



TRAVELSAFE COMMITTEE

Members:

Mr J. Pearce MP (Chairperson)
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FATIGUE PUBLIC HEARING

TRANSCRIPT OF PROCEEDINGS

FRIDAY, 25 FEBRUARY 2005

Brisbane

WITNESSES

Queensland Transport

Mr Tony Kursius, Executive Director, Land Transport and Safety Division

Mr Gary Mahon, Director, Strategic Policy Team, Land Transport and Safety Division

Department of Main Roads

Mr Allan Krosch, Executive Director, Traffic and Road Use Management Division

Mr Gordon Lee, Principal Engineer (Road Safety), Traffic and Road Use Management Division

Mr Mark Mitchell, Manager (Heavy Vehicle Access), Traffic and Road Use Management Division

Department of Industrial Relations

Ms Denise Adams, Director, Legislation Development and Review, Workplace Health and Safety Queensland

Dr Ki Douglas, Principal Medical Officer and Manager, Statewide Services, Workplace Health and Safety Queensland

Mr Peter Lamont, Assistant General Manager, Workplace Health and Safety Queensland

Mr Jordan Watts, Policy Officer, Legislation Development and Review, Workplace Health and Safety Queensland

CARRS-Q

Mr Mark King, Lecturer

Professor Mary Sheehan, Director

Dr Andry Rakotonirainy, Senior Research Fellow

Queensland Police Service

Chief Superintendent Kerry Dunn, State Traffic Support Branch

Mr Peter Kolesnik, Research Analyst, State Traffic Support Branch

Prince Charles Hospital

Dr James Douglas, Director of the Sleep Disorders Centre

Australasian Sleep Association

Dr Craig Hukins, Respiratory and Sleep Physician, Princess Alexandra Hospital and Clinical Director, Sleep Disorders Centre

RACQ

Mr John Wikman, Executive Manager, Traffic and Safety Department

Mr Joel Tucker, Research Advisor - Transport and Road Safety

FRIDAY, 25 FEBRUARY 2005

Committee met at 8.32 am.

The CHAIR: I call this public hearing of the Travelsafe committee to order. The committee conducts this hearing pursuant to the resolution of the Legislative Assembly of March 2004 that appointed it. This resolution requires the committee to inquire into and report on all aspects of road safety and public transport in Queensland. Today's hearing is to assist us with our inquiry into crashes involving driver and rider fatigue in Queensland.

I am Jim Pearce, the chair of the Travelsafe committee and member for Fitzroy. The other members of the committee are Darryl Briskey, member for Cleveland; Peta-Kaye Croft, member for Broadwater; Shane Knuth, member for Charters Towers; and Di Reilly, member for Mudgeeraba. We have apologies from Bruce Flegg, the member for Moggill, and Chris Foley, the deputy chair and member for Maryborough.

The proceedings here today are lawful proceedings of the parliament and subject to the Legislative Assembly's standing rules and orders. The committee will not require those appearing to take an oath or affirmation; however, we expect our witnesses will respect these proceedings.

Recording of today's proceedings, except by Hansard, is not permitted. It is our intention to keep the times of the hearing according to the program. We will finish at 12.30, if not before. I have deliberately kept times to a minimum because I respect the fact that we all have schedules. I ask that you keep that in mind when you are responding to any of the questions. If you take questions on notice, we ask that you provide your answers by next Friday, 4 March. If there are any problems in that regard you can contact us and we will talk about it.

ALLAN KROSCH, examined:

TONY KURSIUS, examined:

GORDON LEE, examined:

GARY MAHON, examined:

MARK MITCHELL, examined:

Mr KNUTH: For long-distance drivers, having somewhere safe to pull off the road and take a break is crucial. It is okay to tell drivers to restrict their driving hours and to stop if they are tired, but it is a wasted effort unless there is somewhere they can actually stop. What are you doing to ensure there are enough rest areas of the right standard in the right locations?

Mr Krosch: In our *Guide to Queensland Roads* there is a good outline of all of the rest areas that exist. I guess that is known and available to the committee. We have a rest area policy, which lays down criteria about spacings and so on for rest areas, and a rest area strategy with a view to seeing that fully implemented over time. Mark is very familiar with the rest area issue. I will ask him to supplement my answer about how much more we might need to do in the rest area field.

Mr Mitchell: As Allan mentioned, we have a particular strategy that our Main Roads districts use to guide the development, upgrading and expansion of our rest area network, both for motorists and for heavy vehicle operators. I guess the problem is a pragmatic one of how much funding is available to achieve our goals in terms of new and upgraded rest areas. There are new ones being rolled out. A new one on the Gatton bypass has recently been opened and there are new sites, for instance at Waverley Creek, near Sarina, where a heavy vehicle rest area is specifically being constructed. Main Roads does have a vision in terms of where it would like to be.

There are more low-budget types of options that we are pursuing at the moment. We are rolling out a number of what are called informal heavy vehicle rest areas, which are sites truckies have been using—pull-off areas, gravel pits and so on off the side of the road—for a number of years. Main Roads is helping heavy vehicle operators to identify where those sites are by using a system of blue delineators on the approaches to those sites. There are a number of things happening with Main Roads. They are probably not quick enough for most of the heavy vehicle industry but, as I say, there are some budgetary limitations on what we can achieve.

The CHAIR: How do you determine where to locate those different rest areas?

Mr Mitchell: There are spacings put down in our strategy for rest areas. There are some detailed siting requirements—acknowledging the speed at which a vehicle accelerates and trying to locate rest areas on high ground. They are the sorts of things we would consider.

The CHAIR: Driver Reviver is one of the more visible initiatives to address fatigue driving. We all applaud the good work those people out there do. I have been on a couple of the sites. The feedback you get from some of the drivers about the distances they are actually travelling is quite interesting. What concerns me, though, is the limited number of hours and days the sites actually operate. Their location can be off the road quite some way. You may see the signs, but the rest area is usually not visible. The thing I am concerned about is that a large proportion of the driving population does not actually stop. Can you tell us the cost to the government of Driver Reviver from cup counts? Can you tell the committee about trends in usage of Driver Reviver sites? Does the department collect any information about the demographics of the people who use these sites?

Mr Krosch: When you say 'Driver Reviver', do you mean rest areas generally or the Driver Reviver campaign?

The CHAIR: The Driver Reviver coffee stops.

Mr Krosch: That is a Queensland Transport issue.

The CHAIR: So you do not have any input at all into that in terms of safety? It is all left to QT?

Mr Krosch: It is a QT matter.

Mr Kursius: There are 37 Driver Reviver sites operating around the state. They are largely operated by volunteers. We provide guidelines in terms of how they might operate and we provide some funding for specific initiatives. The Queensland Police Service also provides a lot of local assistance in organising those sites. One of the reasons they are open at limited times is that they depend on volunteers being available to actually staff the sites. In terms of cup counts, my understanding is that we do not have an actual cost per Driver Reviver activity, but I think it is wrapped up in an overall allocation that we provide for those types of community activities. I will ask Gary Mahon if he has that figure.

Mr Mahon: The department appropriates about \$80,000 per annum to the Driver Reviver program. There is sponsorship over and above that. There have been a couple of different sponsors over the last few years. They provide a lot of the—

The CHAIR: Who are they?

Mr Mahon: Currently it is Bushells. Previously it was Nestle. It has always enjoyed good sponsorship. Just to reinforce Tony's point, predominantly it is a volunteer program and volunteers are called upon on quite a few occasions over the year. It is an exemplary effort by those communities. There are around 2,000 volunteers providing that service on any long weekend and at Christmas, Easter and so forth. I think it must be recognised that it is an exemplary effort by the community across Queensland.

We provide support for a range of things—vehicle-mounted warning signs, reflective vests and no-smoking signs. Main Roads makes a contribution towards maintenance around a number of the sites that are used. We also provide first aid kits and fire extinguishers—all those sorts of small-level support type things that they need to undertake these programs. At the end of the day it is really about volunteers.

The CHAIR: Do you consult with Main Roads about location, access and so on?

Mr Mahon: The road safety advisors in the regions, along with community response, tend to somewhat steer which sites can be supported. There have been a number of new sites generated over the years where communities have got themselves together and have wanted to sponsor a site in their local area. There is usually always a way that can be done. In some cases it is beside a service station and in other cases it is at a clearly marked rest area that we might have.

The CHAIR: So it is more community driven?

Mr Mahon: Very community driven.

Mrs REILLY: Does QT have a recruitment program in place for volunteer staff? How do you continue to encourage the community to be involved as volunteers?

Mr Kursius: A lot of that work is done at the local level by the road safety advisors working closely with our colleagues in the Queensland Police Service and Main Roads.

Mrs REILLY: Whose consultants are they?

Mr Kursius: Queensland Transport road safety consultants. Each of our regions has road safety representatives. The regions in Queensland Transport together, as I said, with representatives from the Queensland Police Service, Main Roads and other community groups and local government tend to band together to ensure that there are sufficient numbers coming through. So you will find that the local Lions Club or Apex are often key groups that will work at these sites and they will roster people through those programs. There seems to be continued support from those groups—a high level of support.

Mrs REILLY: So you are not feeling that the program itself is losing its effectiveness? The community is still involved enough to keep it happening?

Mr Kursius: That is our view, but there are a number of effects that come out of Driver Reviver sites. Certainly it is the individual drivers who pull in there and use the facility, but there are a lot of messages that surround the Driver Reviver activity itself. It is quite a visible activity at the roadside on key parts of the road network. We also usually have advertising of where the Driver Reviver sites are, and there is quite a bit of publicity around that as well—all of which is aiming at this message of fatigue, not driving tired and taking rest breaks every 15 minutes for every two hours of driving as a minimum. So, on the one hand, it is very important that people stop at Driver Reviver sites, but the surrounding messages and the interest that it generates is pretty important, too.

Mrs REILLY: Is there any thought of putting the sites at petrol stations or closer to where people might stop naturally anyway?

Mr Kursius: We have worked with petrol stations, and in the past we have had agreement with some fuel providers like Mobil which act as Driver Reviver sites as well. So they are an adjunct to the 37 sites that we run, and they will offer free coffee and encourage people to stop at their Mobil service stations as an example.

In some cases, that works. In other cases, some of the store traders have a concern that the free coffee et cetera distracts customers from their businesses. So it very much depends on the particular companies that we can negotiate that with and also where the sites are. So in some cases we do have sites on service stations. In other cases they are set up in rest areas, but in many cases they have demountable buildings so it is an established site. We are happy to continue to work with service stations in terms of those service stations either offering a place for a site or offering a stopping point with free coffee and encouraging people to pick up the fatigue message.

Mrs REILLY: You were talking about the advertising and the promotion that goes with the Driver Reviver sites, and that is what makes it more effective. Is that all targeted at drivers or is there some thought that we could target some of the messages to passengers so that children and teenagers in cars would be the ones to say to mum and dad, 'I think you should pull over. There is a Driver Reviver coming up.' Should you target the advertising more to them?

Mr Kursius: I think it is a combination of both. One of the reasons Driver Reviver sites were offering chocolates et cetera was to encourage the kids to pull in and pick up the chocolate bar as well as mum and dad having a coffee and getting the message. So there was that underlying attraction for children to encourage mum and dad to pull over.

Mrs REILLY: But not with your current sponsor.

Mr Kursius: Not with the current sponsor so much, no.

Mr BRISKEY: Are there any plans to increase the number of sites from 37?

Mr Kursius: I think we have increased the number of sites by a couple in recent times, and there has been a combination, as I mentioned, of using service stations so we have had that as an adjunct. I do not know that we are looking at expanding at this stage because those 37 are fairly strategically located, but by the same token if the need emerges and we can get sufficient community support to pursue additional sites then we are quite pleased to do that.

Mr BRISKEY: Has there been any training of these volunteers at all? Have the volunteers ever been called on to provide services that they are just not trained to do? Do people stop there if they have an emergency or a medical problem, for instance?

Mr Kursius: I do not know of any specific cases, but I am quite sure that people have pulled in with more in mind than just looking for a cup of coffee.

Mr BRISKEY: I am sure they have. So are we asking volunteers to do more than they are able to do?

Mr Kursius: We are not asking them to do that, but I think out of a general community commitment they probably are helping people in a whole range of areas. Often we have police officers off duty who are working with the volunteers as well as volunteers. We have equipped volunteers with reflective vests so that if they are called upon to move around the site there are those safety factors. I do not know if Gary Mahon would be aware of any other specific cases

Mr Mahon: Certainly not as reported but I support Tony's remarks. Undoubtedly people pull up with additional problems from time to time and the volunteers may well be able to provide some assistance, but it is certainly not required of them. Our policy manuals and so forth are quite specific about what they are there to do and what they are supported to do. But in any case if they could provide assistance I am sure they do, but it is not particularly reported to us.

The CHAIR: Peta-Kaye Croft has a question which will be directed to both departments.

Mrs CROFT: Do your departments have directives or policies that require your own staff to limit their driving hours or to break up long trips with overnight stays? If you do, is it possible for the committee to have a copy of those? The next question that would follow on from that is: do all departments have such directives or policies in place that you are aware of?

Mr Krosch: I will answer first. I am not aware that Main Roads has any. I will undertake to find out for sure.

Mr Mitchell: In our road delivery contracts there are stipulated requirements: any contractors or Main Roads employees have to abide by any legislative requirements and that includes things like driving hours. There is no special dispensation given for Main Roads employees. As you are aware, there are legislative driving requirements for heavy vehicle operators, for instance. They would have to conform with those requirements, and that includes maintaining logbooks and all those sorts of things that heavy vehicle operators are required to do.

Mr Krosch: In the mining industry, for example, people may work at night and have to drive home in the morning—

Mrs CROFT: We are actually looking at your own departments—

Mr Krosch: Yes, I know, but by reason of analogy that is the kind of thing you are asking—whether we in Main Roads have the sort of thing that other companies have. I am not aware that we do but I will undertake to find out.

Mr Kursius: Queensland Transport operates under workplace health and safety provisions of a general duty of care in terms of our employees. With respect to that, our responsibilities in terms of ensuring that they do not drive fatigued applies. I am not aware that we have specific standards that apply there, but we do operate with Q-Fleet, and Q-Fleet have adopted our fleet safety standards. We have a program that we offer to fleets. Q-Fleet have adopted that, and I believe they have put in their own training program which is available not only to our drivers who might be driving in long distance or remote situations but to all Q-Fleet users. Similar to Allan, we will endeavour to see if we have any other guides that are part of our motor vehicle policy.

The CHAIR: I welcome Bruce Flegg, the member for Moggill. I have one more question on Driver Revivers. Just a very brief answer, yes or no: do you collect data on the Driver Reviver sites about how many people are using it?

Mrs REILLY: And who they are?

Mr Kursius: Yes, we do. There is data that is returned to us from the site managers, predominantly from police.

The CHAIR: The committee has been reading quite a bit of material for this inquiry about driver fatigue and the impairing effects on drivers, and it is quite concerning for us. We have sleep experts telling us that most Australians just are not getting the sleep that they need to function properly. We also know that Australians are a nation of workaholics. Working parents are really working two jobs—the ones they get paid for and their jobs at home. We have shiftwork that seems to be on the increase to keep up with the demands of a 24/7 society. The number of trucks on the road is increasing and everyone is driving more and more. So it is quite a cocktail of different contributing factors. Where are we headed with this? Is driver fatigue a growing road safety problem? Where do you see us in the next five to 10 years based on the current trends? What are we doing about it?

Mr Kursius: I would be happy to respond to that first. We agree that fatigue is probably one of the last frontiers for us in road safety. It is a major issue for us not just here in Australia but internationally. It is a worldwide area of concern. We are losing approximately 40 people per year in fatalities to fatigue. Considerable work has been done in terms of managing heavy vehicle fatigue, and that work continues at the national level. Queensland has been a leader nationally in developing fatigue management programs and a fatigue management program pilot. The results of that will be considered by the Australian Transport Council within the near future.

In terms of light vehicles, there are activities that have been undertaken there, but light vehicles do represent a concern for us because of the nature of the environment. We have a variety of drivers in light vehicles who are not particularly regulated and it is extremely difficult to regulate them. So that is the environment that we are working in, and we would agree that there is much more work to be done, particularly in the area of light vehicles.

There are a number of potential technical initiatives on the horizon under ITS, Intelligent Transportation Systems, and we are examining those. We are looking at those both nationally and internationally and we are working with researchers such as CARRS-Q, which I understand will be giving evidence later today, which is looking at both the research background and the application of some of those emerging technologies.

We have to be very careful with those technologies because we would not want to see a situation where drivers become so complacent that they rely on the technology to demonstrate when they are fatigued and therefore ignore their own physical symptoms of fatigue. We need drivers to maintain a

knowledge and build that knowledge and responsibility of fatigue as well as looking at some of those potential technical solutions.

Some of the technical solutions range from looking at eye movement to steering wheel movement and brainwave activity. Some research that I saw in Madrid is looking at the level of energy and concentration that a driver puts into the effort of driving before falling asleep fatigued, and they are able to map those levels now where they are at maximum energy output just before they drop off to sleep. So there is a number and a range of those initiatives coming through.

