CORRECTED TRANSCRIPT

RURAL AND REGIONAL SERVICES AND DEVELOPMENT COMMITTEE

Inquiry into cause of fatality and injury on Victorian farms

Melbourne – 20 January 2004

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Dr R. Hall, Director, Public Health, Chief Health Officer, Department of Human Services (sworn).
The CHAIR — Under the powers conferred on this committee by the Constitution Act and the Parliamentary Committees Act, this committee is empowered to take all evidence at these hearings on oath or affirmation. I wish to advise all present that all evidence taken by this committee, including submissions, is under the provisions of the Constitution Act granted immunity from judicial review. I also wish to advise witnesses that any comments made outside the committee’s hearings are not protected by parliamentary privilege. This is an all-party parliamentary committee, and it is hearing evidence on the inquiry into the causes of fatality and injury on Victorian farms. Could you provide your full name and address?

Dr HALL — I am Robert Geoffrey Hall, I represent the Department of Human Services, level 18, 120 Spencer Street, Melbourne. I am the director of public health and chief health officer within that department.

The CHAIR — Thank you. Your comments will be taken down and will become evidence in due course. We will provide you with the opportunity to make a statement or preliminary comments for about 10 minutes, then the committee will ask you some questions.

Dr HALL — I will, if I may, show some Powerpoint slides.

Overheads shown.

Dr HALL — The department is involved in range of activities contributing to injury prevention. My part of the department, the public health group, provides capacity in respect of data analysis and interpretation. I will be presenting some of the thinking that derives from that, including linking farm injury with broader population health data. We also have specific expertise in health promotion and interventions to achieve population health outcomes. We view this particularly within a socioenvironmental framework.

As a department we provide support for various injury prevention programs in the areas of child injury prevention, sports injury prevention, falls prevention for older Victorians, and farm injury prevention through the Farmsafe program. The department also funds some injury prevention research activities, including the chair of injury prevention at the Monash University Accident Research Centre. Our colleagues at Vichealth fund the Victorian injury surveillance and applied research system, which is also at Monash University. I would like to highlight five issues from the paper that we have submitted to the inquiry.

People living in rural and regional Victoria experience higher levels of injury compared with metropolitan residents. There are specific issues associated with farm injuries, but we consider that they also need to be considered within a broader rural context. The factors that are involved in farm injury prevention are complex, and there are multiple causes and different environments and issues which need to be considered when considering rural injury. The level of child injury is a particular example which highlights some of these complexities in that the farm is not just a workplace but also a home and there are frequently younger people and children and frequently older people who also may use the farm as a home. Farm injury contributes to overall disease burden. One of the concepts I would like to tease out a little is the difference between the number of cases of particular injuries and the burden of disease that they may represent. Some injuries which are not so frequent in number contribute an extraordinarily high burden of disease to those individuals who suffer from them. Bringing all this together highlights the need for prevention responses that take into account the broader community and environmental issues affecting farmers and their families.

To start from the broader end, the Australian Institute of Health and Welfare report on health in rural and remote Australia found that injury is a major contributor to premature mortality in Australia. The table on this slide shows that rural Victorian residents experience a higher mortality — that is, a higher death rate — from all injuries compared with metropolitan residents. Residents of rural centres represent about 11 per cent of the Victorian population, but account for about 13 per cent of admitted hospital cases for injury and about 21 per cent of emergency department presentations based on the 1998–2001 figures available to us.

The causes of farm fatalities are varied, but what is striking about this table is that in 2001–02 — and I should stress that this is just a single year and that there is variability from year to year — 12 of the 20 fatalities recorded as being on farms — and I will give some of the caveats around the data — were intentional through suicide. Data from 1990–2000 shows that tractors were involved in about 50 per cent of adult farm fatalities — for instance, this table shows that one of the drowning incidents involved a tractor.

