

TRANSCRIPT

ROAD SAFETY COMMITTEE

Inquiry into serious injury

Melbourne — 10 September 2013

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Professor P. Clarke, Centre for Health Policy, Programs and Economics, and

Dr D. Petrie, senior research fellow, Melbourne School of Population and Global Health, University of Melbourne.

The DEPUTY CHAIR — Firstly I apologise on behalf of our chair, Mr Murray Thompson, who is unable to attend today. He requested of me that I extend his apologies to you. We thank you for coming. The evidence given is protected by parliamentary privilege; however, any comments made outside the hearing are not afforded such privilege. The transcript will become a matter of public record. I ask you both to introduce yourselves and name the organisation you represent for the benefit of the transcript.

Prof. CLARKE — I am Professor Philip Clarke from the University of Melbourne. I am a professor of health economics, so largely my comments will pertain to using a sort of cost-benefit or cost-effectiveness framework to evaluate road safety.

Dr PETRIE — My name is Dr Dennis Petrie. I am a health economist working at the University of Melbourne.

Prof. CLARKE — Perhaps I will make a few points. We do not have a formal set of slides or anything, but I will try and make the points verbally, and we can no doubt clarify any issues that arise. At the broadest level I would like to make the point that you can get lost in the detail when it comes to trying to value things or trying to use or apply these methods, such as cost-benefit analysis, but at its broadest level the question is that as economists you are trying to have an explicit way of summing up costs and benefits, generally using money or other ways, but it is then to assist decision making. Obviously it is increasingly used across various sectors, and perhaps most explicitly in the health area it is used by the Pharmaceutical Benefits Advisory Committee.

Australia was one of the first countries to adopt an explicit framework for evaluating pharmaceutical drugs, so I might make some references about that. Clearly I think what it did do is allow an expert committee to weigh up the demerits of drugs in terms of their overall benefits for extending human life and increasing quality of life versus their cost. It has largely assisted governments in being able to pick and choose what is value for money.

Perhaps I will make reference to the PBAC, as it is called, which determines what should be listed on the pharmaceutical benefits schedule. That is an uncapped program, so often I think what happens these days is there are recommendations by the committee to list drugs or make certain changes, and then there is some politicking around the issue about at what time those recommendations are adopted.

To take another example, a similar committee in New Zealand called Pharmac has a fundamentally different role, because what has happened is the New Zealand government has basically given it a fixed budget and has asked it to make allocations and adjustments to achieve maximum human health. So there is quite a difference between the committee that makes recommendations on cost-benefit that then feeds into a political decision-making process ultimately by approval of cabinet and the minister versus a process where the committee is delegated the responsibility but government determines how much money and then it makes choices. Those are two things to consider if you are adopting this sort of process in road safety decision making.

Often economists are accused of only being concerned about costs. That is not true; we are also concerned about benefits, and in many ways trying to measure benefits is the hardest part to do. Obviously you can observe costs, such as the costs of upgrading highways and other safety measures, but trying to assess the benefits and then value them occupies most health economists' time.

Obviously as far as possible one wants good evidence of changes in terms of reductions in mortality or morbidity or in terms of potentially reducing traffic accidents. Coming back to the Pharmaceutical Benefits Advisory Council, it can draw on submissions which involve randomised trials. Here there has been much less scope for randomised trials, although potentially it is possible to build randomisation in if you have got a safety program. Instead of allocating where the safety program goes in an ad hoc way, if you can allocate that in a random way you can kind of get a natural experiment. People have found — for example, in the United States with trying to extend health insurance — that if you have not got enough budget to cover your entire population, what they have been doing is using lotteries, and out of that drops an experiment, which will give you an idea of how effective the program is. You may well want to consider it beyond the pure research. You may want to use lotteries for other reasons. Effectively people may see it as fairer if you have got a limited budget to allocate that randomly rather than in an ad hoc fashion.

Once you have assessed the benefits in the reductions of mortality and disability, what metrics do economists use? Effectively there are two broad metrics. There is the quality-adjusted life year, which health economists tend to use. That tends to try to place a value on a life on a scale from zero to 1, where zero is someone who is

still alive but they have got very poor quality of life that is almost equivalent to death, and 1 would be full health. You try to measure things on that scale. Perhaps a subset of that is the disability-adjusted life years, which again are giving a formal scale. To some degree the commonalities between these methods are greater than their differences.