It is a combination I guess of continuing to look at the good work being done in terms of heavy vehicles and heavy vehicle drivers and looking at ways of improving that. There are some technologies that are coming online there as well. The Intelligent Access Program will be able to track heavy vehicles on the network and advise in an exception reporting framework where drivers are driving beyond normal hours and in locations that they should not be driving. That type of technology will add to what we are already working with.

We are looking at automatic numberplate recognition. That type of technology will be able to give us much more information about point-to-point journeys of heavy vehicle drivers. On the light vehicle front, though, we continue to provide extensive public education. We have run a number of campaigns, and there are more campaigns planned under the Road Safety Strategy and action plans for Queensland. But we do need to look at all of those possible efforts, particularly for light vehicle drivers, in an endeavour both to educate them and to look at what assistance we can get from in-vehicle applications.

Mrs REILLY: Thank you, Tony. It is good to hear that it is so high on your agenda and that you recognise what a big problem fatigue is. Can you give us a bit of an idea of the annual expenditure on fatigue related programs? That might include Driver Reviver but the other ones too, the education programs and the heavy vehicle ones you mentioned.

Mr Kursius: Yes, we can do that. The figures that I have available here deal with a total for Queensland Transport of \$2.904 million. That is taken off 2004-05 figures. That involves our heavy vehicle fatigue policy and program, \$297,000, and our regional compliance programs, which are a lot of our on-road inspectors and working with industry at the regional level, \$1.57 million. On the light vehicle front, the Driver Reviver program—as we said, it is in that area of around about \$80,000 to \$100,000. It is a little bit difficult to pin the exact amount down, but we would call that at around about \$80,000 in terms of the funding that is tracked there for the 2004-05 year. The light vehicle fatigue public education campaign is \$957,000.

Mr Mahon: Some of that \$950,000 is actually spent on promoting the Driver Reviver program.

Mr Kursius: Comes back into the Driver Reviver.

Mrs REILLY: But you will be able to provide us with that so we can have a better look at it.

Mr Kursius: Yes, sure, we can table those figures with the committee.

Mrs REILLY: The Audible Edge Line Program; did you mention that?

Mr Kursius: I need to swing over to my colleagues in Main Roads for that.

Mr Krosch: I could not give you a specific amount of money that is spent on audible edge lines and things like that. We would have difficulty in identifying just what we spend on fatigue related. Our best estimate would be about \$3 million per annum on the things that we do that are specifically fatigue related, but it is only our best estimate. We do not have a management accounting system that tracks that.

Mrs REILLY: But the audible edge lines; you could identify that separately.

Mr Krosch: We could, but I do not have that available to me.

Mrs REILLY: That is okay. I am happy to take that on notice, if you would not mind.

Mr Lee: No, that is not easy to get either, because we have been trying to extract figures from our districts in the last couple of years for the Transport Statistical Steering Committee. It is rather difficult because audible edge lines have not been recorded as a separate item in their works. A lot of them are put down as part of their other work and other times some of them got deleted or scrapped due to new works. I mean, I have tried for the last couple of years, to get some figures. If we promise to give you the new figures now, I am afraid that we are going to just go back and chase our tails again.

The CHAIR: So fatigue related—you direct money into rest areas, audible line markings; what else?

Mr Lee: Rumble strips, signing to fatigue rest areas, which are the sort of higher profile signing similar to those contained in the written submission. You have some photos there. To some extent there is a bit of rumble strip on the shoulder as well as that used in Roma. The money that Allan mentioned before would include provision and maintenance of rest areas, audible edge lines, rumble strips and so on and the associated signing.

Mrs REILLY: Can I just ask both departments—I know Tony mentioned working with CARRS-Q and looking at research—I would be interested to know if either or both departments actually fund some of the research.

Mr Krosch: We do. We are helping fund the rural and remote study for CARRS-Q. We are funding it over five years for \$125,000—\$25,000 a year.

Mrs REILLY: Is that fatigue or others as well?

Mr Krosch: It is everything to do with rural and remote. I do not want to pre-empt your questioning, but I would like an opportunity to say a little bit about the philosophy that Main Roads is bringing around this kind of issue, but I will wait till the appropriate time.

Mrs REILLY: Tony?

Mr Kursius: We are also funding that same CARRS-Q research in terms of rural road safety activities. It is the same amount, but I am not sure that it is included in that; I would have to check. But it is still the same amount that our colleagues in Main Roads are committing.

Mrs REILLY: I was going to ask you both to give me an idea of what sort of evaluation has been done of these various programs. We probably do not have time to go into that too much, but I guess it is also hard to evaluate your programs if you cannot specifically identify how much funding is going into them, first of all, to see how effective they are. You both might be able to give me some ideas and conclusions.

Mr Krosch: If I might just give this understanding to the committee. The philosophy that we are pursuing around road safety in Main Roads currently is a philosophy about the 'more forgiving' roadside. We have a view that a fair bit of effort has been put over time into influencing human behaviour and that maybe it is time to put more effort into the engineering countermeasures, along the philosophy that drivers are human and humans make errors. If you make an error you might deserve to have some penalty but maybe not your life or serious injury. We have put a lot of effort, in the last couple of years, into analysis of those road accidents where people are killed and seriously injured to find out where they are occurring. We have almost proven again the old 80-20 rule; about 80 per cent of the killed and seriously injured are occurring at about 16 per cent of the length of the system. This is the sort of concept that goes beyond 'black spot' to what I might term 'dark grey stripe'. So we are trying to identify the 'dark grey stripes' of where the accidents are occurring and then to put money into there so that if you did happen to run off the road you would not hit a fixed object and so on.

So under the Safer Roads Sooner program, and under the part of it we call the Targeted Road Safety Initiative, that is where we are trying to put our road safety effort. That is not just fatigue related, but fatigue would be an important part of that—probably a significant part.

The CHAIR: It crosses over, yes.

Mr Kursius: If I could give a very quick answer. There have been comprehensive evaluations undertaken of the Driver Reviver program and it returned a very high cost-benefit analysis. I believe it was in the area of around a four or five return. I would need to check that, but—

Mr Mahon: About four, I would say.

Mr Kursius: Yes. That was a very positive outcome. In terms of the public education campaigns, the strength of the public education campaigns is not just in raising people's awareness and their knowledge. The road safety research is telling us that when it is combined with visible activity, enforcement being the more common one from QPS, it actually strengthens and reinforces the message. From the position of fatigue, that is why we actually have an approach to enforcement for heavy vehicle drivers, which is linked also with our campaign activity, and the Driver Reviver activities and the publicity that goes around that is a visible example of antifatigue activity which also supports the campaign material.

Now, some of the research that MUARC has done indicates more broadly that on average these public education campaigns result in an 8.5 per cent reduction in crashes during the campaign and a 14.8 per cent reduction in the period immediately following the campaign. That is a pretty broad statistic, but there are quite individual evaluations done on the different public education campaigns.

Mrs REILLY: Would you mind providing those on notice, the full reports of those evaluations, both your internal ones and any that have been externally reviewed by MUARC or anyone else? On notice is fine.

Mr Kursius: What we have available and what is released, we are happy to do that. There is a program that we work with MUARC on in terms of an ongoing evaluation, so we will need to see where they are at.

Mrs REILLY: That would be good.

The CHAIR: Allan, that point you made, did you say it was 17 per cent of road crashes happen in—

Mr Krosch: Eighty per cent.

The CHAIR: Of the road crashes happen in 17 per cent of the road.

Mr Krosch: Sixteen per cent by length of the system.

The CHAIR: Okay. In improving the roadside environment in those identified areas, is it reasonable to suggest that you could move the crashes further along the system?

Mr Krosch: It comes back to the question of why did they crash there. To some extent crashes are a little bit of a statistical phenomenon, but it is just possible that there are certain parts of the road system where tiredness is more of a factor because people have driven a certain distance from the last town. It may be that there are places where the driving is a bit monotonous. It is more than likely that there are some places more prone to accidents occurring.

Dr FLEGG: You talked about the programs—the audible edges, public education and so forth. The only way you know the effectiveness of those is evaluation. You did touch on a little bit of it. You gave us the figures on the response to public education programs. What sort of evaluations do you do for these programs to determine which ones are effective and worth putting more resources into? Are those evaluations done on a systematic basis? Are they a sort of internal flick over the figures, how many crashes are there after a program, or is there some sort of more vigorous external sort of assessment?

Mr Mahon: I am assuming, Bruce, that your question is directed mainly at public education campaigns.

Dr FLEGG: I was thinking of the range of things that we are talking about—driver revivers, audible edges and so forth.

Mr Mahon: As a general principle, we evaluate as many things as we possibly can. I mean, there are some limitations because a range of these are longitudinal studies and they take some time to arrive at some precision around the benefits of those particular campaigns. We have a number of processes in place. We use internal evaluation methodologies and we use external review. There is a Transport Statistical Steering Committee that is in place. That is chaired by the Office of Economic and Statistical Research from Treasury. That is a process where we basically let a tender and a variety of different specialist institutions can bid to do the independent evaluation. Those evaluation results are then derived from those contracts, assessed by that specialist steering committee panel and we then publish those reports. On an average per year we would probably do about six evaluations through that process.

We independently then contract other institutions from time to time to try to get in early on how our programs are running. Monash University Accident Research Centre is one that we use quite regularly. There are others. In some cases they are specialist road safety professionals that we might engage. One that comes to mind is Dr Ron Christie, who is a fellow we use from time to time. There are others that we would use from time to time to give us independent advice about our program evaluations.

In terms of public education campaigns, we have had one major evaluation undertaken by MUARC, that is, the Monash University Accident Research Centre. That gave us some very encouraging—

The CHAIR: What campaign was that, Gary?

Mr Mahon: That was across a number of campaigns, speed in particular. That gave us a result that strongly suggested that we get about an 8.5 per cent reduction in crashes during the campaign and immediately after the campaign that deepens to about 14.8 per cent and then tapers off. I think the thing to bear in mind with public education campaigns is that we use a social marketing technique which is also based on a theory of reasoned action. What that is really about is trying to change people's attitudes, and by changing their attitude you can then subsequently change their behaviour.

As Tony pointed out before, when you reinforce that with strong enforcement messages, so there is a very real presence of police reinforcing that message—if you are pushing RBT, for example, on television media—and they see an additional presence of police out there, those two connecting messages give you a lot of additional power in what you are trying to promote.

We do a lot of market surveys through the year as well, so we track how attitudes are going. Where we see that messages are starting to falter and so forth, that is one of the indicators that pushes us towards repushing particular promotions around those strong messages.

Predominantly, our public education campaigns have centred on messages around the Fatal Four. Sometimes it is the Fatal Four as a package and sometimes it is elements thereof. In the fatigue one, for example, our main campaigns have been: 'Don't roll over in your sleep,' which has been quite successful; 'Rest or RIP' is another that has gone quite well; 'Microsleeps' with Dr Karl; and we also ran a special campaign during the Olympics period because we had a lot of extra travellers on the road and

much higher populations during those holiday periods. They have been the main what you might call signature campaigns on fatigue in terms of public education.

Dr FLEGG: I am interested in where fatigue lies in your priorities compared to, say, drink-driving, speeding and the other behavioural things. Do you have an idea of how expenditure in research would relate to fatigue and where you would consider it in your list of priorities?

Mr Mahon: In terms of the priorities, as I am sure you are well aware, the Fatal Four are fatigue, drink-drive, seatbelts and speed, so it features very prominently. Those four factors contribute to about 75 per cent of the toll. As a raw average, you are looking at about 30 per cent on drink-drive, and then 15 per cent each on the other three. That is just a generalisation but it is in that order, on average.

In terms of fatigue research, an enormous amount of research is going on around the world and has been going on for some considerable time. I think one of the things the government in Queensland should be complimented on is that the management of this issue was always expressed as controlling driving hours for many, many years and Queensland was the first to adopt an approach of fatigue management. In fact, 1 March 1993 was the introduction of the first legislation in this country that changed the whole theme from limiting the hours people drive to an actual fatigue management concept.

You have many contributing factors to fatigue. In the workplace environment it is everything from the way people are rostered, diet, health, informing them about issues like circadian rhythms and how that affects your body, and all of those sorts of issues. The more you can inform people about what they need to manage, the better off you might be. So we have tapped into the best research going around—and that is everybody from NASA through to road safety professionals who have put a lot of research into this fatigue issue or fatigue phenomenon—and we draw on that as best we possibly can. We have enacted some of our own research, but compared to the body of research that is going on around the world, it is a small contribution. The art here is how you take those learnings and turn them into something practical as an intervention, because it is a bit of a subjective field and there is no objective criteria yet to establish when you are past the point where you should not be driving.

The other point I would make is that I think you should be careful not to be thinking about fatigue as just a falling asleep issue. There is a suboptimal level there of levels of alertness that is a big contributor as well, and that is a particularly difficult thing to be assessed in an accident adjudication.

The CHAIR: I certainly realise the difficulties of it.

Mrs CROFT: My question is with regard to public education. A number of government departments are involved in public education about the dangers of driving while tired including the police, emergency services, tourism, even fair trading and your departments. Can you advise if there is a game plan for the all the various initiatives by these departments? Can you tell us how your initiatives are being coordinated to ensure that they give consistent messages and advice?

Mr Kursius: I think a lot of that coordination takes place through our road safety committee, the Queensland Road Safety Committee, and also through our partners in road safety. We work regularly with our colleagues in Main Roads, Emergency Services and the Queensland Police Service. They participate in the road safety committee activities and in our road safety summits, and we actually have developed that partnership where we are actually looking at new potential partners like local government joining that. The contribution that those different players make is really captured in our Road Safety Strategy and our Road Safety Action Plan which does blueprint, if you like, the direction and the sorts of areas for priority and focus. Then, at a more operational level, we are working with the likes of police on a regular basis about the sorts of campaign messages that are being developed.

The CHAIR: How do you do that? Do you hold meetings?

Mr Kursius: We hold meetings on a regular basis with police, yes. We have things like legislation enforcement committee meetings where we meet regularly. I meet with the Deputy Commissioner of Police on a regular basis and we discuss a wide range of issues. But certainly where we have campaigns coming up, and our major campaigns like Easter and Christmas, of course, we are regularly talking with one another as we plan that, determining how and when and where the message will be delivered and who is going to manage the responses to those messages over those periods. That is quite a focused and complex area.

Mrs CROFT: Are all drivers from all age groups and all areas of the state getting these messages, do you think?

Mr Kursius: I was just looking at some of the campaign material, and during the campaign we actually do assessments of the level of awareness. If I could just give you an idea of some of the material that we have had in the past. Perhaps I could just refer to the microsleeps, of which you will still see some examples running, and this is the sort of material that we are getting while the campaign is on. Drivers who admitted to driving when tired decreased 34 per cent to 29 per cent. Awareness of the warning signs of fatigue achieved 85 per cent awareness compared with 59 per cent before the

campaign, and there are other indicators here. Drivers who are able to confidently identify ways to avoid driving when tired increased from 68 per cent to 84 per cent.

We are taking these wave surveys during the campaign to see whether or not the messages are getting through. Of course, it is very difficult to translate a campaign message to a reduction in crashes when there are such a lot of other contributing factors, not the least of which is the activities of our enforcement agencies et cetera. But certainly that is telling us that the message is being picked up by the sample and target groups. So if it is a message that is targeted at a particular part of the driving population, then the wave surveys will identify those, be it age group or whatever.

Mrs CROFT: That was actually going to be my next question: whether the public education programs that you have target high-risk groups for fatigue crashes, such as young drivers and country drivers.

Mr Kursius: We do a lot of research before the campaign with the target groups, identifying who and where those target groups sit. Then we do research in respect of those target groups to find out what it is that is going to have an impact. For example, the messages that are received by older drivers are not the same messages that are going to be received by young drivers. You can get drawn in with older drivers saying, 'Look, I think I know what is good for younger drivers,' but we really need to be talking with younger drivers more and that is what we are doing in respect of developing campaigns. In fact, once the campaign has been developed and approved and is up and running, we are actually monitoring that group and finding out what awareness levels have shifted as a result of that. Then, as Gary mentioned before, after the campaign we are measuring that again. We do actually run that through and then test that out against the results in terms of crash results, of course, because at the end of the day that is the aim—to reduce those crashes—but in terms of the particular public education campaigns, they are the sorts of indicators we are tracking.

Mrs CROFT: Thank you.

Mr Mahon: Could I also add: in the development of the campaigns we go to some considerable trouble when we are deriving the scripts. The creative aspect and so forth. We use focus groups to test attitudes, how they are receiving that message, and again we utilise the demographic that we are pitching to in those focus groups to try to get as solid a message as we can so that we are much more confident about the types of results that we might get.

Mrs CROFT: Thank you.

The CHAIR: Unfortunately, we are drawing towards the end of the time that has been allocated, so there will be number of questions that we will provide for you, if you do not mind.

Mr Kursius: Sure.

