ability to look through a record to try to match it ourselves in a populated database. I think that is the end point. How we get the data would be determined in the methodology about the linking project or what would be the outputs of those linkages. It might be in some aggregated form and it might just cover what we want to know, because we have the records of where the person was sitting, what the speed limit of a road was, what the vehicle was that was being driven, how old it was and whether seat belts were used. So you might get in an aggregated form that in country Victoria we had X number of crashes that involved this type of injury at this particular time of day for this particular vintage of vehicle. You can get all that information we need to do our job and to do countermeasure development, but you would not be able to identify or put 2 and 2 together to work out that was person B from our records.

Mr LANGUILLER — And the person's age?

Mr SCHOFIELD — The person's age is important too.

Mr LYNGCOLN — I guess we have different uses for the data. If we have an intersection where there have been lots of crashes and we want to go out and treat it, then obviously we want quite specific information about crash types so we can understand what countermeasure are going to work. But for other policy decisions it might be enough to have it at an aggregated level that says a certain crash type was resulting in a certain severity of injury and we can look at targeting that crash type if we want to make some inroads into that injury type. There are different purposes for which we need different levels. The independent record is important for some of those purposes, but aggregated data is perfectly sufficient for other purposes.

Mr SCHOFIELD — For example, we just did a recent exercise of a similar nature, not with health records but with the Victorian coroners office where we supplied a list of fatalities over a certain period of time that had all the identified data. We provided that to the coroners office, and they then looked at matching all those records we had supplied with their own database and came back to us with aggregated data on alcohol and drug use for different road user groups; we specified what we wanted. That was done relatively quickly and relatively easily, and we both overcame the issues relating to some of the legal issues that surround the coroners office and our own office as well.

Mr PERERA — If there was a discrepancy in the aggregated data, then how do you rectify it? Do you have to go to individual records?

Mr SCHOFIELD — Sorry, I did not understand that.

Mr PERERA — If there was a discrepancy between the coroners aggregated data and your data, how do you rectify it?

Mr SCHOFIELD — We just have a certain number of unknowns. With any sort of data matching or data linking project there will always be a certain number that we cannot match, and they will be in an unknown situation or you could give, as the US model does, certain weightings to a certain amount of linked identifiers and provide a weighting of how good that record might be. But in this particular instance there was a very small number of unknowns, because you would expect from every road fatality there would be a requisite coroners office report, so it was pretty close. It just goes to show that we wanted some information that was not at our disposal and we worked with the coroners office to do that, and we overcame the sort of legal requirements that both organisations need to comply with in relation to privacy and we both ended up with what we wanted.

Mr PERERA — Evidence both in submissions to this inquiry and in research literature suggests there is a strong basis for the use of the International Classification of Disease-based Injury Severity Score, ICISS, to define 'serious injury' in Victoria. Do you agree?

Mr SCHOFIELD — I would agree entirely with that summation. I am not an expert in this field, and having helped put this submission together I had to learn very quickly that there is no suitable measure to suit everybody's needs. But I think what is appropriate, and I am guided by advice that Monash has provided and in a lot of its literature and research around, is that the ICISS method provides probably the most objective measure that we have, it is regularly available and we can use it. For example, in putting this submission together we got the VAED dataset of all the ICISS scores of what is serious for every road user group or the majority of types of crashes for road user groups. We have that data. It is available. One of the constraints might be that the survival ratios, the SRRs, are probably a little bit outdated.

I note that Monash in their submission said that that would need to be undertaken from a Victorian or an Australian perspective to be more up to date. I have had conversations with VISU in the last week or so to find out what their capacity was to undertake development of SRRs for Victoria. They said it could be done, not easily, but it was achievable in a relatively short space of time at a very modest cost. I think some of the hurdles that surround ICISS can be easily overcome and applied very quickly in Victoria. I think that provides us with that severity index that is based on medical observations and codings that are being used worldwide.

Mr PERERA — Any comparison with MAIS?

Mr SCHOFIELD — I think Dave touched on that earlier. Whilst the Europeans are using an MAIS 3+ score and for international comparisons that would be really good, we still believe ICISS is available to us. We could still look at using ICISS and then maybe converting stuff later on for international comparisons, but the trouble is Australia uses ICD-10-AM for their coding, while the rest of the world is still using pretty well ICD-9s. You can convert, through proprietary software, ICD-9 to AIS, but then you need to get further software to convert ICD-10-AM to ICD-9 and then convert back to AIS.