The alternative is to directly try to value either a life or risk in terms of monetary terms or disability and so forth. Again, these are often employed by economists, particularly in the transport area. Those are the two ways. I must stress that the important thing is that you are explicitly trying to value the benefits. Of course once you estimate QALYs or DALYs or numbers of lives saved, at some point you are going to have to place a value on that if you decide whether it is worthwhile. There is no escaping the idea that what you are buying into by undertaking some sort of economic evaluation is placing some sort of monetary valuation on the benefits and comparing that with costs.

Finally, perhaps I will make just one reference in terms of an important issue also to consider — that is, discounting, which is the rate at which you value benefits in the future over costs now or the rate at which they may decline. Often economists observe — and I think generally we observe — that we generally put off what we do not like into the future or do not value some things as much the further they occur in the future, so often what economists do is base an explicit discount rate. In Australia typically that is 5 per cent.

If you change that discount rate, it can make quite a big difference to any sort of program where there are costs up-front and a long-term stream of benefits. Again, one might re-examine that in terms of reprioritising programs. The lower the discount rate, the more you will favour, as it were, long-term preventative strategies. There is perhaps a need to have a think about this, given that Australia's discount rates tend to be higher for programs than other countries, such as the United Kingdom. I will leave it there and perhaps hand over to my colleague.

Dr PETRIE — Basically what I am going to talk about is more on how health economists place value on potentially serious injury or other kinds of outcomes, like death. Ideally with these things we want to try to get the willingness to pay of individuals in terms of how much they are willing to pay to reduce risk to themselves or others they care about or to prevent serious injury or death. That is our aim. There are different ways that people go about trying to achieve this outcome.

One way is kind of a human capital approach. Basically this is trying ex-post, after it has happened, to say, 'If someone dies, their lost productivity is how much we are going to place as a value in terms of what was lost when they died'. It is in terms of their lost productivity. But there are problems with that in terms of old people who are no longer in the workforce; it means that implicitly — or explicitly — their value is zero even though they are still contributing, so they still have value. Also that kind of approach is not particularly good at trying to get back to risk and valuing risk, because it is really ex-post rather than individuals having risks and trying to reduce risks from an ex-ante perspective — so, looking at things in the future and thinking, 'How much am I willing to pay to reduce risk?'. It is more about, 'What is the lost potential productivity of the person who died?'.

There are other ways to do it. There is stated preference, where you ask people their opinions on how much they are willing to pay to reduce these risks. It is very difficult to do, so often you get people who kind of overestimate how much they are really willing to pay in practice. They will state that they are willing to pay a lot when actually, when it comes down to it, it is probably a bit less. In Queensland they were trying to evaluate the benefit of tolls, and they asked people to state their preference in terms of how much they would use the toll road. They overestimated 10 times more than people actually used it. This is why the private company that built it went bust, mainly because this estimate was just so far out. Again, what people state is not always what they actually do, so there are a lot of problems with getting stated preferences, mainly because it is a tough question to ask; people are not very good at answering it, basically.

There are other methods. People kind of have revealed preferences. Basically this is when we might try to value a life by using cases in real life where people trade off between money and risk to themselves. It might be that, in a sense, people have two job options. One job option might carry a risk of death or serious injury and another one might be more safe, but there is a risk premium attached to the job in terms of what they take. Lots of times this value that they elicit in terms of a statistical life is about how much people are willing to not get paid in order to get a safer job compared to a risky job. It is another way of trying to elicit that value. It is probably one

of the more preferred ways because it is people making real decisions, but again there are problems because the less people are risk averse the more likely they are to go into a risky job.

Also these kinds of methods do not take into account all the costs involved. There is the cost to others — so, there are bereavement costs if someone dies. There is also the wider cost to the community, and also lots of times this does not take into account government costs or third-party payers, because, again, people are just considering the cost to themselves. Some of these costs, if they get seriously injured, are covered by government in the future, so they do not really consider some of these costs.