The CHAIR: You can get back to us. There is a last question I would like to ask you. With regard to the Queensland Police Service submission, they have made four recommendations about heavy vehicles, and we have copies of these to give to them. They say in their recommendations—recommendation No. 12—that current legislation addressing fatigue management for drivers of heavy vehicles does not appear to be working. Are they correct?

Mr Kursius: Legislation in this area is very difficult, particularly for light vehicle drivers. In terms of heavy vehicle drivers, I think we have already discussed a number of the initiatives that are under way and we have national legislation that is currently being developed for model legislation for the states in respect of compliance and enforcement which will largely focus on the heavy vehicle industry again. A number of the technologies that we are looking at, ANPR et cetera, are also focusing on heavy vehicles. So there is quite some significant legislative clout now, and drivers are prosecuted for driving beyond legislated hours. We have the fatigue management program; breaches of that will be pursued as well. In fact, we have chain of responsibility where if drivers are being coerced to drive long hours we are actually able to prosecute—and do prosecute—other people in the chain.

In the light vehicle side of things, though, it is a much more complex situation. I would like to put to the committee some recent research that we have had. I am going to ask Gary to talk to this shortly, too, but this recent research has just been forwarded to the committee and I do not know if you have had a chance to read it yet. We have been analysing fatigue related crashes from origin of journey for about the last 18 months, so it is very fresh research, and we have to do a lot more work; I must put that caveat on it. But it is suggesting that just over 50 per cent of fatigue related crashes are occurring within 25 kilometres of the start of the journey. If that is the case, then we have an even more complex issue to deal with and we have to test that. As I said, it is only 18 months that we have been analysing this data, and we do have to test this with our colleagues interstate as well. But if that is the case, we have a much more complex issue to deal with. Roadside testing for fatigue is also a very difficult thing to achieve right now, and we recognise that there are many contributing factors to fatigue that are affecting light vehicle drivers. We do not believe that at this stage you can effectively legislate to deal with that, but what we do need to do is to look at ways and means of reducing those crashes where light vehicles are involved. Gary, you might like to say a few words.

Mr Mahon: Thanks, Tony. The few things that I would add are these. I mentioned before that Queensland was the first to move in 1993 on changing the theme to a fatigue management approach. The Queensland parliament introduced chain of responsibility provisions in 1999 as well, and we have been building a solid body of legislation around this issue for some considerable time. When you look at the national proposed heavy vehicle driver fatigue package—and I do not think any reasonable observer could suggest anything to the contrary—it is fairly closely modelled on the Queensland arrangement. It introduces the OH&S element, the fatigue code of practice, chain of responsibility, improved record-keeping arrangements and risk based offence categorisation, which we have had now for some time.

The second thing I would do is draw your attention to heavy vehicles crashes. We are currently running more than 50 per cent down on the previous five-year average. Heavy vehicle crashes have been declining quite substantially over the last five years. So when you draw the efforts that have been put into our legislative construct, the consistency with the national model and the results that we are getting in terms of the toll, I would infer that the package is working reasonably well. We can always improve our legislation and we have an open mind to contributions in that regard, and anywhere where we can introduce improvements we will.

One of the things that I would mention is that up until 1993 there had been quite a lot of research undertaken and you could reasonably argue that there was virtually no reflection of that in our legislation. There was all of this learning that had been achieved over 30-odd years and the legislation effectively remained the same. What we have endeavoured to do since that time is that, where practical and feasible to introduce, we have introduced the learnings from research as much as we can over the last 12 or so years, and we will continue to do so. I leave that message on the table—that is, the department always looks to introduce anything we are learning from research where it is practical into the legislation. In summary, you cannot draw the conclusion that the legislation is having the effect on the toll that we are getting, but through a number of different initiatives—between public education, the legislation we are introducing, the type of enforcement that is entertained and so forth—we certainly are drawing a reasonable result in terms of heavy vehicles.

The CHAIR: Unfortunately we have run out of time. I express my appreciation to you all on behalf of the committee and thank you for your attendance.

Mrs REILLY: Can I ask one more question on notice?

The CHAIR: Yes, but put it in writing.

Mrs REILLY: All right.

The CHAIR: The next witnesses are from the Department of Industrial Relations.

DENISE ADAMS, examined:

KI DOUGLAS, examined:

PETER LAMONT, examined:

JORDAN WATTS, examined:

The CHAIR: Good morning, representatives from the Department of Industrial Relations. Were you present earlier when I went through the—

Mr Lamont: No, we were not. We arrived about 15 minutes ago.

The CHAIR: I will not go through the whole lot. We only have a very short period of time. We are going to try to keep the questions as brief as we can. I know it is difficult, but I ask you to respond by keeping the answers as brief as possible. If we do not get through all of our questions, we will simply put them to you in writing and ask if you can have them back to us by Friday, the 14th. Could you state your position with the department.

Mr Lamont: I am the Assistant General Manager of Workplace Health and Safety Queensland in the Department of Industrial Relations.

Dr K Douglas: I am the Principal Medical Officer of the Department of Industrial Relations, Workplace Health and Safety Queensland.

Ms Adams: I am the Director of Legislation Development and Review with Workplace Health and Safety Queensland.

Mr Watts: I am a policy officer with Legislation Development and Review with Workplace Health and Safety Queensland.

The CHAIR: Would you like to make a very brief opening statement?

Mr Lamont: Yes, please. Thank you very much for inviting the Department of Industrial Relations to present to the committee today. From the outset let me emphasise that Queensland Transport has

main carriage of the issue of fatigue management for road users and that the Department of Industrial Relations is supportive of Queensland Transport's approach. With regard to fatigue, the role of the Department of Industrial Relations is to provide information and advice to educate industry and workers about the causes and effects of fatigue across all industries. As already mentioned, we defer to Transport with regard to fatigue in road users.

More generally, the Queensland Workplace Health and Safety Strategy 2004-2012 was released last year by the Hon. Tom Barton, Minister for Employment, Training and Industrial Relations. This strategy is part of the department's commitment to reduce the human and financial costs of work related injury and illness. The transport and storage industry has been identified as the priority industry under the Queensland strategy that the department is giving particular attention to. It is one of five priority industries. In December 2004 a Transport and Storage Industry Action Plan for 2004 to 2007 was released, and we will leave copies of this for the committee. This action plan identified key workplace health and safety activities to be undertaken in the transport and storage industry over the next three years. Key initiatives include delivery of a manual tasks risk assessment tool; undertaking compliance interventions in high-risk areas; participating in a national compliance campaign to do with falls from heights on trucks; producing, publishing and circulating reports on the outcomes of our industry audits and blitzes; and presenting at industry and union forums.

In addition, the Department of Industrial Relations has developed a fatigue management guide for workers across all industries. I am pleased to announce that the fatigue management guide—sorry, but it is just an A4 copy at this stage—has been released. It is now available on our web site, and again we will leave copies of this for the committee. The intent of this guide is twofold. It is to educate industry and workers about fatigue, how it is caused and its effect and also to provide practical advice to industry and workers on how to manage fatigue. The guide recommends that employers and persons who conduct a business or undertaking use a risk management approach to manage fatigue. The guide then walks the reader through the risk management process and how it should be applied to best manage fatigue. This guide provides some best practice strategies for organisations and individuals to manage fatigue and contains some practical tips for shiftworkers on how to address fatigue in their daily lives. The guide provides advice that is generally applicable to all workplaces within Queensland where fatigue is a health and safety issue. To conclude, the role of the Department of Industrial Relations is to provide guidance to obligation holders and to encourage consultation with workers when determining shift rosters.

The CHAIR: As an opener, can I ask you to comment based on your experience and research on the importance of fatigue as a cause of industrial accidents and as a factor in road crashes involving workers. How does it rank as the cause of workplace injuries and fatalities based on evidence, and are we doing enough about it?

Mr Lamont: There were a number of different parts to that question. Within this Transport and Storage Industry Action Plan we do have a bit of a statistical analysis as to what is happening in workplaces. But I guess to emphasise up-front our focus is work related injuries and work related fatalities, so the only information we collect relates to where an incident has occurred as part of a working environment. That would relate to where, for example, a truck driver might be driving as part of their business. Between 2000 and 2003 there were 54 compensated fatalities within Queensland. Of those, 31 related to motor vehicle accidents. So they do form a fairly high proportion of fatalities within the transport and storage industry. Do you mind repeating the question, because there were quite a few parts to it?

The CHAIR: How does fatigue rate as a cause of workplace injuries and fatalities?

Mr Lamont: The major issue is that we do not actually record or do not have any way of identifying where fatigue has been the specific cause of any workplace incident. I do not know whether Ki wants to comment further on that.

Dr K Douglas: The problem with fatigue as a cause of accidents is that there is no test you can apply. You can only really infer that fatigue may have contributed if you look back at the person's previous amount of sleep in the 24 hours prior to the incident, if you look at their roster and schedule and how far they are commuting—that is, all of those factors which might have led to sleep loss or sleep deprivation. I am just thinking of a particular case—it was a transport related case—where the driver was incinerated in his truck and there would be no way of scientifically proving that fatigue was the actual cause of that incident. You could infer it based on his rostering, but there may have been other factors. When a body is incinerated, you do not have a post mortem that will tell you if there was a fatal heart attack or something at the time. I guess what I am saying is that we do not have any clear way of establishing fatigue as the cause.

The literature on car accidents and fatigue is a bit more clear, and I refer you to the article by Connor. It was an Auckland study of 571 drivers who were involved in a crash where either the driver or the passenger was injured or killed. She found that sleeping less than five hours in the previous 24 hours was a very big risk factor for having such a crash. She also found the same if you drove between the hours of 2 and 5 am or if you had symptoms of feeling sleepy. We have found that the problem with

drivers—and the literature supports this—is that drivers recognise that they are becoming tired, but they do not recognise when they are so fatigued that they are impaired and they tend to push on. That is probably well known to this committee and to people in this room. It is not a message that is well known amongst the general public.

Connor, who is a researcher in New Zealand, suggested that there needs to be simple evidence based messages for the general public about driving. Rather than saying, 'Don't drive when you're tired'—what does that mean?—she felt it was better if you could say specifically, 'Avoid driving between 2 and 5 am. Don't drive when you're feeling sleepy and don't drive if you have slept less than five hours in the previous 24.' In a sense, the same would apply to accidents at work. So there are some simple messages you can get across.

The CHAIR: In places like the coal industry where you have people working four, five or six 12-hour shifts in a row, in the investigation of an injury or a fatality, is there not a trigger point that would make you look at people's work history to say that it is fatigue related?

Dr K Douglas: We do not regulate the coal industry at all. That is under the Department of Natural Resources and Mines.

Mr Lamont: Yes, we do not get involved in workplace accidents in the mining industry.

The CHAIR: But there are plenty of other industries that have a similar type of work pattern.

Dr K Douglas: It is very difficult to get people to admit to not having had enough sleep. There have been a couple of cases to which I referred in the Travelsafe symposium last year where the law is now getting quite tough in terms of road users who then drive when they are knowingly tired and have had less than two hours sleep. They are starting to get if not jail sentences at least suspended sentences. Our problem always has been trying to get correct evidence, but that is something that we are looking at in our inspector training in terms of how to gather evidence of trying to prove fatigue.

The other issue we have is that there is a limit to what an employer can control and what an employee is then responsible for. We have always recognised that fatigue management is a shared responsibility. For us to prove a breach, we would have to prove that it was the employer's actions in terms of the rostering, the hours demanded and the work requested that led directly to that accident. You would have to prove that that was the primary contributing factor to that accident. That is actually quite a difficult standard of proof in many accidents, because most accidents in workplaces are multifactorial.

The CHAIR: I think it is an interesting area that we could keep talking about for a long time, especially as I come from an industry where there is a lot of rostering and demands on workers.

Mrs CROFT: The committee notes in your submission that the department partially funded the development of a draft fatigue code of practice by the National Road Transport Commission. I just wondered if you would be able to advise us as to when will the draft code become an actual code. Also, I know that in your opening statement you mentioned some projects that you were undertaking, but could you advise if you are funding or conducting any other research or projects relating to driver fatigue?

Mr Lamont: We provided \$10,000 in funding towards the development of the national code. The status of that code at this point in time—

Ms Adams: It is going to the transport ministers committee meeting. I am not sure when that is scheduled, though.

Mr Lamont: This funding was provided to the National Road Transport Commission

Mrs CROFT: Are there any other funding projects that your—

Mr Lamont: There are no specific research funding projects that we currently have in place to deal with fatigue management. Our primary focus recently has been on finalising this fatigue management guide. So we are just in the process now of making sure that that guide is distributed to workplaces far and wide. It is an advisory guide, so it does provide useful and practical information.

Mr BRISKEY: The committee is interested in the department's jurisdiction. Under the legislation, is a truck a workplace?

Mr Lamont: Yes, a truck is a workplace if it is being used for work purposes at the time.

Mr BRISKEY: What is the legislation that covers that?

Mr Lamont: The Workplace Health and Safety Act.

Mr BRISKEY: Does the department have any responsibility for workers who drive on the job or who are driving home from work while they are tired?

Mr Lamont: If it is a commuting issue, no.

Mr BRISKEY: No? What about if they drive on the job while they are tired?

Mr Lamont: If they are driving on job, then it does come under our jurisdiction as far as it is a workplace, but we are currently also in the process of developing a memorandum of understanding with Queensland Transport to try to make clear what the delineation of responsibilities are, because if there was a workplace accident involving a truck driver, it may be that we defer our responsibility either to Queensland police or to the department of transport.

Mr BRISKEY: So you are saying that if they are driving home from work while they are tired, there is no—

Ms Adams: We have no jurisdiction.

Dr K Douglas: A person's individual car is not a workplace, but if the employer contributed to them being tired because of the hours that they were requested to work, then that might be a different matter. But the car itself would not be a workplace.

Mr BRISKEY: But if they are driving that truck home, though.

Mr Lamont: No, if the truck is not being used for work purposes—

Mr BRISKEY: But it is garaged at their home. No?

Mrs REILLY: Is there a size delineation for where you identify a truck or the weight load?

Dr K Douglas: I think it is 4 ½ tonnes. Above that it is a heavy vehicle. Whether or not it is the workplace is whether work is being carried out with it at the time.

Mr BRISKEY: It can be a car—anything.

Mr Lamont: It can be a car, or a pushbike

Mrs REILLY: A car or pushbike can be a workplace as well?

Mr Lamont: It could be.

Dr K Douglas: The example that I might give is an Aussie Home Loan mortgage lender. These are mobile home lenders. They might have a four-wheel drive. So they go off to do a job in the evening—sign people up for a mortgage—and go home. On the weekend, they take that vehicle to the beach. They are not doing work; it is no longer a workplace. But the previous night, when they were visiting someone in their home for a mortgage lending activity, then it was a workplace.

Mrs REILLY: Yes.

Dr FLEGG: I am interested in hours of work and shift lengths. Have we got legislation that limits the numbers of hours people can work or, in particular, the fatiguing effect of working long shifts on consecutive days or over a period of time?

Mr Lamont: We do not have any legislation that covers the maximum number of hours to be worked. Essentially, hours of work tend to be regulated through industrial agreements and industrial agreements are usually agreements between relevant unions and workplaces and endorsed through the Queensland Industrial Relations Commission. In relation to hours of work, we continue to monitor trends in the changing nature of the work force within Queensland. The information that we have is that the average hours worked over the last 19 years between 1985 and 2004 have gone up by around about an average of 1.3 hours. The number of people who are working excessively long hours, which is defined as in excess of 50 hours—I do not think that we have an actual percentage—we now have around about 185,000 persons employed in Queensland working in excess of that 50 hours per week. That compares to around about 74,000 back in 1985. The number of people who are actually working shiftwork as a proportion of the work force has been declining in Queensland over the same period of time. We now have a situation where there are around about 209,000 people currently engaged in shiftwork. If we go back to a figure in 1997, at that stage there were 196,000 people. So the real number has gone up, but as a proportion of the total work force, that has actually decreased. So we do monitor trends, but, no, we do not have any legislation which says that this places a cap on the number of hours that can be worked in a given week.

Mrs REILLY: How can that be the case, though, with the increased casualisation of the work force and so many people who just work set casual hours, particularly in the hospitality and the tourism industries?

Mr Lamont: Are you talking about the changing nature of shiftwork?

Mrs REILLY: Yes. I just find that extraordinary.

Mr Lamont: We tend to rely directly on Australian Bureau of Statistics survey data for this information.

Mrs REILLY: But you suspect that it is measuring the full-time equivalents.

Mr Lamont: I would imagine that it is measuring full-time equivalents rather than actual numbers.

Mrs REILLY: Have you got concerns that the actual numbers are not reflected in those figures? If that is the case, then how do you address things like increasing fatigue in the workplace if we are not

even looking at the actual numbers of casual workers who are working hours that are traditionally not normal hours?

Mr Lamont: Within particular industries we spend a lot of time looking at the casualisation in the work force and hospitality is the principal example, but I guess it depends on what your definition of 'shiftwork' might be. Most of those employees are not working throughout the night. They might be working an hour late in the evening, but not until 1 o'clock or 4 o'clock in the morning.

Mrs REILLY: Most of them are actually working during the night and we do not know how much sleep they are getting during the day. They are working through the night and then working eight-hour or 10-hour shifts as such.