The next figure highlights the number of Victorian hospital admissions from farm-related injuries by age and sex. The conclusions we draw from this is that there is a preponderance of males over females who are involved in farm-related injuries and that there is a peak age in the young working ages, but that essentially the risk of being
hospitalised for a farm-related injury extends over the entire working life. There is no age group where there is freedom from risk, except one might say that the very young are at lower risk. If you look at rural mortality figures, agriculture is recorded as having the second highest frequency of work-related fatalities in 1989 and 1992, behind the transport and storage industries.

I want to go through some of the causes as recorded in the data that are available to us, and they will come from a number of different data sets. Firstly, these are admitted hospital episodes. These are people who are admitted to hospital with injuries over the year shown with recorded causes of injury. This shows that falls, motorcycles and agricultural and farm machinery, farm animals and motor vehicles are primary causes of hospital admissions for farm injuries as recorded over the years shown.

The next chart shows a similar breakdown of injuries, but this is not for hospital admissions — it is for emergency department attendances. As you can see, there are higher numbers of attendances. I should also point out that the year span coverage is a little different and is due to the speed with which the data gets through the computer system. But it shows again that transport, both machine and animal, and dangerous objects and falling all contribute to farm injuries presenting to emergency departments.

I want to focus on the same kinds of data for children under the age of 15 years, and for child deaths where it is recorded as being on farms in the data available to us. Drowning and transport injuries are major causes of fatalities in children under the age of 15. Data from the Australian Institute of Health and Welfare shows that children under the age of 15 years comprise about 20 per cent of unintentional farm-related fatalities in Australia, and that children under five years represent about two-thirds of all children. I have tried to give a breakdown of the age range of child injuries resulting in fatalities.

These data are for children under the age of 15 years in Victoria for the years shown. There are diverse causes for presentation to hospital illustrated here. Motorcycle accidents are the most common cause of farm injury related to hospital admissions for children, but other farm vehicles, horses and other animals are important agents of injury for children. Falls are also prominent amongst hospital admissions among children. One of the interpretations that we place on these data is the interaction between the farm as a workplace and the farm as a home. Again these are data for children under the age of 15 years and presentations to emergency departments. Again I have to point out that the year range is different and that there are, of course, higher numbers.

As for adults, horse-related injuries are a common form of injury resulting in presentations to emergency departments, but there are also motorcycle accidents, and in our view this suggests that there may be a high level of unsafe motorcycle use on farms. In addition there is data that are not shown in the table here, but according to some data available to us, about 75 per cent of child injuries occurred with the child in close proximity to work being carried out by an adult on the farm. Normally we would not expect to see children exposed to some of these settings in non-farm environments, and that the types of injuries that are shown are associated a bit with the stages of development of children. As children become more mobile there increased risk of various injuries. An example would be the risk of drowning. We consider that as children get older, other risks replace this, and that particularly the use of farm equipment and motorcycles are prominent here. In our view this highlights the need for specific attention to be paid in terms of prevention efforts that are targeted to the different age groups.

We conducted back in 1996 a Victorian burden-of-disease study which quantified not only the number of episodes of various kinds of illness, including injury, but also the consequences of those illnesses to individuals and to the population. We use a measure called the disability-adjusted life year, which measures the numbers of years of healthy life lost, and this is calculated as a combination of years of life lost — that is, the reduction in expectation of life due to loss of life and also the reduction in quality of life as measured by the numbers of years of life lived with a disability. The sum of those two factors together gives this measure called the disability-adjusted life year. We found by making these calculations on injury that about 7 per cent of the total burden of disease in Victoria in 1996 resulted from injury. We are currently working on the data for the year 2001, and they will become available later this year.