There is probably also the PBAC. They place an implicit value on a quality-adjusted life year. Basically their threshold is about \$50 000. Again, whether or not it is the right value we do not really know, but at least it is explicit, and it can be debated whether or not it is an appropriate value to place on our own health. There are lots of reasons you might want to change it. Again, it depends on whether or not individuals have the ability to protect themselves from particular risks. For example, you might be willing to pay more in terms of rail safety if people cannot adjust the risk themselves. If someone else is driving, if someone else is controlling the speed, I cannot adjust the risk myself by driving slower, for example. So there are reasons you might want to change these prices as well.

Probably the other thing is that willingness to pay also depends a lot on income as well, so how much we value serious injury is going to depend on income. If you are placing a value on it, that means that as our incomes rise the value we place on it should also rise as well. I suppose that is about it. Thanks.

The DEPUTY CHAIR — We thank you. We will go through the motions — although you have kind of answered some of the questions we had — for the purposes of our records.

Mr PERERA — In your opinion, what are the advantages and disadvantages of using willingness-to-pay methodology to calculate the social cost of crashes?

Dr PETRIE — I suppose willingness to pay in the broad sense is kind of what we want to measure. It is how we try to capture willingness to pay. As I said, stated preference — trying to get people to elicit it just through a questionnaire — is really difficult, and there are lots of reasons why. It might be too high or too low. People might make protest votes. People might just not be very good at managing their budget, but as you spend your budget you kind of start to realise, ‘How much do I have left?’. If people are hypothetically doing it, then they do not have that pullback in terms of, ‘How much is my budget, and how much can I afford to spend on this?’. This is kind of where revealed preference is almost like a gold standard, but, again, there are difficulties in eliciting these values, mainly because you are looking at choices where people do make these trade-offs between serious injury and money. Again, like in road safety, it might be people purchasing safer cars versus less safe cars and how much in addition they are willing to pay for those safety features.

Mr PERERA — So basically you sort of discard WTP?

Dr PETRIE — I think willingness to pay is what we are trying to get, but I think in terms of a questionnaire to try to elicit people’s values it is really tough to do. I think all these measures are trying to get willingness to pay, but they are just doing it in different ways.

Mr ELSBURY — We have pretty much done willingness to pay to death, I think. I am just going through the questions here and not really finding one that is still relevant. What do you consider best practice in terms of developing a willingness-to-pay study to assess the cost of serious injuries due to road crashes?

Dr PETRIE — This is a survey to individuals or — —

Mr ELSBURY — Yes.

Dr PETRIE — I suppose there are lots of potential pitfalls. Again, there is reminding people about their budgets and how much they said they have to spend.

Mr ELSBURY — One of my things about this willingness-to-pay concept is that, if I were to use all of my financial resources to be able to keep my family safe, we would be driving a Volvo. My wife is not; she is driving a Corolla. It does not have curtain airbags. It did not have them back when that car was produced, so my

willingness to pay is up here. My actual paying is much lower than what I have actually displayed through my own actions.

Prof. CLARKE — I think that is common. That is a common finding of stated preference — they are both willingness-to-pay concepts. Effectively what we are trying to look at is your demand for safety, but often people overstate it. I think it is because, if you think about normal goods, you are trading these every day for money, whereas with safety often you are not. I must stress that, if it is clearly what you are really paying for, this is the premium for an adjustment in risk. Clearly it is very difficult. If you are trying to avoid a certain death, then I think valuation becomes very difficult, but a change in risk — going, for example, and looking at people's preferences for airbags — would be a way to try to get a few. If people were informed, it would be a way of trying to get a premium they place on safety, as it were.

The other thing I must stress here is that perhaps we are not looking for the magic single number. If we have a range, I suppose what it is doing is narrowing down, because if the costs are greater than the top valuation you place on life — if the cost per life saved or whatever is greater than that — then you would discard the project, and if it is below it, you would accept it. Even if there is a reasonable range, it is still narrowing the framework, which you would perhaps leave it to other factors to decide on.

Mr ELSBURY — That was interesting, because in the presentation we just had from the RACV we were told that we could save \$390 million worth of injuries over the next 20 years if we went and spent \$470 million. If you looked at it out of pure economics, you would say, 'Just leave it; don't worry about it', but we are not dealing with just economics, thank goodness — there is a human factor involved there — so you would be encouraged to do something about road safety, but just purely putting it down as economics does not always work.