The CHAIR: Or have education during the day. They are going out working until all hours of the night and they are casual workers.

Ms Adams: We have a data development project which we put in place precisely to address some of those issues where we do not have the data before us that we actually need to guide us better in our policy setting in the department. We have set up a data warehouse. At the moment we are in the process of pulling together the different types of data sets that are available. The next step from that—and also it is built into the industry plans that we have referred to—is identifying those areas where we need to do some further investigation and then to put something in place to enable us to give better evidence. We rely on qualitative data as well when we are developing our policies.

Mrs REILLY: I am just at a loss to know how that is going to help you identify the casual work force.

Ms Adams: That is a target group that we are worrying about. We are worrying about the changing nature of employment patterns and employment arrangements within the department as a whole. It is not just a workplace health and safety issue; it is also an industrial relations issue. We have been looking at this for the last couple of years. This is also a national issue. Collecting good, strong, quality data is one of the problems that we are trying to address there.

The CHAIR: What responsibilities do employers have to help ensure that employees make it home safely after long shifts? What are employers' responsibilities and how do employee obligations apply to other workers such as subcontractors?

Mr Lamont: Under the legislation, employers have an obligation to ensure the health and safety of their employees in the conduct of their business or undertaking. Are you looking specifically at young persons in work or are you looking at all workers?

The CHAIR: All workers.

Mr Lamont: Essentially, once a person leaves their place of work, the employer's direct obligation under our legislation ceases. However, they may have a more social obligation to ensure that a person is able to travel safely to and from work. There is nothing under the workplace health and safety legislation that requires an employer to ensure the safe transport between their home and place of work.

The CHAIR: Given that a worker is able to claim workers compensation for travelling to or from work, surely we should have a connection there to say that employers do have a responsibility if they are sending people out on the road after working a number of consecutive 12-hour shifts, for example?

Dr K Douglas: I think Peter is really meaning that we do not have prescriptive legislation that says that an employer has an obligation to prevent fatigue. It is not in the act, it is not in the regulations; there is an implied obligation—or more than implied—because under our general obligation, section 28 of the Workplace Health and Safety Act, you have to ensure that persons are free from death, injury or illness caused by the workplace, work activities or specified high-risk plant. High-risk plant would be trucks, cranes and that sort of thing. So there is not a direct, legislated, regulated section of the act that says that you must prevent fatigue. However, the general obligation means a risk management approach. So you have to identify any factors in the workplace that could contribute to an employee being too fatigued to drive home safely and you would look at the nature of the work—how heavy it is, how physical it is, how long the hours are, what sort of shift—

The CHAIR: Distance to travel?

Dr K Douglas: Distance to travel, or the work itself, or the demographics of the workplace—how old are the people you have employed. We know that there is a difference in terms of fatigue. Young people might be more at risk because they tend to party on, or else they are studying as well as working. Older people might be more at risk because they have certain medical conditions. You have to look at domestic responsibilities and health status. You can take all of that into account. You are not absolutely obligated to fix a problem at home, because you cannot do that, but you should take it into account and you also should look at commuting times.

But when it comes down to it, what an employer should do is protect the opportunities for sleep. That is really all an employer can do. When I say 'protect the opportunities for sleep', that means that if you are going to have a 12-hour shift roster, you do not have six in a row, for instance, because

obviously you are not protecting the opportunity for sleep. You are not going to roster someone to finish work at midnight and then have them back at 6 in the morning, because we know that between 12 am—by the time they get home, having to come back to work at 6 am—they are not going to have adequate opportunity for sleep.

With that sort of rostering system, although it is not prescribed—there is no legislation about it—we would take a very dim view then if someone had an accident because you would be able to infer, provided there were no other obvious causes, that that might have contributed to the accident as a major factor.

Dr FLEGG: Have you had a look at the health industry in relation to that, because the work practice that you have just described is standard practice in the health industry.

Mrs CROFT: I was just going to say that that is the standard for the hotel industry, too.

Dr K Douglas: I have come from the health industry.

Mr BRISKEY: The fast food outlets, too.

Mrs REILLY: And standard for politicians.

Dr K Douglas: You are perfectly correct. The trouble is that, as a community, are we prepared to make some changes, because that is really what you are asking. It is not just interns, residents, medical officers, surgeons or politicians who work long hours; it is people in our department who do the same.

The CHAIR: It is about everybody.

Dr K Douglas: It is just about everybody. So there has to be some sort of community attitudinal change to say that perhaps this is not the best way to work. That is an individual view; that is not the department's view. I should make that clear. But there are ways and means around this and I can tell you from my own experience as a medical registrar on call 20 years ago that I split all of my weekends with a colleague. We both decided that we were not competent to work Saturday and Sunday nights—a 48-hour on-call period; we could not do it—so we just worked twice as many weekends, which absolutely suited us.

Our own department of emergency medicine started off by rostering people from 8 in the morning to 12 midnight—all the staff on, starting at the same time. We realised that we did not need to do that, so we rostered people from 8 till 8, 10 till 10 and 12 till 12. So there are ways, even in the health industry, to overcome some of the factors that lead to fatigue from long shifts. It is certainly an issue. It is an issue that I understand Queensland Health is looking at. It is an issue we will be talking to them about. It is not an issue that will be solved overnight. I have to say that.

I draw the committee's attention to the recent article I sent to Mr Hansen from the *New England Journal of Medicine* by Barger et al. It talks about the risk of motor vehicle crashes among interns who were working 24-hour shifts. Their risk of having a crash in the morning after they had finished work was double to up to six times greater, depending on how many 24-hour shifts they had worked in the previous month. It is an issue that the health industry is aware of. It is on our list to examine. The focus for this year is manual tasks in the health industry. It may be that next year we will be tackling fatigue. I cannot guarantee that, but it is certainly an issue I am talking to both the private and the public health industry about.

Mrs REILLY: What about in relation to your own staff in the department? I know that workplace health and safety inspectors and industrial officers spend a lot of time on the road. Does the department actually have directives or policies that require them to limit their driving hours, take prescribed rest breaks and so on? How does that apply across all government agencies? Others have referred us to your department for that.

Mr Lamont: We have a health and safety policy and procedures manual which provides a number of rules around the distance and time that workers in our department can actually drive. That is often used as a guidance model elsewhere. Those rules include things like driving not more than eight hours per day based on a 10-minute break every two hours. We try to put some rules around people starting early in the morning and finishing by early afternoon to avoid the hazards of night driving; avoiding large, heavy meals during the day and instead having a substantial meal in the evening; and estimating the time between locations, preferably within regions. For example, in our south-west region, which has some of the greatest distance requirements, we require a buddy system whereby people drive in pairs rather than alone. They are to also identify when they are setting out, make sure that people know when they are going to get to their destination and they check in. So we do have some rules.

Mrs REILLY: Can you provide a copy of that policy to us?

Dr K Douglas: Yes. We will send it to you electronically. In particular regions the operations managers have their own rules. To control extended work hours they simply advise their staff that they will not be paid for any overtime past 9½ hours. Also, if they cannot get home within the 12 hours of a total day—driving is considered work time; it is not something extra you do—they are required to stay

overnight and the department will pay for the accommodation. So there is no excuse for any officer of the department to have a fatigue related accident if they follow the policies and procedures.

Mrs REILLY: Do you provide that as a guide for other departments?

Mr Lamont: It is available to any other department. Through the public sector division of the department we provide a lot of directives and there is a directive relating to driving.

Dr K Douglas: It is actually called *Staff working remotely*.

Mrs REILLY: It would be interesting to see how many other departments follow the directive. If it is a directive, they have to do it.

Dr K Douglas: It is an internal procedure for ourselves.

Mr Lamont: There is a directive as well.

The CHAIR: Can we get the directive as well?

Mr Lamont: Yes.

The CHAIR: We would really like to keep talking to you, but we have run out of time. I appreciate your attendance here this morning. The next witnesses will be from the Centre for Accident Research and Road Safety.

Proceedings suspended from 10.05 am to 10.28 am.

MARK KING, examined:

MARY SHEEHAN, examined:

ANDRY RAKOTONIRAINY, examined:

The CHAIR: I now welcome representatives from CARRS-Q. Could you begin by giving us a brief outline of your work and expertise in driver and rider fatigue issues?

Prof. Sheehan: We are obviously concerned with driver safety, particularly in Queensland. We have a particular concern with drivers in rural and remote Queensland because we are funded to a large extent by the Motor Accident Insurance Commission and by third party. We have been following this now for a number of years. There has been a lot of movement in the area of sleep deprivation fatigue, but one of the things that has been also emerging in the scientific literature is the idea of monotony based fatigue. We have begun to think about this as a discrete phenomenon. We are interested in both. We are interested in prevention in relation to any sort of fatigue, but that is where we are coming from. My colleagues have been active in this area developing research programs and have prepared the submission for this.

Mr BRISKEY: The committee is interested in statistical definitions of fatigue crashes. As you are aware, the Queensland Transport operational definition of fatigue crashes includes single vehicle crashes on open roads with a speed of 100 kilometres per hour or higher. The Australian Transport Safety Bureau operational definition of fatigue crashes includes single vehicle crashes on roads with a speed of 80 kilometres per hour or higher. Both of these definitions would exclude crashes on urban roads with speeds below 80 kilometres per hour. The committee also notes that studies commonly show that fatigue related crashes are more likely to occur on rural roads. Is the way fatigue crashes are defined for statistical purposes the reason we do not hear much about fatigue crashes in urban areas?

Mr King: Yes, I think that is true. It is a bit of a chicken-or-egg problem in that there is no easy way to validate the definitions that are used. The ATSB found that a study they did which looked at the definition missed a lot of fatigue related crashes as defined by coronial and police reports. At the same time, they classified a lot of crashes as fatigue related while the coroner did not. I think the problem here is that there is no real way to validate whether or not fatigue was involved in those crashes in the first place.

Because we know that the kinds of crashes we expect to be fatigue related are more likely to occur in rural areas, our definitions tend to focus on that. So certainly we do miss the urban areas, and I think we will consistently do so. Queensland Transport has attempted to cover that by looking at crashes that occur in urban areas at particular times of day. Once again, you are including an awful lot of crashes that are not fatigue related.

Mr BRISKEY: And missing out on crashes that are?

Mr King: Yes. We cannot really call them fatigue related crashes. It is just using a surrogate measure to estimate overall numbers. We are never quite sure how accurate they are.

Mr BRISKEY: How can we make accurate comparisons between fatigue related crashes on rural roads and those crashes on urban roads?

Mr King: Again, it comes back to the fact that we do not have a clear definition.

Mr BRISKEY: So we cannot. How do we get an accurate picture of the extent of fatigue crashes in urban areas?

Mr King: One way you could attempt to do it is by doing a more detailed, in-depth crash investigation study, which is resource intensive. It would involve, for a group of crashes, following through in detail the circumstances which led to them. In this case you would be making inquiries into things like the lifestyle the people involved were leading and the activities they had been involved in—those sorts of things. Even then it is not going to be entirely accurate, but at least you are going to get a more detailed picture of the possible contribution of fatigue.

Mr BRISKEY: It is not an easy one at all. It is something the committee has been grappling with.

Mrs CROFT: Your submission discusses the terms 'monotony' and 'hypovigilance'. Can you please clarify how these conditions relate to driver fatigue? How is highway hypnosis related to monotony? Has your centre conducted any research on these two areas of fatigue driving?

Prof. Sheehan: It is a new area. There has been work in Canada—basically simulator work—that has defined or demonstrated that monotonous road conditions, or simulated monotonous road conditions, do lead to reduced attention and that this is over and above sleep deprivation or other issues. We are currently engaged in submitting for a research grant to try to begin to look closely at this issue. Again, the definitional problems are of interest. The first study is going to be based on our rural and remote study up in north Queensland. One of the things you find is that, when people are in a highly monotonous situation and there is a distraction or something happens, in their report of that crash it will be the intervention that they record. The police will record the intervention, not the reduced vigilance that perhaps led them not to be prepared for this thing to happen. So we are going to try to track those sorts of crashes through the rural and remote study.

It is an emerging issue, we think. There is not a lot of research in it. You may recall that in the seventies there was quite a lot of work on this kind of thing relating to factories and factory work, monotonous conditions and accidents. Then it just vanished off the research agenda. We are now in a situation where we are perhaps more able to look at this and, with the advances in information technology, perhaps able to do something about this, if we can actually track what it is and find indicators for it.

I will mention another thing relating to the monotony issue. We think it seems to be to do with not only lack of stimulation or very routine conditions in which someone works or functions but also repetitiveness. It appears to also be a problem in mining situations, where people are operating in a mine and undertaking exactly the same task again and again and then failing. It is not because they are sleep deprived; it is about reducing their vigilance or attention. It seems to be related to that particular situation. There may be individual variations in this also. It looks as though there are people who can handle that kind of condition forever, if you like—we had people from the American military come and talk about that; I think they spoke to you also—but there are others who cannot.

Mr BRISKEY: So do we do psychological testing on people for various types of jobs and driving activities?

Prof. Sheehan: That actually is one of the aims of the research we are currently applying for funding to do. The research is, first of all, linking crashes in rural conditions to the road example and seeing context. If we can locate that, moving that particular road style context into a simulator, actually testing sleep deprivation and personality characteristics and developing mathematical modelling for an IT solution.

The CHAIR: How is highway hypnosis related to monotony?

Prof. Sheehan: I think it is that continuing similar environment. I think most people on the committee would be aware of it. Even the Gold Coast freeway would be an example. Certainly in the United States they now put quite a lot of discriminating features along the walls that run along the side of freeways as a way to break that monotony. We do it, too. That, in part, is to break that monotonous condition.

The CHAIR: Are you actually doing any research at the moment?

Prof. Sheehan: We will be. If we can get the money we will be. It is a totally new area, we think. My colleague is taking the lead on that one.

Dr Rakotonirainy: We have already started some preliminary research on the effect of monotony on hypovigilance. We have discovered that under some monotonous conditions the vigilance of the participant can fall in 20 minutes. It is quite dangerous to be involved in such an environment.

Dr FLEGG: I noted your comments about the work you are doing in north Queensland. Can you tell us a bit more about that? What are you looking at? If you want to let some secrets out, what are some of the interim findings you are already starting to see? When do you think a final report will be available?

Prof. Sheehan: It is a whole-of-government funded study—

Dr FLEGG: You can still leak it!

Prof. Sheehan: I was trying to give credit where credit was due. Over three years we are interviewing all seriously injured people who are hospitalised for 24 hours or more in north Queensland. We are also taking coronial reports on all fatalities, excluding urban Cairns and urban Townsville. We have only just collected the first hundred cases. Because of the population and because of the characteristics of our starting date, a large proportion of those are motorcyclists. So it is a little influenced by that.

As far as fatigue goes, I have some data but it is very early data—as you can imagine with only 100 hospital cases of which only 73 are driver riders. I have the figures here. Seventy-eight per cent of these were single-vehicle crashes and the overwhelming majority of those are single-occupant crashes. About 13 per cent report that they were tired or they were bored on that trip. Shiftworkers were 15 per cent. We have not linked that data back but that is something that is coming up. Males are 78 per cent, perhaps I should mention.

Interestingly enough, in terms of the sleep deprivation what looks to be emerging—it is a very strong trend—is that 2 through 5 o'clock in the afternoon is the key time when these crashes occur. The majority of them have stopped in the last three hours and have spent a reasonable amount of time—more than 10 minutes—at their last stop.

What I really wanted to mention to you was that there was a lot of community support. We ask, 'What are the things that you think would save lives in rural and remote Queensland?' More than 84 per cent believe roadside rest facilities are a good thing. Seventy-nine per cent believe rumble strips—a roadside based fatigue initiative—would be helpful compared with 78 per cent who stated better roads. So there was raised concern about that. We asked them what was a really important road safety ad they had seen that they can recall, and six people remembered the recent one Rest or RIP as compared to 18 who recalled from 10 years ago: 'If you drink and drive, you're a bloody idiot.' That obviously really stood out in the community's mind.

The CHAIR: So what is that telling us?

Prof. Sheehan: I think we have started down the track with fatigue measures. The community I think has accepted that fatigue could be a problem and they like the idea of these fatigue measures—roadside rest facilities and rumble strips et cetera. They do not know whether they help but they think they do. So there is a community that is prepared to move in that direction.

Mr BRISKEY: What was the age of these people?

Prof. Sheehan: The mean age is 37. The range was 16 to 78.

Mrs REILLY: Are the results of that study ready to be provided to us yet or soon?

Prof. Sheehan: It is still very early. We made a presentation to the funding group this week on this first hundred, the features of that and the baseline data. We could send you that presentation.

Mrs REILLY: That presentation would be fine.

Prof. Sheehan: Okay, will do.

The CHAIR: One of the anchors that is holding back efforts to tackle the driver fatigue problem is the lack of an objective test for driver impairment. The police are saying they really need something like a breathalyzer or behavioural test they can use at the roadside that will tell them if a driver is too tired to drive. From time to time new devices have also have been announced that monitor driver performance and alert them if they show signs of being tired. We are hearing a fair bit of this in recent times with our conferences that we go to. How valid and reliable are the fatigue monitoring technologies that are available today? I am interested, in particular, in the progress since the review by the National Road Transport Commission in 2000.