My advice has been, from a number of parties, that there is significant loss of data through that process. The issue with an MAIS is that it only reflects injury, or the most severe injury, to one body region, which is not what we want. If we look at particularly vulnerable road users, it could be multiple injuries to different parts of the body. That is not telling us what we need to know so that we could perhaps assign different countermeasures to different types of injuries and severity levels for road user groups, and I think that is where it gives us that benefit of understanding that each injury is coded and what body part it is. We can make determinations of where we need to look.

I think one of the interesting things with the SRR scores that are supplied by the VAED is that they showed that in that serious context — and I might be wrong, but I will stand corrected — something like 44 per cent of pedestrian injuries were classified as serious compared to the average across all road user groups, which is about 30 per cent. Straightaway that tells us that we need to look at some countermeasures for pedestrians because they are overrepresented in the severity stakes. We believe that whilst no system is perfect and that there are pros and cons to every system, this one provides us with advice that we can use fairly quickly and is readily obtainable at minimal cost. I think that should be the benchmark Victoria uses. I think too that other

jurisdictions are also looking at ICISS. I know WA did a lot of work that sort of grounded their linkage project at ICISS. I think New South Wales and the Northern Territory are also looking at it too, so I think we should set the pace and set that one early ourselves.

Mr PERERA — If Victoria were to adapt three separate measures to track road crash trauma — that is, the current resource-based measure used by Victoria Police; a threat-to-life measure, such as ICISS; and an outcomes measure, such as DALY and QALY — would that provide government and road safety agencies with the best picture of what is happening on our roads?

Mr SHELTON — That combination of measures would certainly provide us with a stepwise improvement to what we have at the moment, Jude. The DALY work, I believe, would probably need more underlying analysis in order to adopt it; however, I believe we are in a fairly strong position to adopt ICISS at the moment. My one qualification would be that we ought to keep an eye on what other jurisdictions in Australia are doing. There will be a strong push towards having a consistent approach right across Australia. I think there is a growing view that ICISS is the best one for Australia, but some jurisdictions are still very wary about that.

Mr LYNGCOLN — We would continue, I think, to need the current serious injury reporting that we have, particularly for our infrastructure countermeasure development. We rely very heavily on the police reports to understand exactly what is happening at locations on the network to be able to tailor solutions to that. I mentioned before that what we want to add to that is that measure of severity, and we believe ICISS is the best way to go with that, but as you suggested in your question, we need a set of things.

Mr LANGUILLER — Just very quickly, which jurisdictions are wary of using that?

Mr SHELTON — The response I have had from Western Australia, for example, is that whilst they are very interested in ICISS, they are cautious about the potential resource impacts of that. I would imagine that if it is an issue for one jurisdiction, it may be an issue for others. It simply indicates, I think, that we are somewhat at the cutting edge here in actually contemplating new measures. Whilst I think there is a balance between what is convenient and readily available, there is a cost to that, and we need to ensure that we adopt an appropriate approach that balances both cost and outcomes.

Mr LYNGCOLN — It is fair to say, talking to other jurisdictions, that quite a few of them are actually sitting back and showing a fair bit of interest in this particular inquiry and have indicated that they are going to sit back a little bit and wait for the outcome of this inquiry before making firm decisions on top of that.

Mr SHELTON — Equally importantly, no jurisdiction has actually reported to us that they will not support ICISS.

Mr LANGUILLER — Thank you.

The CHAIR — Gentlemen, we are moving towards the end of our time, and we have a number of questions I would like to make sure we get on the record, so if we could have a focus on comments to the point rather than expansive and erudite eloquence, then that may assist us to make some forward momentum so that we have the main questions on the record.

Mr LANGUILLER — Can I also call for no interjections from members?

The CHAIR — As always.

Mr PERERA — This committee has received 36 submissions as part of this inquiry. A recurring theme in most of them is the lack of information about term of reference (d), the correlation between different countermeasures and actual reduction in trauma. Is VicRoads aware of studies or research that have determined which countermeasures have reduced trauma rather than reduced crash risks, and if so, by how much?