Prof. CLARKE — Sure. Yes.

Dr PETRIE — Again, I think it is about what they are capturing in their benefits as well. People capture benefits in different ways. In fact with a reduction in risk and the perception that things are safer, people are willing to pay for that perception, because they get anxious when they feel unsafe, even though it might not translate into that outcome.

Mr ELSBURY — Buying a four-wheel drive and driving it around the city, I feel safer because I can see things, but if you are in an accident it is actually worse.

Mr TILLEY — Who says?

Mr ELSBURY — In the city.

The DEPUTY CHAIR — Put that on record!

Mr TILLEY — Gentlemen, I would like to continue on willingness to pay, but probably in more practical terms, specifically about surveys. While the willingness-to-pay approach is conceptually the most appropriate costing model for road crashes, there are a number of methodological issues that need to be overcome before it should be adopted. Associated issues include the significant costs involved in undertaking a willingness-to-pay survey, the time taken to complete a study and issues associated with the ability of survey participants to assess risk. What are your views on the methodological issues associated with the willingness-to-pay model? Do you believe they can or have been overcome? Please draw on your experience in the health-care area in responding to this question. You have already answered a whole part of it.

Prof. CLARKE — My PhD research about 20 years ago was one of the first studies in Australia to look at the willingness to pay for valuation of breast cancer screening. I was interested in which rural towns should receive screening units. One of the ways to look at that is to try to look at women's behaviour in different towns in terms of how far they were willing to travel, so that has revealed preference. What we did show was that those who were located further away had much lower rates of screening in towns. Alongside that I conducted a willingness-to-pay study asking, 'How much would you value a mobile screening unit at?'. There is a signal there and there is noise — there is no question — that values from the willingness-to-pay study were generally higher than the observed values. It enabled me to come up with a way of saying that towns more than

50 kilometres from a fixed site should have mobile screening units at that time, whereas towns below that should not. It is a way of using cost–benefit analysis to get a hard and fast rule.

Were they perfect measures? I do not think so. But, as I said, was it giving some signal about the value the individual has placed on that aspect of their health care? Yes, I think it was. In many ways I think you can delay adopting use of these methods because you perhaps have some concerns. If you read the literature, academics are always trying to highlight deficiencies in the research of others or trying to find improvements. But are they tools for a state to be able to improve decision making? Yes, I think they are. There is a signal there, and it is a matter of where you have got uncertainty being explicit about that. What I think it is doing is narrowing the range over what you would say would be cost-effective or where the benefits would outweigh the costs, but there still will be a range. At least it makes it more explicit.

Dr PETRIE — There are lots reasons why it may be sensitive to the way you ask the question, how you frame the question, what kind of scales people get put in there. I do not think these questions should be necessarily be fixed, but people have explored what it is sensitive to basically. Again, it is in the sense that it might provide you a range, it might to add to it in a number of different ways, but it is not going to give you this one answer. Does it add to knowledge? Yes.

The DEPUTY CHAIR — Thank you. We have covered some of the space, but I want to make sure that we pin this down to some very direct responses, if I may. It appears that willingness-to-pay values comprise direct costs of crashes, such as hospital treatment costs and property damage et cetera, and indirect costs, such as lost productivity costs, and the WTP values for a reduction in risk values derived from. Do you think this is an appropriate approach, or should the willingness-to-pay values be based only on the value for reducing risk? What are the issues, if any, around the potential double counting of costs?

Dr PETRIE — I think the evidence suggests that for the willingness-to-pay surveys people do not take into account the costs that they do not bear and potentially sometimes their close family members bear. When they are making these decisions on how much they are willing to pay, they are just taking into account the direct impact on them. They do not consider the fact that the government is going to have to pay for the hospital visits and the care because they do not have that direct cost on them. Again it is this hazy area where you are asking someone to elicit their value, and it is whether or not they are taking some of these things into account. Again, there is how you frame the question as well and trying to separate these things out in terms of who bears the cost.