Mr King: I do not think there has been any advance on the NRTC even though there are a lot of devices. Again, you have a problem as to the validation side of it. The question arises as to the level of validity that you want. For example, you have devices that look at eye blinking, head nodding, EEG and those sorts of things, and they can certainly pick up changes which are consistent with fatigue coming on, but do they relate to an increased crash risk? At the far end of the scale obviously they do. Where is the cut-off point? If we have some sort of enforcement which is based on a particular cut-off—a particular criterion level—where is the balance between reducing crash risk and unnecessarily stopping people who were not at risk? We do not know that as yet.

I think the big gap lies between what the performance measures show and what the actual crash risk is on the road. There is no data that I am aware of at the moment that relates your performance in these tasks to actual crash risk. It is more of an assumption that if these particular abilities are compromised to a certain extent then that is something to be concerned about. At the extreme end we are certain of that. At the other end we are certain that there is not much impact. Where does it lie in the middle? That is really where the difficulty is.

The CHAIR: Just so I am clear, are there any technologies available at the moment that police could use as a tool to determine if the driver is suffering from some sort of fatigue?

Mr King: My inclination is to say no for a couple of reasons. One is that there is a big difference between somebody's performance when they have been sitting in a car for an hour or so in a monotonous situation and when a policeman pulls them over and tests them. They might have been quite prone to having a fatigue related crash before they were pulled over, but once they are pulled over their heart is pumping and that sort of thing.

The CHAIR: Police do that to us.

Mr BRISKEY: Only if you feel guilty about something!

Mr King: The other thing is that it comes down to how defensible such a criterion level, for whatever measure, would be in a court of law. I do not know enough about it, but I would have to say that I do not think there is good enough evidence at this stage.

The CHAIR: So it is an area which we look at with interest into the future.

Mr King: Yes.

Dr Rakotonirainy: Just to reiterate what Mark said, one of the main problems is that we do not have a baseline to determine what is fatigue from the physiological point of view. As you probably know, we react differently to fatigue. We are susceptible in a different way. To come back to the monotony problem, if you use high-blink detection to detect fatigue, then that kind of device would not be useful to detect the effect of monotony. If you are talking about highway hypnosis, for example, then your eyes would be wide open and there would not be any eye blinks. So there are different parameters which should be taken into account to tackle the entire problem and there is no technology yet that can be used by the police.

Mrs REILLY: QT mentioned a study when it was speaking to us this morning carried out in Madrid. I missed the detail of it but it related to the level of energy output and that that rises just prior to a crash. Is that something you have heard of?

Prof. Sheehan: I have not.

Mr King: No, I am not familiar with that.

Mrs REILLY: I can tell from the looks on your faces. I will seek more information from them. We have read a lot about driver fatigue, but there has been very little mention of rider fatigue pretty much throughout our submissions. It has not come up very much. Do you think the issues are the same for drivers and riders?

Mr King: I am not aware of studies either so I am really speculating, but riding is a more challenging task because you have to balance. The whole physical characteristics—the handling characteristics of the bike are different—and they involve having to have more control. So, on the one hand, it means you are probably getting a bit more stimulation to keep you awake, but on the other hand the demands over a long period of time are more likely to fatigue you. That is speculative, as I say. I am not aware of much that has been done.

Prof. Sheehan: I am not, either.

Mrs REILLY: I turn to another group of drivers. Your submission gives four reasons why legislation to restrict driving hours for truck drivers may not be as effective as initially hoped. One reason is that it does not account for circadian rhythms, which is the primary determinative of alert levels in driver fatigue. The regulations overemphasise the importance of hours of driving. They do not factor in inter- and intradriving variability—like work history and those other variables. You also mention the failure of drivers and trucking companies to adhere to the guidelines. I wonder if there are any others and also whether you have any suggestions about how these limitations could be overcome.

Mr King: I think this is a difficult area because there are issues of economic efficiency, and that applies nationally to Australia's gross national product, not just to the individual profitability of companies.

The work that has been done over the past 15 years on the fatigue management program initially started from the premise that the driving hours regime was not a really good way of managing fatigue and there were other ways to do it, and we should accredit companies to manage the fatigue of their drivers. That led to our becoming more flexible with the hours. We now have the ability to have more flexible driving hours. However, the research that has been done by Ann Williamson and coworkers shows that these more flexible driving hours seem to lead to more fatigue than the old driving hours regime. I know they have suggested a weighting system where the hours of driving during the night when your circadian rhythms are low get weighted more highly than the hours during the day. From a research point of view, that is a promising direction. From a practical perspective, I do not know how practical it would be because it would mean for a trucking company it is a lot more expensive to move goods at night than it is during the day. That then has implications for traffic as well as for overall profitability.

Mrs REILLY: Could technology such as the safe-T-cams in New South Wales enhance the effectiveness of the legislation or could we look at additional resources for on-road enforcement?

Mr King: I am not familiar enough with the enforcement regime. I know that there are a lot of logbook violations. I am not up to speed with what has been happening with the auditing of the fatigue management pilot participants—how successful that has been. I know there have been some high-profile cases recording multiple violations that are in the press. How widespread that is I am not really sure. There are incentives to bend the rules and I guess there always will be, but I am not familiar enough with the balance between the enforcement resources that are being poured into it and what the outcomes are to be able to give you an answer on that.

Mrs REILLY: And the safe-T-cam?

Mr King: Safe-T-cam tells you between two points how long it took a truck to get there, basically. So over a very long stretch, if we had safe-T-cam going from Victoria to Queensland, you might be able to track the fact that a truck had driven all that distance. It tends to be used more for speed than fatigue. Potentially it could be, but there is always a question about how widely you can spread safe-T-cam. It is going to be on major routes rather than on the quieter roads as well. So it would have some benefit, I would think, but there are limits to it.

Mrs CROFT: In your submission you included a table on page 20 that showed education related fatigue countermeasures such as Driver Reviver and public education strategies. The committee notes in your submission that these countermeasures need to be evaluated. This table that you are referring to on page 20 is from Queensland Transport's 2001 annual report published in 2002. Are you aware if any of these programs have been evaluated since 2002? Should the evaluation of these programs be a priority? If so, which programs do you believe should be evaluated first?

Mr King: I am not aware that there has been much evaluation of these since. One of the issues with public education is that we know that public education for road safety usually works best when you have got it backed up by something else because when you are looking at particular road use and behaviours which are undesirable, from a road safety point of view, they often have benefits for the people who are doing them, like people speed because there is a whole lot of benefits to speeding. So when we have publicity about speeding it is not terribly effective unless it is well backed up with enforcement to help to change the different contingencies of their behaviour.

With fatigue the problem is bigger because we do not have any realistic way of enforcing anything. Our fatigue public education is relatively limited except where we have something in the workplace, like where we do have, however problematic they are, driving hours regimes for heavy vehicle drivers. I think that certainly what I would like to see is where fatigue measures have been put into the workplace safety programs of fleets which are not heavy vehicle fleets, some evaluation of how effective that has been, because you are dealing with a combination of the education and some form of management. I know that the taxi companies here have some controls over their drivers now where if they have been on the job for a certain amount of time they get logged off from the computer system and they cannot bid for jobs over that computerised system. It does not actually stop them from driving; it just changes the way that they can pick up jobs.

Mr BRISKEY: It stops them from sitting on ranks.

Prof. Sheehan: I think I would agree on that, too. Again, it comes back to the type of evaluation that is done. I do not think there is any outcome evaluation in the sense of have these reduced deaths come out on any of these at the moment, or I think we would know. But I would also agree that it is probably the workplace and safety programs that would be fairly high priority, because they are probably the simpler to actually evaluate. It would be easier to get hold of the data. There would be a quicker flow through and probably larger numbers.

Mrs CROFT: If you were going to evaluate—even if the programs have been well designed and executed—how difficult and expensive would it be to evaluate the crash reduction benefits, do you believe?

Prof. Sheehan: You want to try that?

Mr King: Well, it is difficult for the same reason that we have trouble in picking out fatigue related crashes in general: that you have got to be able to know whether the crashes were fatigue related or not. The fleet area does give you a bit more opportunity because, given that people are driving for their work, you have got a lot more ability to know more about the reasons for their driving and their work history and things like that. You have got the ability to do testing in the workplace. You could actually try some of these fatigue tests in the workplace as well.

The downside of using fleets is, of course, that as opposed to using the whole of the Queensland driving population, you have immediately got small numbers in fleets and driving for them at limited periods of time so that you have got to accumulate a lot of driving to accumulate enough crashes. It is one of those unfortunate things where, as a researcher, we end up wanting more crashes when we should be wanting less just so that we can actually get a result.

Prof. Sheehan: But I think that is probably the most feasible one. I mean, you have Q-Fleet, you have the Queensland Rail fleet. There are quite large fleets that probably keep good data on their crashes, but you would have to take some surrogate measure of fatigue and you would have to take a plunge on that and say, 'Okay, that's the indicator,' be it the cleanest or not. But it seems to me that is a feasible exercise and it probably is not an enormously expensive one. It would be a data monitoring and projection exercise. I think that would be quite a nice study to do.

Mrs CROFT: Thank you very much. Is there a case for shifting some of the public education resources away from the general campaigns aimed at all drivers to targeted campaigns aimed at high-risk groups such as young people, shiftworkers and people with sleep apnoea, do you believe?

Prof. Sheehan: I would not. No, I would not. I think it is still too early in the community's acceptance of it. I think it is there being accepted, but I think it is still too early to reduce that. You might want to put extra money in for those groups and that could be argued, but my personal feeling—and I defer to the others for their comments—is that it would not be, particularly looking at the sort of findings I am getting from the rural and remote study. This is something that still needs to get into people's minds and community acceptance.

Mrs CROFT: Thank you.

The CHAIR: I have one last question. In your submission you discuss a program of intensive crash research into rural crashes to monitor the effects of countermeasures and to detect trends in crash and injury causation. Is your rural and remote road safety collaborative study investigating these fatigue issues?

Prof. Sheehan: The answer is yes, and it will be doing it in more detail as it goes ahead.

The CHAIR: So where are you with it at the moment?

Prof. Sheehan: As we said, we have got these first hundred. We have actually just coded the data so we could present something on a hundred cases, but we will be looking more at that. We get the medical records and we get the accident investigation reports. We are working with the police, Main Roads et cetera on those crashes, but we would expect to do that.

The CHAIR: Thank you very much. Thanks very much for your time. It is much appreciated.

Mrs REILLY: I look forward to seeing that.

Prof. Sheehan: But still very small numbers.

Mrs REILLY: And your progress.

The CHAIR: Our next group of witnesses will be from the Queensland Police Service.

KERRY DUNN, examined:

PETER KOLESNIK, examined:

The CHAIR: Good morning, Chief Superintendent Kerry Dunn.

Chief Supt Dunn: Thank you, sir.

The CHAIR: Welcome again.

Chief Supt Dunn: Thank you.

The CHAIR: First of all, I will get you to open by stating your position with the Queensland Police Service.

Chief Supt Dunn: My full name is Kerry George Dunn. I am Chief Superintendent of Police, presently officer in charge of the State Traffic Support Branch.

Mr Kolesnik: My name is Mr Peter John Kolesnik. I am the manager of the Road Safety Strategic Development Intelligence Unit, State Traffic Support Branch, and also national secretariat to the Australasian Traffic Policing Forum.

The CHAIR: I would like to give you an opportunity to make an opening statement but we do not have a lot of time, so I might do it this way: by asking if you would like to start off by explaining the recommendations to the committee. There are 22 recommendations, and we would like a little bit more feedback from you just as to the reasons for those recommendations.

Chief Supt Dunn: Do you want me to individually go through the recommendations?

The CHAIR: I think that would take up the whole afternoon.

Chief Supt Dunn: I would think so, yes, certainly. I think generally that what the whole process involves is applying the QPS services and the functions that we undertake more so to have them more defined in relation to fatigue. There is an issue that we have heard about continually here today in

defining fatigue. It is increasingly difficult for the police to investigate fatigue related incidents, as they occur across the whole network, and to get a consistent approach in relation to those investigations because of the difference between the individual incidents that occur. That is one big issue and one big concern we have got, and I do not think there is any real answer there. There is no real criticism there, either; it is just a difficult question, and it continues to be. I am sure that you will have time and some considerations in relation to that determination.

There are also recommendations in relation to public awareness and the like and the consequences of driving whilst fatigued and the level and degree of fatigue driving and the break-up of the fatigue. What is actually the fatigue? Is it sleep deprivation? Is it monotony? Is it air quality of the vehicle? That is another issue, and it is an important issue that I think has been missed in the whole process. We continually see that on the national committee that is looking at that, under the funding and process of the Prime Minister. That is a big area that we are looking at on that basis.

Technology: looking at what technologies are available out there for us, the ITS principles and processes, and looking at what we can apply there. That is another area that maybe, in some regard, that Prime Minister's committee can help us, and I feel that that will come in the not-too-distant future. Legislation: we are looking at a legislative solution of some sort, as police often do. We look at generally something we can do to help the people, not so much hinder them or fine them but more to interact with them and have a cause and a causation for the police in relation to an incident, looking at the actual incident and following it up further so we can get a causation. At the moment we put it down as fatigue not as often as I feel that it is the case, only because it is so difficult to measure, as I said before and earlier. But we put an incident or a crash down and we do not follow it right through; we only follow it to the point that we feel is necessary and that the coroner might feel, or that a court would feel, is suitable.

Now, we know there are issues in relation to court processes and prosecutions in relation to fatigue driving. We have seen those continually over time, again on the definition and again on the sleep process. This is a primary defence that has been used in the past. But from a legislative perspective we are looking at some mechanism to be able to, when we do interact with the drivers—and we are frequently interacting with them, more particularly in high holiday periods and high travel periods, and we are detecting fatigued individuals. But in reality we have no real course to take any further than to request them to park their car and take a break. Maybe, as was mentioned here before, the adrenalin rush when we intercept them—I even have that adrenalin rush, so do not worry. You are not alone there. When you are intercepted by police, there is that guilt feeling of some sort, whether you have done something or not.

But, yes, just so we can give them a notice, as we do with the heavy vehicles, to make them take a rest if necessary. It is surprising how many people—from what the police advise me—do admit that they have driven for extended hours and they have not taken a break other than to stop at a service station, put fuel in, grab a bottle of Coke or whatever else might be the case and continue on their journey.

The CHAIR: In your process of accident investigation, how do police officers identify that driver fatigue has possibly contributed to the crash?

Chief Supt Dunn: As I said, it is very hard to determine, but I spoke to the officer in charge of our Accident Investigation Squad and he gave me a little list. He emphasises that it is often extremely hard and usually it is not much more than a gut feeling of the investigator. There is also a very fine line between a suspected fatal fatigue incident and a suspected suicide incident. Indicators of fatigue being a factor in the crash could be lack of braking or evasive tactics leading up to a crash scene, a vehicle travelling straight ahead when there is a bend in the road, a vehicle travelling off the road at a very shallow angle—usually indicated by the path of the vehicle across a gravel verge or grassed area—investigation into the movements of the driver in the 36 hours leading up to the crash, for example, work hours, work load, recreational activities, hours of sleep et cetera.

The CHAIR: So you do actually look at that.

Chief Supt Dunn: Yes, and a combination of the time of day, weather conditions, vehicle control settings—we look at the heating settings, the internal ventilation settings of the vehicle—the location, and the cruise control is another indicator.

Mr BRISKEY: You would not look at that in relation to all crashes.

Chief Supt Dunn: No, in the serious crashes and fatals generally.

The CHAIR: Thanks for that. In your submission you note that Queensland Transport is responsible for providing the necessary training to police but may not be providing the training that is needed. Can you elaborate on that a bit for us?

Chief Supt Dunn: I am not speaking behind Queensland Transport's back here; we have spoken to them about this. It is more for the investigators and heavy vehicle enforcement. In 1991 the heavy vehicle enforcement processes in the Queensland Police Service were handed back to Queensland Transport, and police at that time maintained the focus on the light vehicles. But, as we have seen over

time, there has been a shift and a need for police to get more into the heavy vehicle enforcement and that has occurred, but we lack the training and the expertise in that area. That is what we have requested of Queensland Transport and that is being undertaken. It is being undertaken, from what I am assured and from my discussions with Queensland Transport, but we made that note in our recommendations and our comments because it was an issue that we saw. We had a dwindling degree of expertise in relation to heavy vehicle enforcement and it is one area we needed to address.

Dr FLEGG: Is there anything you can identify that would assist police in more accurately defining what accidents are fatigue related?

Chief Supt Dunn: A black box recorder in a motor vehicle would be one simple solution. We see them in aircraft, and I know it is coming, from the discussions we have had internationally. A lot of vehicles are now looking towards that technology. That would be a great aid and a great assistance to us in investigations, but there is not really any one thing we can recommend at this stage. We have looked at a number of types of technology—pupilometry, and the like—and we have not yet determined anything that is available that would be of sufficient assistance at this stage.