Mr SHELTON — I mentioned a little bit of that earlier, Jude. I would like, if you are happy, Murray, to take that on notice and give you more detail about what we can provide on that.

The CHAIR — Yes, that would work well. Thank you.

Mr ELSBURY — What are some of the issues that arise when conducting cost-benefit analyses of road safety measures that specifically target vulnerable road users, such as cyclists and motorcyclists, compared to the cost-benefit analysis of measures that target motor vehicle occupants?

Mr LYNGCOLN — I guess one of the issues there when you are talking about those vulnerable road users is that the severity of their injuries can be at the more extreme end because they are often unprotected in crashes. At the moment, in the way that they would be accounted for in the BCR, we are just using a figure for a serious injury. So if vulnerable road users tend to have a higher level of severity in the crashes, then potentially that is being sort of underfactored in, if you like, in BCRs in looking at projects to deal with that issue. That is why getting a better handle on severity becomes so important for us. We would expect that once we have that better handle on levels of severity we would probably be able to better identify that there are some particular road user groups, like those vulnerable ones you mention, that we might need to put a particular focus on.

Mr SHELTON — There are probably a couple of important characteristics about moving to particularly willingness to pay and a focus on severe injury. Amongst those would be that it would throw a stronger focus on vulnerable road users generally.

Mr ELSBURY — And is that part of the problem you have with the New South Wales model — that you do not think that has been taken into consideration?

Mr SHELTON — I am not saying it has not been; I simply need to be satisfied that it is adequately covered. It also throws a focus on safe system design — say, over and above extreme behaviour management, which is more related to fatalities. It probably will also be able to, once we look at the detailed data, throw a stronger focus on protecting brains and spines in crashes, and I suspect it will also actually throw a stronger focus than we already have on young drivers.

Mr PERERA — The ability to identify cost-effective countermeasures relies on evaluation of these countermeasures. Many participants in the inquiry have noted that there are a limited number of evaluations of existing countermeasures and that it is more appropriate to look at the combined impact of countermeasures. Part A is: is it appropriate to assess countermeasures as a group — that is, collectively? If so, how can decision-makers discern what works from what does not? I will ask part B as well: how does this work at a policy level where the allocation of resources and priority settings are sometimes based on comparing the cost effectiveness of individual road safety measures?

Mr SHELTON — Evaluation of programs is really essential to continuous improvement of countermeasures. We focus increasing amounts of effort on our evaluations, and the Road Safety Executive Group has only recently requested that we provide more of these evaluations through to them for their assessment as well. Quite often the evaluations are happening. They are held within program areas to refine and improve programs. They do not necessarily actually find their way to the outside world. I think we need to be doing more of that.

In relation to programs versus projects, if we take our starting point as being that all crashes are multicausal, then the value of an evaluation or the ability to evaluate will depend on the strength of that particular countermeasure to focus on a very specific causal relationship. If that is a very strong relationship, then an evaluation is highly valid. For example, if you are doing something that is more diffuse, like road safety education, and the link between your countermeasure and behaviour change and hence the causes of crashes is a much more tenuous or poorly understood one, then evaluation becomes very difficult.

Another reason that evaluations can be very difficult to do is that where they are of high quality they are measuring activities or inputs to outcomes, with outcomes being crashes and injuries. You need a certain number of crashes and injuries in total to get confidence around the performance of your measures. Ideally those numbers are going down the more we put countermeasures in place. It can take many years and large amounts of money to collect sufficient evidence that the countermeasure was effective, so we often need to find surrogates for actual outcomes. The general observation that program evaluation is critical to improving our response to serious injuries is very valid.

Mr SCHOFIELD — Whilst you noted that a lot of submissions said there were not many evaluations, I would say that quite a lot of evaluations are undertaken in Victoria not just by VicRoads but also by TAC and

the Department of Justice. Importantly too MUARC, on behalf of the road safety partners, undertakes a lot of evaluations. The point I am trying to make is that in our submission, for example on speed, when we went through the dichotomy of speed I think we listed about 10 or 12 evaluations of the speed camera program and various attitudinal studies, so I would like to make that point.