The DEPUTY CHAIR — In another part of my work I do quite a bit with the ageing population, and typically when you sit down with people who are older, 65 and more, retired, and they do not appear — anecdotally I put this — to recognise the value that they do bring to families and community. For example, child care or work of a kind which is typically unpaid and unrecognised internationally. Is there any work around that area, particularly with the older persons community given that ours is an ageing community?

Dr PETRIE — I think there is probably more consideration to trying to get the value in there. Whether or not people have been able to accurately value that, probably not, so lots of time people kind of have a third of a working person basically. It is hard to value, but still you want to try and illustrate that value, because it is potentially important in some studies.

The DEPUTY CHAIR — Thank you.

Mr PERERA — Several submissions to the inquiry suggest it would only be appropriate to adopt the WTP approach in Victoria to calculate the social costs of serious injury if it is also used across other policy areas. Do you agree with this statement?

Prof. CLARKE — Yes. The only thing, which Dennis raised, was the issue about whether the value you place on saving a life or reducing risk is different across different areas. The issue may be that in terms of public transport you may place a higher value on lives lost when you do not have control than when you have control. Ultimately the idea would be to try and marry it with decisions made in the health-care sector. Clearly you are basically trying to do the same thing in terms of extending human life and improving human life in a different area with safety. The rational thing would be to try and have as far as possible a common value, unless you can find a reason not to. As I said, with the difference between individual versus public safety actions may be a reason.

Dr PETRIE — Having a consistent number is a fantastic thing, because then we can have consistent decision making. It does not necessarily have to be the same, but at least then it provides a requirement that you need a rationale about why it is different, and then that can be debated. It makes it more transparent about decision making.

Mr PERERA — But again the difficulty is getting the information from the people — is that right — their views on their need to pay?

Dr PETRIE — Exactly, so how much they are willing to pay is difficult.

Prof. CLARKE — Typically, I suppose, people who have done these studies get a range, and maybe it is a wide range, say, for a value of a statistical life. Typically it goes from about \$1 million to \$2 million to about \$10 million, but at least it is now giving you a range. So if you have a safety program that is going to cost you \$500 million and you expect to save 10 lives, you could make a decision if you can place a value on life, even at the upper end of that range, that it is not worthwhile, whereas if it was \$50 million, you would probably say it was. As I said, I do not think you are ever going to get a single value; there is no magical value of life out there that we are trying to get.

The other thing is that it will change over time, particularly with people's expectations as their income rises. What I think the economists would say is that as our income as a community tends to rise we tend to place a higher value on life, potentially relative to other goods. Perhaps one might observe this in actual expenditure as well as in the fact that expenditure on health care tends to be rising relative to other goods.

Mr ELSBURY — A recurring theme in this inquiry is the impact of injury severity classifications on the calculation of crash costs. Currently Victoria and other jurisdictions use a police definition for 'serious injury', which relies on a hospital admission as the proxy. However, this proxy does not provide an injury scale and has been described as a 'blunt, resource-based measure'. A majority of participants in this inquiry believe that the serious injury measure in Victoria should be replaced with the ICD-based injury severity score — ICISS — a threat to life measure. In your view, how critical are injury definitions in assessing crash costs?

Dr PETRIE — I do not know what the exact definitions are, but obviously we are stuck with them. Again I think the injury can have very different resource implications. If a person is seriously injured and in a year's time or two years time they are not better, that has huge resource implications, rather than someone who might have an injury now but in three months time might be fine. Yes, I think there is probably a wide variety of different injury severities having a wide variety of resource implications in the future, downstream. For lots of individuals who hit hospital services we see very different implications in terms of costs, and normally the 5 per cent which are the most costly will have 50 per cent of the resource use. So the most severe are causing the major resource use basically.

Mr PERERA — Dr Petrie, the committee notes that one area of your research has focused on the economics of bereavement. Can you explain what this is and how these costs might be calculated in the context of road safety, by reference to the human capital and WTP approaches?

Dr PETRIE — Yes. I suppose it is how people respond in the sense that you are not only reducing the risk to yourself but you are reducing the risk to the people who you care about and if that person dies, there is going to be an impact on you and in some cases this is a very severe impact. In my work on bereavement, when I looked at people accessing health services basically what I found is that those people who were bereaved often accessed health services a lot more than those people who were not bereaved that could be matched. In lots of these cases it depends upon how you ask the question. Some of these reveal a preference. When you are considering taking a risk, you are not considering the implications potentially for your family dealing with your death, for example. I suppose it can be thought of as an additional cost to others from a person taking risks.