Mr Kolesnik: There are certainly a lot of developments in the in-car technology field towards this type of solution, such as what Chief Superintendent Dunn mentioned, the in-car black box technology. That is being looked at by manufacturers and, certainly, on the Commonwealth Government Motor Vehicle Exhaust Gas Suicide Prevention Reference Group it is an issue that is being considered as well. So it is certainly likely that in five to 10 years time that sort of technology will become part of a standard requirement in vehicles as well, as we progress.

Dr FLEGG: Is there any evidence that police are reluctant to look for evidence of fatigue in drivers, firstly, because it is not so easy to identify, but more particularly because they do not perhaps have the legislative backing to stop people driving anyway?

Chief Supt Dunn: There is a general reluctance when we have not got a power or authority to act in that regard. Yes, in some degree that is the case, but then we have the general processes. We certainly enforce and promote within our own ranks that we have the overall general road safety processes. But we will generally act, if we know there is a fatigue area. We have identified a number of those throughout the state—Mackay is a prime example, in and around Mackay and through that area. We saw that there was a definite fatigue problem. We then took action, and put in place a project and an interception philosophy. We have the authority to intercept these drivers, and all drivers, but we did not have the authority to ask them—and we do not—to take a break for a couple of hours, and that is where the 'Fatigue Sucks' program came from.

It has been very, very effective and it does not involve just the police. It involves the community and the companies—the mining companies in particular—looking at their processes, their principles and especially their workplace health and safety issues. We have got to get back into that area, too, from their perspective. An individual finishes work following a 12-hour shift and then drives from the site at Moranbah to wherever it might be—to Mackay—and invariably we are seeing a large number of them coming to grief in that process, because they were fatigued.

Mr BRISKEY: Your submission proposes the creation of an additional category in WebCrash 2 of driver fatigue related by definition. It enables users to compare the police-defined fatigue related crashes with the operational definition. Can you provide the committee with preliminary comparisons of crash statistics using the additional WebCrash 2 category?

Mr Kolesnik: What we can say, Mr Briskey, is that this whole issue actually came up as a result initially of our preparation and collation of the submission for Travelsafe, and also through our commissioner's operational performance review. It was brought to our attention with regard to the operational performance review processes, whereby police district officers have to front the commissioner every six months and provide a report in terms of how their district is performing against trends over periods of time.

One of the things that we report on in this process, obviously, is road trauma and elements of it, including fatigue. District officers were being asked questions about fatigue related crashes that they knew nothing about. One example occurred in the southern region in early 2000, where the driver made a statement about the incident that they were involved in. The incident was investigated. There was absolutely no mention of fatigue being a factor at all. Yet because of the time frames that are allocated for defining a fatigue related crash, this particular crash was nominated as having fatigue as a contributing factor, and when the district officer fronts up in front of the commissioner, he is asking him about this particular fatigue related incident and the district officer says, 'Well, we know nothing about it.' But to Queensland Transport's credit, WebCrash has been updated to include this police-defined category of fatigue. I guess that, probably, the current operational definition applied by Queensland Transport perhaps slightly exaggerates the true incidence of fatigue related crashes, yet, by the same token, the police definition may also not necessarily capture it. So we sort of have to find that medium, I would have to say.

Chief Supt Dunn: I think what it is getting back to is that we have got an accountable process. If we conduct an investigation and definitely identify the incident as fatigue, we can work towards a solution or a remedy in relation to that particular area, and it might mean that we have got to do interceptions. But where a system automatically classifies an incident as fatigue, that makes it very difficult for an accountable organisation, such as we are and such as our district officers are, in the performance of their duties and their functions.

In that OPR process, everything is examined in infinite detail in relation to road safety. So if there is, for instance, an alcohol issue in a district, the district officer is asked what he is doing about that alcohol issue and what processes he is undertaking. Quite clearly, we can define the alcohol incidents and we can readily see them, but where this brought some disparity was the recording of fatigue when there was no actual fatigue shown in the investigation.

Mr Kolesnik: Certainly, from a national perspective, Queensland is by no means the only state that has this problem in defining fatigue. You will note in our submission that we give a bit of a synopsis of how fatigue is categorised in different states. So, there is variation throughout the country and how it is also defined by various agencies.

The CHAIR: As always, an excellent submission. I just want to raise one point from the submission with regard to an indication and recognition of the importance of distributing information to all drivers about the causes of fatigue, the signs of onset of drowsiness, the most appropriate countermeasures to take and sleep disorders. We all recognise that that is important. Here is a good question for you. How would the Queensland Police Service feel about distributing this information at random breath test sites and any other time that police officers may pull a vehicle over?

Chief Supt Dunn: I cannot see any issue with it or problem with it. I am sure the service would be prepared to assist in any way. It is something we would focus on, anyway, in particular time frames and in particular periods where we know there is a high incidence of fatigue related crashes.

Mr Kolesnik: The Queensland Police Service certainly participates in the Driver Reviver scheme and also in the RACQ 'Fatigue Sucks' program, but we also have 19 school based police officers throughout the state that attend various schools. They also do talks on road safety related matters. Fatigue management, of course, is one of the initiatives that kids are provided material on through that program as well.

The CHAIR: When we do have campaigns—we get them on television, we have radio ads and that sort of thing—do you notice a drop-off in those particular areas, whether it be alcohol, driver fatigue or seatbelts? Do you see a change in that?

Chief Supt Dunn: Not generally—not unless it is combined with an active enforcement program too, and then we start to see a decline. You have got to have that combination, I feel, and that is noted in the research and elsewhere. If you do not follow through with a process, it does not have the impact that we see when we do. When we go into an area in relation to alcohol, particularly, and we see that there is an issue and a problem, we publicise it and then we generally go in afterwards. Then we will do a sampling some time later. It is like heavy vehicles and everything else. We will do it on that same basis and we see a drop-off, but it is not a continual drop-off. It starts to come back up again if you are not careful and you are not in there looking at the problem and heightening it, with the community's cooperation.

Mrs CROFT: Your submission mentions the work of the Commonwealth Government Motor Vehicle Exhaust Gas Suicide Prevention Reference Group, which is trialling a device that monitors air flow and levels of carbon monoxide in vehicles. You spoke in your earlier statement about the air quality of vehicles.

Chief Supt Dunn: Yes.

Mrs CROFT: The committee wanted to hear a little bit more about that. I have a couple of questions. Firstly, we wanted to know when this trial will be completed. How will this device be added to vehicles? Will it be included in existing vehicles, and are you aware of the approximate cost of the device?

Chief Supt Dunn: To the first question, when will it be completed—I believe by the end of this year. The design and testing and everything else concerning the actual device will be completed, hopefully, by the end of this year. This is the advice I have got, anyway. What was the second part?

Mrs CROFT: How will the device be actually added?

Chief Supt Dunn: It is a simple fitting of the device to the vehicle, apparently. That was one of the big parameters that were initially put to the group, that it had to be easy to install and at minimal cost. I understand it is of minimal cost. There is a suggestion—its consideration will be something for the Prime Minister and, no doubt, the government to consider—of retrofitting these devices throughout the entire fleet. The cost, as I recall, is in the vicinity of \$20.

Mr BRISKEY: What does the device do?

Chief Supt Dunn: The device monitors the air quality in the vehicle. If the air quality and the CO₂ levels start to vary too greatly, it will even open the airconditioning and the external vents of the vehicle and vent the vehicle. If it keeps up and it is not taken note of and the driver continues, it will eventually shut the vehicle down after a specific period of time. So it is a suicide prevention—

Mr BRISKEY: I can see the point of that, especially with young kids or anyone who wants to use a vehicle to commit suicide.

Chief Supt Dunn: Yes.

Mr BRISKEY: So it will cut the vehicle off if the carbon monoxide levels are getting too high?

Chief Supt Dunn: Yes.

Mr BRISKEY: What about driving; will it do the same—cut the vehicle off when the vehicle is driving?

Chief Supt Dunn: That is the proposal, yes. But it will give a number of warnings before it does. It gives warnings as it goes along, and it will depend on the carbon monoxide levels how often the warnings are given. Then it will get to a stage where it will cut the vehicle off. It will warn; it will say 'Vehicle will be shut down.' It takes about 30 minutes to clear the vehicle, too, with all the windows down. So it is amazing to think what the carbon monoxide might do. It is amazing when you think, with impaired driving or fatigue driving, what effect that is having on the drivers—when they are driving with their air circulation on interior, the monoxide levels in the vehicles are increasing, so what effect is that having on the drivers in relation to their concentration and their consciousness?

Mrs REILLY: Will this same device help with that?

Chief Supt Dunn: Yes. That is the advantage of it. That is why we were, I think, included on the committee and in the process, to look at the overall application of it, and I represent the Australasian Traffic Policing Forum on that committee.

Mrs REILLY: Do you have any feedback on what kind of will there may be—the feeling from the Commonwealth government?

Chief Supt Dunn: The indications are that there is a strong will in relation to it, a very strong will. So we will just see how they go.

The CHAIR: Watch with interest.

Chief Supt Dunn: Yes, we will watch with interest. But it has been going on for two years now—two and a half years.

Mr BRISKEY: Is it an Australian design?

Chief Supt Dunn: Yes, designed here in Australia.

Mr Kolesnik: And I think, from the last teleconference that we sat on, there was some discussion that this would be implemented as part of the vehicular Australian Design Rules in the future.

Mrs REILLY: Good work. I just want to refer you back to one of the recommendations relating to heavy vehicles, recommendation No. 12, which says that current legislation in Queensland addressing fatigue management for the drivers of heavy vehicles does not appear to be working, even though three such systems exist, and that legislation regarding heavy vehicles needs to be enhanced and alternate methods of detection using technology based on best practice need to be incorporated into management of fatigue. Can you just elaborate a bit on what is not working and how you would like it improved?

Chief Supt Dunn: We are seeing an increasing incidence of fatigue related offences and logbook offences on a detection basis from police, to the point that—I have the graph here, and I believe it is in our submission—for 2003, we had over 3,237 detections for the year, and that increased from 2,374 in 2002. It is not that we are getting a lot smarter in our operations. We are detecting a lot more offences. We are also seeing in that process an attitude from some of the drivers that they do not seem to be too concerned about the fine they are getting, because there are no points attached to this offence.

New South Wales, as I understand it, is now attaching points to logbook offences, so that will help and will, I believe, change the whole outlook from the heavy vehicle industry's perspective. There are three programs in place at the moment. That causes some misunderstanding and some problems as far as enforcement goes, but that is something that we are working through. In 2004 in July, as we often do, we undertook sampling operations throughout the state as well as Operation Austrans, which is a national heavy vehicle operation. In that operation—that is, Operation Seth—there were 197 heavy vehicles intercepted for logbook checks and the like in and around the Goondiwindi area. There were 21 detected with incomplete logbooks, 23 were found to have had excess hours, 17 had false entries in their logbooks, two failed to carry their logbooks and two failed to produce and other general logbook offences totalled 137—that is, of 197 detections. Some 11 heavy vehicles were grounded for periods ranging from two hours to 24 hours, and one driver in particular had driven direct from Melbourne to where we intercepted him at Goondiwindi and he intended travelling direct to Toowoomba. That was a

requirement on him by his employer, so we passed that on to Queensland Transport as part of the chain of responsibility processes. That has its own difficulties where there are interstate connections and processes. That is just a sampling operation that we did.

Mrs REILLY: When you do those sampling operations, do you also test the drivers for the presence of drugs that they may use to keep themselves awake?

Chief Supt Dunn: We do search the cabs, yes. We do not test them because there is no real test that is available to us that we can lawfully utilise. There is a problem with the process and an issue with drug detection in that an individual under our current legislation can be partially affected by drugs and we do not have the ability to take any action against that person. That is an issue that was brought up in the drunk-driving forum.

The CHAIR: How many times does a driver have to offend before you actually target the operator?

Chief Supt Dunn: As soon as we get any notable detections, we advise Queensland Transport as a matter of course. If we detect an individual who has driven excess hours, we automatically advise Queensland Transport of that detection and heighten that to it.

The CHAIR: So that question I put to you should be put to Queensland Transport?

Chief Supt Dunn: Yes. In that operation we also detected unregistered road trains. There was one road train that was detected that was unregistered. There was a school bus detected going 124 in a 100 zone and all of those sorts of issues.

Mrs REILLY: So you are looking for more than logbook offences when you are doing this sample?

Chief Supt Dunn: That was just one we came across. Our task force will look at everything and anything that comes along.

Mrs REILLY: Was the purpose of the operation specifically logbook offences?

Chief Supt Dunn: Yes, it had a heavy vehicle focus.

Mrs REILLY: So heavy vehicles and everything related to that?

Chief Supt Dunn: Yes. We discussed it with the association that represents heavy vehicles—I know that they are present here today—and I know they have like concerns, and we share their concerns. Operation Austrans is an example of where we conduct a national operation—that is, right across Australia—concentrating on heavy vehicles. We are seeing a move in that operation for the drivers to be replaced—given four weeks holiday while we are around—or pushed to the side and relief drivers or local drivers put into the cabs for that period.

Mrs REILLY: So how important would it be to have, say, national legislation to be able to cover heavy vehicles for those similar sorts of offences given that they are driving across borders interstate?

Chief Supt Dunn: That would certainly be important and a great aid. The compliance and enforcement legislation that is being proposed now will go to some degree to addressing that, and that will put in place consistent legislation. But I do not know if it will address the points that we are talking about in relation to the logbooks at this time.

The CHAIR: We are just about out of time, but Dr Flegg has a question.

Dr FLEGG: The draft fatigue notices that you detail in appendix 7 provide a police officer with three options if they have identified a fatigued driver—that is, require him to cease driving, proceed driving for a set time or distance or to a set location before ceasing to drive, and a blank option. How difficult is it going to be to actually categorise who should fit into which of those options? How much of a problem is it going to be for the police if he elects for one of the options to allow the driver to continue driving and then there is an accident involving that driver?

Chief Supt Dunn: It is going to be difficult to some degree, and it will depend a lot on the training we provide to police. That is why I suggest that there would have to be training in relation to how they proceed through this process. We can only go by what an individual tells us and what we observe of an individual at the side of the road. As I understand it and from my knowledge of the process, if we had the legislation and we saw an individual who we felt needed a break but not an immediate one—who had to take a 24-hour break or whatever a short distance away—and we gave them the authority to drive, it would be on an honest and open belief that that person had the ability to drive to that location. We do it with heavy vehicles now regularly. As I said, in Operation Seth we grounded a number of heavy vehicles and we escorted them to a nearby location, and we generally escort them. They then lock their vehicles and move away from the vehicle for 24 hours. That is the intent of the notice. That is for road safety; it is not for any other reason.

Mrs REILLY: Do you do it a lot?

Chief Supt Dunn: We did on a number of occasions. Yes, we do it quite often where we do detect them when they have had excess hours. It is concerning that we do detect them of that nature.

The CHAIR: Unfortunately we are out of time. It is always good to talk to you guys. You are upfront and honest with us, and that is the way we like it.

Chief Supt Dunn: That is the way it should be.

The CHAIR: Again, thank you. We will now welcome the next group of witnesses from the Sleep Disorders Unit of the Prince Charles Hospital and the Sleep Disorders Association.

JAMES DOUGLAS, examined:

CRAIG HUKINS, examined:

The CHAIR: Welcome, gentlemen. Thanks for your time today. Could you please state your positions.

Dr J Douglas: I am the director of the sleep unit at Prince Charles Hospital.

Dr Hukins: I am a full-time respiratory and sleep physician at the Princess Alexandra Hospital, not the Prince Charles, and the clinical director of the Sleep Disorders Centre. I am also on the executive of the Australasian Sleep Association, which is the scientific and professional body of sleep research and clinicians in Australia and New Zealand.

The CHAIR: Did you want to make a small opening statement, or are you happy for us to go straight to questioning?

Dr Hukins: I am happy with questioning.

The CHAIR: I will hand over to Mr Briskey.

Mr BRISKEY: The committee notes the highest estimated figures regarding the prevalence of sleep disorders. Are you able to provide the committee with an estimate of the number of Australians with sleep disorders?

Dr J Douglas: Yes. I guess from Australian research there is evidence particularly for obstructive sleep apnoea/hypopnea syndrome that probably four per cent of males and two per cent of females suffer with obstructive sleep apnoea syndrome. Additionally, there are other conditions such as insomnia, which has probably a point prevalence in the community of 30 per cent at any time. There is also shiftwork, and I guess shiftworkers can experience several and multiple different types of sleep disorders. Three out of 10 Australian workers work longer than the scheduled hours. Some 20 per cent of the work force work non-standard schedules and probably a quarter of all shiftworkers have what is called shiftwork maladaptation syndrome. There is a rare condition called narcolepsy which probably affects two to five people per 10,000 people. That has significance in terms of driving and fatigue accidents, but it is an uncommon condition.

Mr BRISKEY: What characteristics indicate that an individual is susceptible to a sleep disorder?