Significantly adding on to that, the METS that the partners use to assess the impacts of road safety measures or potential countermeasures is all built on and derived from evaluations of individual components and even groupings of components into their safe system elements. Each of the areas that we are looking at has a range of evaluations and scientific research behind it to establish what the likely outcome of introducing any new countermeasure is going to be. We keep making the point in Victoria that we are very evidence based and research driven, and that really comes back to the fundamental of how we establish a road safety strategy. What actions we propose are always based on either best practice or sometimes, because they are so new and different, we are just having a go in some areas. That whole conceptual framework that we operate is always built on history and evaluations.

Mr ELSBURY — According to the submission from the Institute for Road Safety Research in the Netherlands — SWOV — road crashes resulting in fatalities are different types of crashes to road crashes resulting in serious road injuries. The SWOV suggests that the causes of crashes resulting in serious road injuries can be traced to system errors rather than extreme behaviour. On this basis the SWOV concludes that policy aiming to reduce the number of serious road injuries needs to be different to that aimed at the reduction of road fatalities. What are your thoughts on these statements?

Mr SHELTON — My first thought is, yes, I would agree. To expand on that, the best Australian insight into this is the work done in South Australia, interestingly with quite a bit of input from people from SWOV, which looked at crashes there and differentiated fatal and serious injury crashes across those that were considered to be caused by extreme behaviours versus what were largely compliant behaviours. In relation to serious injury the observation was that most crashes were compliant behaviours and it was a failure of the safe system that resulted in the injury. I think the general observation that they are different is probably true for us also. I would suggest we do not have the evidence base to be absolutely certain about that.

Mr ELSBURY — Do you think it would be advantageous to include key performance indicators at the initial implementation and post-implementation phase of projects to track effectiveness? To what extent are such indicators included in non-infrastructure programs?

Mr LYNGCOLN — The Road Safety Executive Group has been doing quite a lot of work on trying to come up with a set of performance indicators that helps their overall management, and they operate at a number of levels. At the highest we have obviously got our overall fatality and serious injury levels. We will have program evaluations so we can report on the effectiveness of particular programs. We have also then got potentially a number of output or indicative measures that do not tell us about the outcome but give us some indication of how effective some activity has been. For example, if police are doing enforcement and TAC is doing campaigns targeted at speed, we can do some monitoring of speed on the network, but we can also test attitudes and things like that as well.

I think we need a set of indicators. It is easier to develop those in some areas than others. For example, it is far more straightforward in the infrastructure space to do that in some of the behavioural areas. We are looking at having a combination of both outcome indicators but also some outputs of indicative indicators that give a feel for how effective some of our measures are.

Mr ELSBURY — Several submissions have highlighted the important role of the Victorian state trauma system in reducing trauma. What are your views on the performance of the VSTS in terms of reducing crash trauma and improving injury outcomes?

Mr SCHOFIELD — I think we would have to agree with that. I think it is important. In about 2001 or 2002 the review of the trauma system was being undertaken on a quality basis to determine priorities for where to send patients so that they would get the best treatment for that particular injury type. I think it is probably remiss of us that we do not acknowledge their contribution a little bit more.

Mr ELSBURY — So you would agree that the developments in medical care and treatment and the impact of the VSTS can explain the reduction in road trauma over the last decade or so?

Mr SCHOFIELD — I would not go that far. They certainly made a contribution. What is important is that very early on in our submission we acknowledge that back in the 1970s it was the medical fraternity that advocated strongly for the use of seatbelts. Whilst it was remiss of us probably not to mention their important work, I think the important part is that it is the combination of factors that have had a reduction in the road toll.

The health area certainly prevented people from dying and improved the injury outcomes for other people. We recognise that, and that is why recently we have included the Department of Health in the road safety management group, because it is an important link for both of us. That is evidenced in our new strategy, where we reference the new Victorian drug and alcohol strategy in a road safety strategy, and equally they reference our road safety strategy in their drug and alcohol strategy. I think those important steps for relationships between health and, I suppose, the road safety partnership is what is being built on, and we do acknowledge their contribution. I am not commenting on the Alfred's submission.

Mr ELSBURY — Very sage.