Mr ELSBURY — A number of submissions have canvassed the use of 'burden of injury' measures such as disability-adjusted life year and quality-adjusted life year to monitor road safety and measure long-term injury consequences. What are your thoughts on their use for this purpose? Which of the two is better, in your view, for the purposes of tracking injury outcomes?

Prof. CLARKE — I think perhaps I will answer the last part first. The idea of a quality-adjusted life year is the idea that you put each life year on a 0–1 scale, and where you are placed on that scale is how much people

are prepared to trade off length of life for quality of life. If I am in a very poor state, I may well be prepared to have a lower length of life to have my health improved. DALYs, or the disability-adjusted life years, were originally more just an expert panel. What I must stress is that there is a new version of the DALYs, and they are now taking the same approach as the QALYs, so effectively they are the same measure; they are just using a different set of weights. Again, as it were, there is no easy way to value these things, whether it be in life or money. Clearly when people value the same states, they can come up with a range of values.

I think there is scope for using these. I would not say they would displace the use of ICD-9 type classifications. But perhaps, in addition, trying to map some of those classifications into a loss of QALYs would give you a way of potentially valuing someone who will be a paraplegic for the rest of their life or a quadriplegic. It would give you a way of trying to place a value on their reduced quality of life, which again is a tradition of maybe 40 or so years in health economics in terms of trying to place a value on quality versus quantity of life. But I would not see any difference between DALYs and QALYs.

Mr TILLEY — If I may, I just want to qualify what you said in your last comments. Did you say there is some change or a new model in relation to the DALYs?

Prof. CLARKE — Yes, the DALYs. Originally it was an expert panel, and I think they sat in Geneva for about two days and rated different things on this scale. That lasted for about 10 years, but now they have done an assessment across the world. In effect you are asking people to make these trade-offs for a given. Imagine you are a quadriplegic and you are expected to live for 10 years — what if you could reduce your life expectancy of 10 years and raise up your health status? Again they are hard questions to answer. I do not think they are necessarily any easier than the monetary valuations, but both now use these valuation techniques.

Mr TILLEY — Can you recall the exact time when this occurred?

Prof. CLARKE — Yes, I can. The new weights for the DALYs came out late last year in the *Lancet*.

Mr TILLEY — Moving along, I got to ask this question of the last witness. What are the benefits, if any, of adopting multiple measures for trauma and serious injury, for example, having both ICISS and DALYs to monitor road trauma? At government level, would multiple measures improve decision and policy making?

Dr PETRIE — Again you are talking about resource use, and also a burden in terms of collecting this information. Basically you want to try to keep things as simple as possible — —

Mr TILLEY — The old KISS principle.

Dr PETRIE — Otherwise it just does not get used and therefore it is of no use anyway. You want to keep things simple, but potentially you want to try to map that onto something a bit more complicated. But I think that is the second stage to help policy-makers say, ‘I’ve got these different classifications, but really what does that mean in terms of people trading off between these different states?’.

Prof. CLARKE — I suppose to put it back on the decision-makers, the information is only relevant if it is going to potentially change the decision. That seems to me to be the fundamental principle as to what additional information you collect. But having said that, I think there is value in collecting more information about benefits and trying to, as it were, either use a DALY or QALY framework or a willingness-to-pay framework. Fundamentally you would only collect it if you were going to use it explicitly in some sort of decision-making process or have that as an input into the decision making. That is not, as I said, necessarily the be-all and end-all, but you would take that into account in your decision making.

The DEPUTY CHAIR — Professor Clarke: drawing on your experience with the United Kingdom prospective diabetes study, to what extent can forecasting models be used to calculate the cost of serious injuries in a road safety context — that is, could data from the existing clinical outcomes registries for road safety crash victims be used to assess long-term outcomes and in turn be linked to a costed methodology so that the future costs can be calculated?