Dr J Douglas: The main issue, I guess, would be excessive daytime sleepiness. That is, as probably has been mentioned here, a very subjective quality, and there are a number of reasons for subjective daytime sleepiness due to acute sleep loss or chronic sleep conditions, medications or other medical disorders. Focusing perhaps on obstructive sleep apnoea, the usual combination of symptoms is excessive daytime sleepiness which is not better explained by something else, loud snoring, a combination of choking or gasping episodes at night-time and unrefreshing sleep and then a positive sleep study which shows more than five obstructive breaths per hour of sleep. So it is a clinical and a sleep study diagnosis. It needs both factors.

The CHAIR: Are these disorders more prevalent than the community is prepared to accept, because I would understand that you would not become aware of them unless they were actually referred to you through a GP?

Dr Hukins: There are a number of aspects there. First of all there is the recognition in the community—both in the lay community and even in a lot of general practice—that sleep disorders go unrecognised. The characteristics which are obvious are often male, overweight and older, so quite obvious obstructive sleep apnoea is easy to pick up. The great burden of diseases in milder sleep disorder breathing still has risks of impairment or increase in sleepiness as well as other impairments. The majority of those cases are not picked up. In fact, we do not have Australian data, but data from the United States from two very good large population base studies estimates that probably two per cent of people with obstructive sleep apnoea are recognised and treated. So we only see the tip of the iceberg at the moment.

The CHAIR: Dr Flegg, you would have some very good questions, I am sure.

Dr FLEGG: We take it that the figures that you have given are for the instance of this and you also just gave the figures for the proportion of people with sleep apnoea. Are those figures applicable to Queensland? Would there be any reason why Queensland would differ?

Dr Hukins: There is no reason. They are applicable Australia-wide, and there is no reason that they should differ.

Dr FLEGG: Correct me if I am wrong, but I think you said that two per cent of people with obstructive sleep apnoea present for treatment.

Dr Hukins: Two per cent are diagnosed and treated.

Dr FLEGG: Two per cent of the overall population?

Dr Hukins: Two per cent of people with obstructive sleep apnoea. So really we are seeing a very tiny proportion of people with this condition.

Dr FLEGG: And we are talking there about clinically significant sleep apnoea where—

Dr Hukins: Yes, so it is sleep disordered breathing with symptoms; that is right.

Dr FLEGG: So there is impairment, so they are the ones who would be likely to be impaired as drivers.

Dr Hukins: So people where we would look at treatment, but only two per cent are actually receiving that treatment.

Dr FLEGG: With the ones who present for treatment of positioning and CPAP and so forth, what percentage would get a satisfactory outcome? They do not all tolerate the CPAP. What percentage would you say gets a satisfactory outcome so you could say that their sleep apnoea is controlled and is not impairing them?

Dr Hukins: If we look at use of CPAP over a long period in the whole population who receive treatment with regard to long-term compliance, you are looking at about 65 per cent to 70 per cent of people who will remain on CPAP. That does not take into account people who use alternative treatments such as dental devices and positioning—conservative measures. There are a small number of people who are intolerant of therapy or who refuse therapy for a number of reasons who should be treated.

Mr KNUTH: What other medical disorders can make people fatigued apart from sleep disorders? Is diabetes one example?

Dr Hukins: One difficulty is that, when we look at it medically, we do not refer to it as fatigue. When we look at fatigue medically, it is a lethargy, a lack of energy, as opposed to sleepiness, which is an increased propensity to sleep and probably more of an issue with driving. If we look at the lethargy of fatigue, hundreds of conditions will cause that, but the likelihood is that that is not significant. The studies which have looked at diabetes, including the risk of hypoglycemia, low blood sugar, epilepsy and people who have abstained from driving for two years since the last fit, show there is no increase in motor vehicle accidents in this group. Probably the other medical conditions most likely of significance with sleepiness fatigue at risk of motor vehicle accidents are psychiatric conditions, and chronic fatigue syndrome is another large group there. Having said that, with regard to chronic fatigue, the data is that probably 65 per cent to 70 per cent of these people actually have an underlying psychiatric condition.

In terms of the conditions causing sleepiness, I think mood disorders, chronic fatigue, and then the other group is a medication effect, which is an entirely different situation, for example, chronic pain requiring analgesia, patients on benzodiazepine sleeping tablets. Medications are a large factor, but as yet are an unmeasured factor of the risks in terms of motor vehicle accidents.

Mr KNUTH: Thank you.

Dr FLEGG: You have painted a bit of an alarming picture. You have painted the picture of an illness that is very, very common and that very few people get treated for. How significant is the fact that you have got a big whack of the population with this illness who do not get any treatment? How big a contributor factor is that to what is happening on roads?

Dr J Douglas: I think that is an excellent question. I think this is really the curx of the matter. I do not know whether it has been referred to already, but there was an Auckland car crash study by Jennie Connor. That looked at all fall-asleep car crashes in the Auckland area. It did not actually demonstrate that regular snorers or those with chronic sleepiness as judged by the Epworth sleepiness scale were actually more likely to have accidents. They found circadian rhythm problems, less than five hours sleep, driving between 2 and 5 in the morning, having acute sleepiness—recognising that they were acutely sleepy—were far better predictors of who was going to have fall-asleep car crashes. So if you take a population perspective, medical conditions such as sleep apnoea are important, but they are not nearly as important as those other factors that I have just mentioned.

Dr Hukins: If I can just add, though, that in terms of magnitude of effect, epidemiological studies suggest that the increased risks of a motor vehicle accident in a subject with obstructive sleep apnoea is in the order of sevenfold. There is a range of studies of between a twofold to a twelvefold increased risk of motor vehicle accidents, but probably the realistic factor is about sevenfold. On top of that, patients with obstructive sleep apnoea are far more likely than control groups to have multiple accidents. So there is an increased risk on epidemiological data.

Mrs REILLY: Taking all of that and your answer to the question, what if you took a specific driving population that you could probably identify who would have a really higher prevalence of sleep apnoea because of the factors that you have mentioned—being overweight middle-aged males, and I am talking particularly about heavy vehicle truck drivers?

Dr Hukins: There is certainly an increased prevalence in truck drivers. We have Australian data on that—including Queensland data—looking at about 400 drivers in Queensland by questionnaire and Australia-wide about 2,300 drivers, and about 250 of those had a sleep study. The prevalence of obstructive sleep apnoea in transport workers is about 16 per cent as opposed to about four per cent of males in the general population. They also have an increased risk of having motor vehicle accidents.

Mrs REILLY: I am not surprised.

Dr Hukins: About 35 per cent of the population studied had an accident and 50 per cent of that 35 per cent had multiple accidents over a preceding three-year period. The factor involved there is that this group is heavier on average. So the higher weight increases the risks of obstructive sleep apnoea, they have an increased prevalence of obstructive sleep apnoea as well, and the other factors that are associated with accidents were working afternoon shift, night shift, increasing the length of hours worked on the day of the accident and the number of hours worked in any given week.

The data that has been collected but has not been published is that, for the majority of transport workers in the Queensland population, the average number of days per week worked is six days per week, with many of them working seven days per week. Often that is not just the one job, but it is two jobs. On the days that they work, the number of hours that they sleep is about is up to two hours less on working days compared to days off. So there are a number of problems in terms of medical conditions, driving hours, and also acute and chronic sleep deprivation.

Dr FLEGG: Could I go back to something there, because I am a bit confused. If you do the simple maths from what we have said there—a big proportion of the population affected, almost none of them getting treatment and then a twofold to sevenfold increase in the risk of having a motor vehicle accident—the maths would suggest that you are probably talking about the major contributing factor to fatigue related motor vehicle accidents, even maybe a majority.

Dr J Douglas: Yes. I think that point is well taken. Sleep apnoea has a spectrum. There is mild, moderate and severe disease. The evidence for the highest risk is in people with severe obstructive sleep apnoea diseases, whereas the burden of the disease is probably in the mild to moderate group. People who have breathing pauses greater than 35 times per hour are the group who represent the biggest driving risk. While one can quote, as Craig has, very high figures—and they are true—you would need to look at it in terms of the severity of their sleep apnoea.

Dr FLEGG: What would be the population instances of those really severe cases?

Dr Hukins: You are looking at moderate to severe sleep apnoea being in four per cent of males. You are probably looking at less than one per cent having moderate to severe sleep apnoea, with the majority being mild. I just say that the sevenfold increase is sevenfold over base risk. It is not a seven per cent increase; it is a sevenfold increase over the control populations of having a motor vehicle accident.

Mr BRISKEY: Two per cent of people are getting treated, but we have seen a 50 per cent reduction in heavy vehicle crashes over the last five years. So is it such a big causal factor?

Dr Hukins: It is a causal factor. The magnitude of the causal factor is the thing of which there is not sufficient evidence.

Mrs CROFT: Your submission states that the main countermeasures to sleepiness are adequate sleep and improved sleep quality. What can you recommend to people to improve their sleep quality?

Dr Hukins: The general recommendations are to have adequate periods of sleep. So sleep at the right time and sleep long enough. For example, the WHO data from about two years or three years ago shows that on average we sleep two hours less per night now than we did 100 years ago. We are in a sleep-deprived environment. On top of that, transport workers may sleep for five hours per night and catch up on the weekend. There needs to be an emphasis and education about what is an adequate period of sleep and driving during periods when you should be sleeping. A lot of accidents occur between midnight and 5 am and particularly between 2 am and 5 am, which is when the body's circadian rhythm is at its lowest. If people drive during these periods, there is an increased risk of accidents.

I think that the quality of sleep also comes with recognising that there is a problem. There is a very dramatic *A Current Affair* factor. Whenever a sleep disorder—breathing and obstructive sleep apnoea particularly—is seen on shows such as current affairs shows, the referral pattern increases. We get a dramatic increase in referrals for a number of weeks after and then it drops off. So public awareness and recognition of these problems is paramount.

Mrs CROFT: I am interested to hear your response to this question. Why is rest without sleep less effective?

Dr Hukins: That is asking: what does sleep do? Basically, sleep has a restorative function neurocognitively. In terms of brain function—high cognitive function—it has a restorative function that just simply resting in wakefulness does not. You do not need long sleep. You can get restoration after sleeping 10 minutes to 30 minutes—the so-called power nap—but you do need sleep and a change in EEG brain activity to be able to get some restorative function and higher cognition, which you do not get if you are sitting watching TV or sitting down quietly reading. Your brain activity is very different.

Mrs CROFT: We are trying to encourage people to take a break from their driving. Do you think that is going to help?

Dr Hukins: Yes, it does. There is data that says that the longer you engage in an activity, the greater the degradation of performance. It may be after two hours driving that you start getting degradation. In a lot of the studies of sleep disorder, particularly obstructive sleep apnoea, that degradation of driving performance occurs after about 10 to 20 minutes. So the longer you drive, or carry out a high-performance function such as driving, the poorer you do that activity. So having breaks from that will improve performance, but it may not so much improve sleepiness.

The other thing to mention—and it has been brought up—is that there are different stimulations. You can feel tired in one moment, have a scare on the road and feel awake and alert for a brief period and recover. There is an environmental factor to your level of sleepiness at the time.

Mrs CROFT: That leads me to my next question. Can you explain the value of caffeine for fatigued drivers? That is probably one of those factors as well. There are some conflicting views about its benefit. Some experts do not advocate it, because it is a diuretic and can lead to dehydration, which induces fatigue. What are your views about the value?

Dr J Douglas: There has been very good, short-term randomised controlled data about it. Certainly, for people who were partially sleep deprived and who had, say, five hours or less sleep per night, if taken early in the morning, it could produce the short-term benefits of improving driving performance maybe for half an hour to an hour at the most. In the afternoon, again where there has been sleep deprivation during the night before, you probably get two hours worth of benefit. The appealing things about it are that it is cheap and readily available. There is also evidence that combined with a short nap the effects can be additive. Some of the downsides are that, in the studies, the amount of caffeine that was needed was often equivalent to two or three cups of coffee. So it is not just a single cup of coffee.

Dr FLEGG: Red Bull

Dr J Douglas: That is right. You are looking at much more than the average amount of caffeine. There have been raised issues about caffeine and its longer-term health consequences. Dietary caffeine, as it is currently consumed in the population, has been estimated to increase systolic blood pressure by 4 millimetres of mercury and diastolic blood pressure by 2 millimetres of mercury. While those values do not seem a lot, the risk of strokes and heart attacks is directly related to blood pressure and even very small rises can contribute to excess strokes and heart attacks. While caffeine could be engaged as a useful, short-term countermeasure, if we promoted it as something that all of society should be drinking, then there may be longer-term effects. There is evidence that there has been an increase of about 28 per cent in the use of caffeine in the work force in the last five years.

Mrs CROFT: Thank you.

The CHAIR: I travel a lot on roads in central Queensland and on going to the service station I see a lot of drivers—light vehicle or heavy vehicle drivers—going for this Red Bull type of thing. I would just be interested in what you have to say about that. Should we be really concerned about it? Should we be trying to get the message through to people that it is a dangerous substitute for energy?

Dr J Douglas: I do not know exactly how much caffeine is in Red Bull. Certainly, two or three cups of coffee is equal to 200 milligrams of caffeine. With 400 milligrams of caffeine, at that level you can get cardiovascular and neurological impairment. So there is a small window of moderate amount of caffeine that you require.

Dr FLEGG: It is about 100 milligrams in a Red Bull.

Dr J Douglas: So on its own it is probably not going to create any short-term issues in terms of cardiovascular or neurological problems. But often it is not just one can of Red Bull.

The CHAIR: It is multiplied.

Dr J Douglas: It is multiplied several times.

Mr BRISKEY: But 400 minimum milligrams over what period of time? That is the problem

Dr J Douglas: That is right.

Mr BRISKEY: Some people have 10 to 20 cups of coffee a day.

Dr J Douglas: You mean in terms of the acute cardiovascular and neurological—

Mr BRISKEY: Yes.

Dr J Douglas: The studies that I am quoting were that they have just taken it in one go rather than spaced out over the day.

The CHAIR: Given that it is not possible to use a blood test to test for sleepiness or fatigue, do you have any suggestions as to how we can improve the identification of sleep related crashes?

Dr Hukins: The short answer probably will be no and the reason for that is sleep—as I am sure it has been mentioned—as a subjective measure is like measuring thirst. How do you measure thirst? At this stage, the limitations in terms of assessing sleepiness is that we ask people, 'How sleepy are you now?' or 'How sleepy are you during usual behaviour such as watching television and reading?' We are asking, 'How thirsty are you now? How thirsty are you normally?'

In terms of identifying crashes, the studies which have looked at prevalence—about 10 per cent to 20 per cent of total motor vehicle accidents related to fatigue—have used strict criteria for research purposes which I do not think are particularly useful. For example, a study by Horne in 1995 mentions some of the factors that have already been mentioned. They were: blood alcohol levels were within legal limits; the vehicle ran off the road or into the back of another vehicle; no sign of brakes being applied; no mechanical defect; good weather conditions; speeding as a factor was eliminated; the police officers at the scene suspect sleepiness is the primary cause; and the opportunity before the accident, for at least several seconds, to apply brakes. That is fine for a research project, but in terms of real-life use a lot of it is exclusion and comes down to probably undercalling. So how do we define fatigue? We can have characteristics which are suggestive of the problem, but determining certain criteria which are very sensitive and specific for picking up fatigue as the primary issue in accidents is very difficult.

The CHAIR: Are there any specific indicators that police could be trained to look for when they are investigating a crash?

Dr Hukins: I think we need to rely predominantly on those almost epidemiological factors—that would be people who are at risk with the things I mentioned—and self-referral about sleepiness at the time, which is obviously going to be greatly underreported for self-preservation reasons. Probably the strongest correlate in a number of studies looking at motor vehicle accidents is how sleepy people were acutely at the time—not how tired they were on average in the past week but how tired they were at that particular time. That is the best indicator of whether it is a fatigue related accident. The difficulty there is that it will be underreported.

The CHAIR: It would be important, though, for police to have a look at the history of the victim to see if they could possibly fit the accident into the fatigue category, simply because of what the victim had been doing for the previous period.

Dr Hukins: That is right. They can identify those where there is a higher probability of fatigue playing a significant part.

Mrs REILLY: What about the role of alcohol or other drugs—even prescription drugs for, say, colds and flu that you can get over the counter—in increasing the risk of a fatigue crash? Are there sufficient warnings on those sorts of products?

Dr J Douglas: Certainly there is a synergistic role with alcohol and obstructive sleep apnoea. There is epidemiological evidence of a threefold increase in accidents on highways if people have consumed any alcohol and have untreated obstructive sleep apnoea. These were people who were not over the limit at the time of the accident but who had consumed alcohol in the previous 24 hours. Something we probably have not emphasised is that often we see patients who have more than one sleep disorder. They may have insomnia plus obstructive sleep apnoea. So it is often a combination of factors.

Mark Howard's study on commercial truck drivers in Australia suggested that there was about a 3½-fold risk of accidents if drivers were on antihistamines and about a 2½-fold increase in accidents if they were using narcotic analgesics. A lot of those would include over-the-counter, non-prescription medications.