Mr TILLEY — The committee is aware that there are various approaches to speed management in different jurisdictions, including overseas. For example, the committee has heard that in the Netherlands urban speed limits are around 30 kilometres an hour, while arterial or freeway roads allow higher speeds of up to and including 130 kilometres an hour. In other European jurisdictions the speeds tolerated on high-performing roads with advanced road safety characteristics are greater still. It appears that this approach to speed management is intended to deal with points of conflict between road users, particularly bicyclists and pedestrians, in urban environments, such as those at intersections, while allowing higher speeds on roads designed to cater for the safe movement of goods and people at higher speeds. What are your views on allowing higher speeds on arterial or freeway roads that are capable of allowing higher travel speeds safely, while reducing urban speed limits? Do not be scared; be bold.

Mr LYNGCOLN — I will start with the urban lower speed limit thing first, and then I will come to the high speed limit one. A lot of work has been done in Victoria to lower speed limits, particularly in areas where there are lots of vulnerable road user activities — so 40 kilometre-an-hour speed limits around schools, through strip shopping centres and increasingly on residential streets as well. In the recent speed limit review we committed to changing our speed limit guidelines to make it easier for local governments to place 40 kilometre-an-hour limits on their local roads where they are not serving a through function, they basically have a local access function, they have lots of use by cyclists and pedestrians and they will not have much impact on the operation of the network but there are potential improvements for safety. That has been really effective.

The safe system purists tell you that you need 30 kilometres an hour. When you look at our stats for, for example, pedestrian fatalities on 40 kilometres an hour, there are virtually no fatalities at all anymore on 40-kilometre-an-hour roads for those road users. Personally I am quite comfortable that 40 kilometres an hour is working for us in relation to those vulnerable road users. There continues to be a push from some areas for 30; I think we would struggle to get community acceptance of that, and that can lead to issues of compliance. If we are going to tackle speed limit things, I am not sure that is the one we most need to tackle, because if you look at the crash problem, it is just not there on those roads. There is still potentially more that could be done with implementing some of those 40s, and we will continue to roll that out.

There is probably work that needs to be done looking at the 80, 70 and 60 range as well. We have taken the approach of dealing with that on a case-by-case basis, rather than looking at a blanket approach, and working with communities to make sure there is community acceptance where we need to make changes.

In relation to raising speeds on high-speed roads, there was a bit of an experiment with that in Victoria back in the 80s, where speed limits on a number of 100 kilometre-an-hour roads were raised to 110. We saw an increase in fatalities of about 25 per cent when that was done, and we very quickly realised that it had not been a good move. The speed limits were lowered again, and we saw the fatalities drop again by about 20 per cent. We receive a lot of correspondence about raising speed limits on the Hume to 130 kilometres an hour, comparing it to autobahns and things like that in Germany. We would be very uncomfortable about raising those speeds with the infrastructure that is out there. Those roads are not designed for that kind of speed. In particular on a road

like the Hume, for example, there are a number of direct accesses on that road from driveways and intersections, and it is a very unsafe situation at that kind of speed to be having that kind of environment. There is not a road in Victoria that has been built to a standard that would operate safely at that kind of speed.

There has been lots of research done around the world on the relationship between speed and crashes and what sort of crash increase you could expect with certain increases in speed, and that 1980s example pretty much matches that research. So our position has been, when those proposals come up, to note the crash increase that we would expect without very significant infrastructure investment. You would be talking very large money — completely grade separating roads and providing a very high standard — which is unlikely to be cost-effective in terms of the mobility benefits that that would deliver.

Mr TILLEY — You mentioned a study in the 80s. Would it be fair to say that the fleet was significantly different from the fleet today?

Mr LYNGCOLN — Yes; obviously there are changes in fleets and things over time. But having said that, those kinds of studies have been repeated all over the world, over and over again, and they continually come up with similar sorts of results.

Mr TILLEY — Yet they maintain 130 kilometres an hour in dry weather and reduce it for wet weather conditions to 110.

Mr LYNGCOLN — Yes, there are certainly countries that operate 130. A lot of people point to Germany, for example, and say, 'They are a very high-performing country; why shouldn't we have their speed limit regime?'. When you look at the actual individual roads, they are not necessarily performing at the kind of level from a safety point of view that a lot of our roads would be. They certainly get advantage from much lower speeds in the urban environment as well. I think it is a bit simplistic to just look at a country and say, 'It's got this road safety performance; we should just adopt autobahns, because that is what they do over there'.