Prof. CLARKE — Here, I suppose in terms of applying these sorts of methodologies, the economics, as it were, is only as good as the epidemiology or your understanding of, if you can reduce or have an intervention, how much it will reduce trauma or mortality in future. I suppose what we have done there is that we have used

simulation modelling based on the best available clinical paper to make predictions over the future about how interventions will change the course of someone's disease and then valued those outcomes and uses of a cost-effectiveness equation. In the area of diabetes I think we can perhaps do a good job because we have got very good long-term clinical evidence. I think perhaps in the case of road safety, if you have got good registries making use of them in terms of trying to analyse the data, using it to try to simulate long-term outcomes would certainly be of high value and something to really consider.

Mr ELSBURY — In your view, what is considered to be best practice for evaluation studies?

Prof. CLARKE — In general, having someone peer reviewed as a general principle. Very famously Winston Churchill once said about Lord Keynes that with two economists we have two opinions, except when it comes to Lord Keynes; he has three. You have three. I think often you have, perhaps, disagreements between economists, but as long as the process is explicit and transparent you should be able to come up with reasons why they differ. Perhaps the classic example is the degree to which you take into account external costs, such as bereavements, in one study versus another. Then it is really up to the decision-maker to choose which one they think is best and appropriate for the community.

I think as a general principle the idea that you not only commission somebody to do a study but then get an expert to review that is a good way of getting a second opinion, as it were, on that study. I think that is a methodology for best practice, but in general perhaps I would say in defence of the tools that I think we are a state now — which I would not have said this 20 years ago — where these techniques have been routinely applied, perhaps less so in safety in Australia, but we should consider at least moving down that path to using them. There is no time like the present to start the process, but should they be the be-all and end-all? No.

Mr TILLEY — I will be bold. I will start the question with what I am looking for, and what I am looking for is certainly your view. Going back to the previous questions, I would like to know how decision-makers are going to be able to discern what works from what does not. I am going to talk about countermeasures now specifically. The ability to identify cost-effective countermeasures relies on evaluations of these countermeasures. In this inquiry so far many submitters have noted that there are a limited number of evaluations of existing countermeasures, and as a result it is more appropriate to look at the combined impact of how countermeasures work. It is probably a bit of what you said in your previous response as well, but it is certainly looking for your view so that governments work out what does work from what does not work.

Prof. CLARKE — I am perhaps returning to what I was saying. One of the things is to get a good handle on a link between any sort of safety measure and its effect on reducing road crashes or improving human health in the broader sense. As I said, one way to do that is by using natural experiments through randomisation, because clearly — I think it is hard; you can use pre and post, but there are always questions about whether other things have changed.

One way would be to try to, as I said, randomly allocate your countermeasures across over time — which sometimes politically you have to do anyway in terms of that you cannot roll out a program in every district at the same time. If you can do that randomly as opposed to just in an ad hoc manner, you could potentially evaluate the process as it is going in. At the fundamental level, if you can get the effect of the safety in reducing mortality and morbidity, I think that greatly then assists, and it is really a matter of placing a value on it. Reducing, as it were, the uncertainty first off in terms of measuring health and physical units I think goes a long way along the road, and then one can think about trying to place a value on that.

Dr PETRIE — I think in the UK when they want to implement a policy they also think about evaluating that policy change. For example, thinking about implementing minimum pricing in Scotland, and basically they are ensuring that the appropriate data is collected before implementation to try to evaluate it post. Again it is the sense of saying, 'If it doesn't work, we want to be able either reverse the decision or move the decision somewhere else'. I suppose, when thinking about changing policy, you are thinking about also the opportunity to evaluate these things when there is not or might not be good evidence about whether or not it works.

Mr TILLEY — So pre and post?

Dr PETRIE — Yes, definitely. Lots of times people will implement it and then say, 'Let's evaluate it'. It just becomes a lot harder because you do not know if you have collected the right things. In terms of what we do, we try to get in at an early stage to try to make sure that the evaluation is set up — randomisation, if we can.

Again it is trying to get it so that the outcome and the evaluation are best practice, but that normally means starting before it happens.

The DEPUTY CHAIR — Gentlemen, thank you very much for your contributions to this important inquiry. We appreciate your time. You will receive a copy of our transcript. You are welcome to make corrections of a factual or typographical nature. Should there be any additional information you may wish to submit to the committee, it would be welcome. Thank you for your time.

Witnesses withdrew.