Mrs REILLY: Can you send us a copy of that study, or just point us in the direction of it?

Dr J Douglas: Yes, that is fine.

Mrs REILLY: Are there enough warnings on those sorts of products, particularly the ones people take all the time—cough medicines, cold and flu medicines and so on?

Dr J Douglas: I do not know the specifics of the labelling. I know that pharmacies produce automatic labels which often say 'may impair driving' or 'can cause drowsiness'.

Mrs REILLY: But it is usually a little label on the back with little writing.

Dr J Douglas: Yes. Again, if transport workers had a comprehensive fatigue management strategy, part of that could be identifying medications they can readily get and which may impair their driving. That would be useful.

Dr Hukins: Physiologically speaking, the other thing which makes things even more difficult is that there are great differences in susceptibility between individuals with sleep disorder medications. You can have similar severities of sleep apnoea in two individuals, for example, and one can be profoundly sleepy and another can be totally unimpaired. So there is a lot of biological variability or differences in susceptibility, and that makes things even more difficult.

Mrs REILLY: Not thinking about sleep apnoea but just normal tiredness, does it actually accumulate? We talk about kids needing catch-up sleep.

Dr Hukins: You do get cumulative effects. It is cumulative if we measure performances. So if we measure reaction times in high cognitive function tests we get progressive decrement in most of that testing. However, the perception goes away. The people feel that they are fine whereas in reality they are not. Another thing that makes things difficult is that the perception is quite different from the reality.

Mrs REILLY: So does an extra good sleep or a substantial nap once that tiredness has accumulated mitigate those effects?

Dr Hukins: Yes. There is rapid restoration of function with one longer recovery nap or within a couple of longer recovery naps. So you can get a rapid recovery if given a sufficient period, but the reality is that it usually does not happen, that you have chronic sleep deprivation. You do not miss out on two or three hours a night for a week; you miss out on half an hour a night for five years. That is what tends to add up.

Dr J Douglas: The scary thing about that is that the degree of sleep deprivation has to be relatively modest to get quite severe decrement in function. Three nights of only five hours of sleep is equivalent to performances equal to one night without any sleep at all.

Mrs REILLY: Has anyone looked at new parents? You said 'five years'—

Dr Hukins: In the first year of a child's life you lose the equivalent of anything between 400 and 600 hours of sleep.

Mr BRISKEY: Victoria has a program called HealthBreak. Are you aware of the program?

Dr J Douglas: I am aware of it as of yesterday.

Mr BRISKEY: It provides free health checks and referrals to doctors if there are signs of sleep disorders. What do you think of that program? Would it be beneficial to Queensland, too?

Dr J Douglas: I think it is something we should look at. I spoke to Mark Howard, who is the author of the paper and one of the doctors involved in the study. It sounds excellent in that it is free, confidential and voluntary for transport workers. It is run by WorkSafe and the TAC and it is supported by the Transport Workers Union. So I think it has all of the key stakeholders working together.

It recognises that there is more to fatigue than sleep disorders. A nurse goes and does a site visit—that person measures blood pressure, checks weight and height and can do a blood sugar measurement—and then the workers fill in a short questionnaire. That information is then processed. If there are significant problems, that is referred back to the worker and also to their GP. I think it is trying to be proactive in addressing a broad range of things. I think it would be worth us knowing about it and also whether there is any evidence that it has been effective in changing important lifestyles. Transport workers are at risk not just for sleep apnoea but also for heart disease, diabetes and a whole range of other important health issues.

Dr Hukins: One important comment in that regard is that we need to look at resource allocation. Our public facilities particularly, dealing with less than two per cent of total people with obstructive sleep apnoea, have extreme waiting times. For example, at the Princess Alexandra Hospital it may take 12 months from initial referral for the patients to actually be seen and perhaps as long to have investigations carried out. So if we are looking at increasing public recognition and dealing with these problems we need to recognise that our current systems are inadequate to cope with them.

The CHAIR: Thank you very much. That was very interesting. We appreciate your input. Our next group of witnesses are from the Royal Automobile Club of Queensland.

JOEL TUCKER, examined:

JOHN WIKMAN, examined:

The CHAIR: Thank you for your attendance here today. Would you like to make an opening statement?

Mr Wikman: Yes. We appreciate the opportunity to provide comments today. With over one million members, RACQ is very concerned about driver fatigue and its significant contribution to the road toll. It is sometimes referred to as the hidden killer, because many drivers are unaware they are

experiencing the effects until it is too late. We have made two submissions to Travelsafe on this inquiry. We have also made reference to it in our document *Road safety priorities*, which was launched last year.

We believe that until recent years fatigue had not received as much attention as speed and alcohol, and there is a lot to learn about it—even how to measure it. RACQ is supportive of efforts to improve the quality of crash data to more accurately isolate fatigue as a contributing factor and also supports further research into improving methods to quantify it. The club believes that effective communication and understanding between government departments, agencies and other stakeholders and their counterparts in other states would help to develop more effective methods for this.

A lot has been done in the commercial and heavy vehicle industry; however, fatigue is difficult to control, detect and enforce for private motorists. Public education and advertising campaigns have increased public awareness of fatigue amongst motorists. We believe that they will remain the best option for addressing driver fatigue, especially amongst high-risk groups. RACQ endeavours to increase awareness amongst motorists about fatigue warning signs, the risks associated with driving tired and how to manage fatigue.

The club believes that driver fatigue may be a symptom of a tired society. Due to this, it is important to apply a whole-of-government approach to the effects of fatigue as a general health problem that affects health and social issues and to promote sleep as the only true cure for fatigue. This will ensure that the message reaches a much wider audience than just drivers.

Unfortunately people make mistakes, so RACQ believes that road and vehicle based engineering countermeasures for driver fatigue have a part to play. They are valuable as they offer protection 24 hours a day, seven days a week, against fatigue crashes. Examples would be the technology to monitor driver fatigue in vehicles, well-designed roads and forgiving roadsides.

Mr KNUTH: Do you believe that people are able to recognise some sign of fatigue but are unaware of the countermeasures that may reduce the risk of fatigue related crashes?

Mr Wikman: Over the years we have tried to raise awareness about being aware of fatigue. Anecdotally, we believe that drivers do not generally know how to judge their own fatigue. They probably wait almost until it is too late. We have put out media releases and other publicity material about looking out for the warning symptoms of yawning, droning and humming in the ears, daydreaming, loss of concentration and things like that. But drivers, traditionally, do not concentrate for all of their trip anyway and I think people would see it as an aspect of them being tired away from the vehicle. I think that in our busy society people are tending to push themselves more throughout their whole life to fit in more—we are proud of ourselves if we can fit in a lot in a day—and that is probably impacting on the amount of rest and sleep people are having.

Mr KNUTH: Do you believe that most people believe that tiredness is an issue only for long distance driving, rather than day-to-day driving?

Mr Wikman: When Travelsafe had the road safety inquiry into rural road safety a couple of years ago, it did come up with results. It showed that drivers tend to have more fatigue related crashes in the country. I guess that comment has been publicised. I think there is a lack of understanding out there that driver fatigue can occur in urban areas, but it does not tend to show up in the crash stats.

Dr FLEGG: In relation to countermeasures that people use when they feel they are getting fatigued, you list in your submission a number which you might reiterate for the benefit of people here. Do you think the popularity of these countermeasures is similar across the whole spectrum of the population?

Mr Wikman: That survey was done by a marketing organisation for our driver *Road safety priorities* document. We had a fairly good cross-section of members' ages, gender and across the state.

Dr FLEGG: Can you tell us what the countermeasures were, for the benefit of the committee?

Mr Wikman: Sure. Listing them in descending order, we listed some countermeasures and people were asked to tick them. Wind down the window was 61 per cent; pull over to eat and drink was 60 per cent; pull over for some fresh air or exercise was 56 per cent; get a good night's sleep the night before was 55 per cent; talk to passengers was 55 per cent; turn on the radio or music was 54 per cent; change the driver was 51 per cent; take a break every two hours was 48 per cent; drink coffee was 35 per cent; pull over to have a sleep was 28 per cent; drink an energy drink, for example, Red Bull was 20 per cent; and turn up the airconditioning was two per cent.

Mrs REILLY: You already said in your opening statement that sleep is the only one that you would recommend as a countermeasure. You are not recommending all those other ones that people say they use; is that right?

Mr Wikman: We would say that the only long-term countermeasure would be sleep. We are tending to give people advice that, if you have to drive, these are things you might need to do for a short-term remedy but do not over-rely on them. I would say the answer to them all is to get adequate sleep.

Mr BRISKEY: One of your recommendations to the committee is that members of the community, particularly identified target groups, be encouraged to change their beliefs and behaviours. Do you have any specific strategies that could be used to change these beliefs and behaviours?

Mr Wikman: We have also been talking to the Road Accident Action Group in Mackay which is fairly active in fatigue. They have shared some of their strategic approaches with our RACQ member on there. That is why we are aware that they have identified those five groups—young drivers, shiftworkers, occupational drivers, commercial and long haul drivers, and holiday drivers. A lot of those fit into our members. I guess to date publicity campaigns have tended to be broadbrush. Do not drive when you are tired, take your breaks and things like that.

Mr BRISKEY: Do you think we should continue using those strategies?

Mr Wikman: Yes, but I think you will have more impact if you target younger drivers particularly. We have had some discussions with RACV, which has looked at people who use Driver Reviver stops. Down there they do not call it Driver Reviver; they call it something else. They have looked at the terminology used in some advertising campaigns. Young people do not understand the word 'fatigue'. It is very hard to define for them. So they are tending to use the word 'tired'. Even for Driver Reviver stops, there is a lack of solo drivers and young drivers stopping at Driver Revivers. It tends to be families and multiple occupants of cars. So we are tending to miss that category and there might be something else that needs to be targeted towards them.

Mr BRISKEY: Have you seen anything specifically in your studies even in other countries that might be better used here to change people's behaviours or beliefs? You talk about driving tired rather than fatigued. Is there anything that we could use here?

Mr Wikman: I think the bigger picture is probably even what has been mentioned by the previous speakers. It is a symptom of a tired society. The person is tired before they even get into the vehicle. It is just a manifestation of what happens. It is like aggressive driving behaviour. It might have happened outside in your day's activities. It is not something that magically happens to you once you get in the car, other than boredom of course if you are driving or doing a task for a long time. I think it could be addressed on a number of fronts from health, education, enforcement or anything like that that could possibly bring home the message to society in general: get more sleep. I think the problem would be solved—not solved but it would be reduced.

Mr BRISKEY: That is a hard one.

Mr Wikman: I know that it is cool for young kids to go out after uni and have a drink. If someone says, 'I want to go home and have a sleep,' then they say, 'You are a wuss' or 'You are weak'. That is endemic in society. We have to try to change that whole culture to say, 'It might be a good idea to go home and have a sleep.'

Mr BRISKEY: Get dad to come and get you.

Mr Wikman: Exactly. That cuts across drink-driving and a whole range of things. We have messages out there already for how to avoid that. I think one of the things that need to be addressed is fatigue.

Mr BRISKEY: Is any other jurisdiction doing it better? Have you seen anything that works?

Mr Wikman: We have picked up some stuff from Victoria. At workplaces they have a check list which says, 'Have you had your eight hours sleep? Do you suffer from any kind of sleep disorder?' It is a whole range of things. It is bringing home the question: am I a candidate for any of these things? It seems to be directed primarily to the workplace but there would be other things where you could develop advertising campaigns that zero in on young drivers. I keep on using young drivers because they do have an impulsive lifestyle. They have a different type of lifestyle completely to other people. They have a different reason why they use a car and travel. So it is important to use appropriate terminology and get the messages—

Mr BRISKEY: Something that hits home at that target group.

Mr Wikman: Yes. Even with peer pressure, you are travelling with your mates. We are doing things for drink-driving. Should we be doing things for tiredness as well?

The CHAIR: Just briefly, what do you think about targeting children to encourage their parents to stop and rest?

Mr Wikman: It seems to be an avenue that has been used in antispeeding campaigns in the past. I would say that we should be looking at all avenues to try to get the message across. If we can start them as early as possible with any road safety message and not just when they are starting to drive, then hopefully that will carry through until when they are driving as adults as well.

The CHAIR: It seems to be very successful in the environmental area where we taught kids at school about the environment and they went home and chatted to mum and dad.

Mr Wikman: The only thing is that kids tend to go to sleep in the car as well.

Dr FLEGG: Several of the submissions complained about the quality and quantity of rest areas in Queensland. They were unhappy with the signage highlighting the availability of the rest areas, the facilities within the rest areas and the number of rest areas. My own experience around Sarina might fit into that category. Are you aware of concerns expressed by your members about rest areas? Do RACQ members consider that petrol stations provided adequate rest facilities?

Mr Wikman: RACQ believes there needs to be a comprehensive network of rest areas across the board. They do need to be substantially attractive and sufficiently equipped to encourage people to even stop. We made a submission to Travelsafe back in 1999 for the inquiry into rural road safety, and our members showed that the minimum requirements for rest areas should include toilets, tables, drinking water, shade, shelter and litter bins.

Dr FLEGG: Does it have lighting in there?

Mr Wikman: Lighting did not come up, no. That is for a rest area, but we also believe there needs to be a comprehensive network of roadside stopping facilities which would be probably a lower order than that but that is for the emergency stop. For instance, a rest area should be provided for every hour of travel along a highway. Other roadside stopping facilities should be for every 10-15 minutes.

Mr Tucker: We also think it is important that drivers be aware that rest areas are still useful to them even if a Driver Reviver is not operating there. Purely because a Driver Reviver is not operating there does not mean you should not take a rest and have a break from driving.

Mrs REILLY: Is that something which you try to let members know in the material that you send out to them?

Mr Wikman: Exactly. We put the locations of rest areas on our maps. We try to put the message out there to plan your trip around locations of rest stops and rest areas. It is not just the Main Roads that provide them. There are local authorities and other community groups that provide them as well. We have had some negative feedback from people who would like to stay longer at rest areas than some of the regulations allow, but we strongly believe that rest areas are an antifatigue situation and people who want to use them as camping areas should go into the appropriate locations.

Mrs REILLY: This might only be in urban areas but some petrol stations are closing their toilets I have been told permanently because of vandals. If that starts to be rolled out from urban areas into rural areas, drivers will find that out. Is that a concern for you? If they close the toilets, then people will just keep driving because that is one of the things they need on their rest.

Mr Wikman: Exactly. They are the facilities that we believe should be at some type of a rest stop and that could be a town centre, it could be a service station, it could be somewhere remote. We would be concerned if—

Mrs REILLY: Have you heard of that happening?

Mr Wikman: It does not just happen in rural areas. I think it happens in urban areas, too. I went into a service station recently and I had to ask the guy if he had a key for the toilet. He said, 'We do not have a key.' I asked, 'Is there no toilet?' He said, 'There is a button that I push.' I think he was stirring me up, but it does not happen just in rural areas. It happens in urban areas as well where you have to go up to the counter to ask if you can go to the toilet.

Mrs REILLY: This is a particular plan by one particular service station chain—they told me they are rolling it out—to close all their toilets.

Mr Wikman: To stop vandals?

Mrs REILLY: Yes. They are not hiring the contract cleaners to clean them anymore, and their internal staff who operate the bowsers and the counters will not clean them.

Mr Wikman: Then that would be a major concern to us.

The CHAIR: We should start talking about them.

Mrs REILLY: You want me to name them?

The CHAIR: Not here.

Mrs REILLY: I was being diplomatic and it is not like me.

Mr BRISKEY: John, in your submission you suggest that employers adopt fatigue management measures as part of an overall risk management strategy. The committee also notes that the RACQ has also introduced fatigue management measures for its road patrols and contracted service providers. Have you found that fatigue components of the fatigue workshops and the workplace health and safety manual are beneficial for contracted service providers? What kinds of outcomes have resulted?

Mr Wikman: It has been effective. Our philosophy is to get people going again as quickly as they possibly can, particularly in remote areas. It is incumbent upon our RACQ agent or breakdown vehicle to be available day and night to get out to some of these remote locations. It is important for personal security as well as peace of mind to do it as efficiently as possible, but there are some policies that say

if there is some way that they could get out there at a reasonable time rather than having to go immediately then that should be addressed.

We are trying to protect the safety of our own employees and contractors as much as possible because of the huge distances they do have to travel. You might not get a call for any part of the day and then in the middle of the night, that is the call you are going to get, when you are trying to get your sleep.

The CHAIR: Exactly. Thank you, gentlemen, for your input. Did you have anything else you wanted to add?

Mr Wikman: No, I think that is right.

The CHAIR: Thank you. If members have no further questions, that concludes our hearing. I thank all the members for their presence here today at the end of this parliamentary sitting week. It is always a big call to get them to stay an extra day. I give special thanks to Hansard. They always do a tremendous job.

Just for your information, the transcript of today's hearing will be on our web site as soon as we can finalise it. If you would like our final report, please be sure to give your details to our staff who are here today, that is, Rob Hansen, Lyndel Bates and Tamara Vitale. I now declare this hearing closed. Thank you very much.

Committee adjourned at 12.25 pm.