Mr TILLEY — I disagree with you on that point. Here you are asking for governments to put significant investment into the roads, and we have AusRAP star ratings and we want to bring the roads up to 4 and 5 stars, yet there is always this fallback position. There is a lack of willingness to explore or look at the opportunities. How can there be this demand on governments to invest significant amounts of money into infrastructure when there is no preparedness to dangle a carrot at the commuting public?

Mr SHELTON — I think if we wanted to operate some of our roads at 130, we could come up with an investment program to lift those roads to that standard and run them at 130. The question would then be: as a community do we want to invest in those roads to be able to do that, or are there other better ways to use that money? That is not a decision for us.

Mr TILLEY — But, say, with some of the infrastructure, my understanding is that some of the infrastructure is engineered and built for higher speed limits in any case?

Mr LYNGCOLN — There has been a practice in the past of designing to 10 kilometres above the speed limit. That has largely been to build a factor of safety into the road design. That does not continue to be the case. It happened in the past. That would have been to determine things like alignment of the road, but it does not necessarily take out things like at-grade intersections and all of that sort of thing as well. The other thing to note is that our road safety barriers and things that we use are not tested to those kinds of speeds in Australia. A fair bit of work would have to be done.

Mr TILLEY — So you are saying a wire rope barrier would not stand up to speeds of 130 kilometres an hour?

Mr LYNGCOLN — I am not saying that it might not for a particular crash; I am saying that we do not know, say, for very heavy vehicles at particular speeds and particular angles whether it would or it would not.

Mr TILLEY — Would you be aware there are survey points on the Hume Freeway where nine-axle vehicles do in excess of 160? What about two-axle passenger vehicles, some of their speeds at the survey points on the Hume Freeway and the data that is coming in there?

Mr SHELTON — There is a reason that it is illegal, though. It is because of the high safety risk that comes with that.

Mr TILLEY — I want to have a robust conversation about it.

Mr SHELTON — I think if we were to look at our whole network and take a risk-based approach to what the speed limits should be, we would not be putting them up. I think already the community is probably enjoying higher speed limits than a solely risk-based approach might actually dictate, particularly on some of our rural roads.

Mr LYNGCOLN — I guess the other thing to note in this area is in terms of cost to the community and travel time and all that sort of thing. We are now seeing some freight companies looking at dropping from 100 to 90 because the fuel cost savings for them are outweighing the travel time difference.

Mr TILLEY — I do not want to go to fuel cost saving. We are a committee exploring safety and where the parameters may or may not lie.

Mr PERERA — Just a quick one. When you drive from Melbourne to Sydney there are townships you pass where the speed limit is 50. However, on the Gippsland Highway when you pass Cranbourne along High Street it is 60, and people have been lobbying for years and years to get it down to 50, but VicRoads has been adamant that it should be 60. Is there a reason?

Mr SHELTON — I think we will have to take that one on notice, Jude, because speed limits are set in relation to the specific context of a piece of road, and we have not come equipped to address that directly.

The CHAIR — Thank you; it would be good if you could do that. I am sure Jude would be very happy to get an answer to that question. Mr Languiller.

Mr LANGUILLER — David, if I may, before I ask you the question I want to confirm that this quote is right. In your previous comments you said, 'Willingness to pay throws weight on vulnerable road users, safe systems and brains and spines'; is that correct?

Mr SHELTON — I was giving my view of what it might do, Telmo.

Mr LANGUILLER — Fair enough. Perhaps in correspondence we would like to explore various variables and questions, particularly in light of New South Wales and what it means in terms of motorcyclists and cyclists, but we will do that by way of correspondence. I just wanted to make sure that that is kind of what you said.

Mr SHELTON — Yes.

Mr LANGUILLER — I think it is a very important statement to make. The committee is aware that a potentially significant proportion of crashes on our roads — up to 30 per cent — occurs in the context of employment. Are you aware of the incidence and extent of workplace crashes, and if so, what issues do these types of crashes pose in developing appropriate countermeasures?

Mr SHELTON — Yes, we are aware of the proportion of crashes that actually involve work travel. Probably the most important opportunity that it offers us is other countermeasures relating to the influence of employers on employees in addressing some of these. There is quite a bit of work that has been done to advocate for employers actually ensuring that their employees are in safer vehicles — that is one particular theme — and more recently work headed up by the NTC has been focusing on engaging companies in endorsing road safety and looking at what they can do through their staff conditions of employment and travel management to ensure that travel is safe. In fact some companies have been quite leading in achieving this, particularly BHP's work in ensuring that they have a 5-star fleet. That has had a big impact not only on their own workforce but on a number of other large multinationals that have subsequently followed suit.

Mr LANGUILLER — Do you agree that if workplace crashes are caused by different factors to those seen in commuting or recreational crashes, this would require policy interventions developed by both road safety and occupational health and safety agencies in conjunction?

Mr SHELTON — I do not have the information to tell me that they are different types of crashes. I do not know whether you can comment on that, Peter.

Mr SCHOFIELD — I might be wrong here, but I had a look through the Safe Work Australia submission. A fair proportion of those were heavy-vehicle-related crashes that were reflected, and I think they made the point that, in respect of Victoria, for a self-employer there is no requirement to report it as a work-related incident. So we are not sure. Certainly by a default mechanism we can undertake analysis on crashes by vehicle type, which probably reflects a lot of the commercial trades; it does not reflect the person who is travelling around in a light passenger vehicle though, whether it is a work-related crash or a non-work-related crash. The vehicle type would certainly give us a fair indication of whether it is a commercial enterprise or not.

Mr LANGUILLER — Just as a matter of interest, how would it qualify for taxis, for example?

Mr SCHOFIELD — Taxis would be classified as a work-related area because it is a public transport vehicle, the same as if it were a bus or a heavy-vehicle occupant.

Mr LANGUILLER — Thank you.

The CHAIR — We are in the home straight. I am just going back to data linking. I just wanted to pose a question. The Department of Health submission includes a discussion about its data linking unit and the potential for it to be crash data here in Victoria. What are your views on the potential of the DOH's data linking unit leading efforts to achieve a functioning linked dataset?

Mr SCHOFIELD — That would have to be the port of call because they are the repository of all the health data; it seems to me a bit of a one-stop shop, and if you do not shop there, you are not going to be shopping anywhere else. We have had some initial discussions with — —

Mr ELSBURY — A bit of anticompetition law is coming in there!

Mr SHELTON — One of the benefits of using health, of course, is that it avoids the need to actually deal with health's privacy issues. If they are not sharing their data with anybody else — it is other people giving them their data — then that perhaps gets around that. I think, though, that whilst health actually has substantial capacity in this area, the resourcing of the work we would need to do could be quite substantial.

The CHAIR — Thank you. The final question: the committee is aware that some in the road safety community believe that a disproportionate emphasis has been placed on fatalities and fatality reduction targets. They contend that our focus needs to be realigned towards serious injury — suggesting, for example, using a serious injury toll and focusing on serious injury reduction targets rather than fatality reduction targets. What is your response to that view?

Mr SHELTON — I do not believe that it is a matter of having one or the other; we clearly need to have both. The emphasis of the new strategy is in fact to recognise that in the past perhaps we have not given enough focus to the serious injury toll. In throwing focus on the serious injury toll, it is not our intention to take our eye off the ball of the road toll.

Mr LYNGCOLN — We should also mention that in the strategy there is a target both for fatalities and for serious injuries; there is a separate serious injury target in there. Around the world people have tended to struggle to deliver the same kind of reductions in serious injuries compared to fatalities, but we have set a target of 30 per cent for both fatalities and serious injuries, as well as the commitment to develop the severe injury measure. As we mentioned earlier, we are keen to help the community understand the scale of the road safety problem, which includes being able to report on serious injuries as well as fatalities.

The CHAIR — Yes. Thank you very much for your time today, gentlemen. Thank you David, Peter and Julian. We appreciate the quality of your presentations and your insights into the field. We have diverse views as a committee and keen interest within the committee as well. Thank you for your offer to address some of those matters today.

Witnesses withdrew.

TRANSCRIPT

ROAD SAFETY COMMITTEE

Inquiry into serious injury

Melbourne — 11 September 2013

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Mr T. Languiller
Mr J. Perera
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Witnesses

Mr D. Russell, senior manager, government and public affairs,

Mr B. Savage, general manager, policy and government relations, and

Mr M. Oakley, consultant, Victorian Automotive Chamber of Commerce.