This table shows, in essence, per head of population, the distribution of disease burden across metropolitan and rural areas. The first column shows the years of expected life lost per thousand population in metropolitan and rural areas, the second shows the years of life lived with a disability, and then the third column shows the sum measure. In essence what it shows is that on these data there is a 20 per cent higher disease burden due to injury among rural people than among metropolitan people.
If we break that down a bit, this table highlights the issue that I mentioned a little earlier, where some conditions, though they may not be particularly common, can result in a very high burden of disease. If I may point out on the left-hand table the example of the number of injuries where there was an injury to the spinal cord, which was fairly low in number, with six injuries, and yet that led to a disproportionately high burden of disease, with 99 disability-adjusted life years lost due to that. This is an attempt to give some sort of ranking not just in terms of frequency of these injuries but also in terms of the consequence of those injuries to the individuals who suffer from them. And so we range from common injuries such as fractures, which generally respond well to treatment and do not leave much in the way of disability, right through to very severe injuries such as an injured spinal cord, but there are other conditions such as amputation, which are in the mid range.

This table shows the impact of the burden of disease, and the height of the columns represents the disability-adjusted life years that are lost due to injury by males and females and according to age group. Again, I need to show some caution about the data, because this relates to a single year, but in the 25 to 35-year-old age group, for instance, the burden of disease is actually not high, and what this indicates is that when one compares it with the slide that was shown earlier where the number of injuries was relatively high in this age group, most of the injuries suffered by this age group are of a fairly minor nature in that particular year. But what I think this shows is that there is a disproportionate burden on, essentially, working-age males.

Just to finalise on the data, there are limitations to the data we have. The data I have spoken about here are essentially from hospital admissions, and general practice data are not included here, so there would be many more perhaps less serious injuries that are not captured by the data systems. The coding frameworks that are used for hospital-collected data may not capture all of the farm-related injuries, and the ones that I have shown are those where it has been coded as being a farm-related injury. So we have to regard these figures as being a floor, if you like, as a kind of a minimum of what has occurred.

Coding on the place-of-occurrence mortality data from death certificates is not always complete, and different systems such as emergency departments or admissions to hospitals have different methods and different definitions, so one needs to exercise a certain amount of caution in being too precise about comparing the various data sets. But my view is that they do show a consistent story of injury in rural areas and on farms, and our view is that prevention strategies need to draw on the available data and to consider the broader environmental framework or environmental context within which these injuries occur.

Our view is that there are prevention opportunities, that there are some key population groups and issues within farming communities, that the high number of adult males supports approaches which target working farmers, but also that females and farming families are groups that should be included in injury prevention work. There is a range of different injury events and different environments, so this will not lead to single solutions, and teasing out the causal factors and risk factors may be quite complex. There are interrelated broader workplace, social, cultural and economic issues.

We consider economic issues may affect farm safety quite directly through the use of, say, aged machinery, poorly maintained machinery; through limited ability to employ adequate staff; through the use of family members to assist with farm jobs that may put them perhaps beyond their level of skill or physical capacity; and perhaps through a lack of protective clothing. We would like to highlight the need for preventive strategies that are fitted in within this social and environmental framework and that are based on the best available data. A broader social model of health, as is our view for many public health issues, would be of relevance here. Thank you very much.

The CHAIR — Thanks very much for that, Robert. In relation to those three conclusions you just made at the end with regard to the prevention strategies needed, the broader social model of health, and the third one, which has just slipped my mind — —

Dr HALL — The use of health sector data to have a data-driven approach to inform the strategies.

The CHAIR — Would you mind just extrapolating a bit on each of those particular issues with regard to some recommendations that could come out of that or some ideas for us to consider or ponder over?

Dr HALL — From our point of view we would be very keen to see available data used and in fact to improve the data systems so we have, in particular, data available in as close to real time as we can make it so we can respond to problems as they are occurring. As you saw, some of the data here are fairly old, so that is one area we are working on.
We need to have a good interpretation of the data, for instance, just focusing on issues such as the frequency of injuries, but to then try to get some idea of the importance of those injuries would also be important, and also to go back to a closer breakdown of the causes. So how one might deal, say, with kids falling off horses might be different from the way one might deal with dog attacks, for instance, and having a breakdown of data in those sorts of areas would be important. That is the kind of data-driven approach.

We also feel that the farms do not operate in isolation, but that they are part of a broader social milieu, and there is some data to suggest that, for instance, the rate of suicide may correlate with economic conditions on farms in the broader sense. We think there is some preliminary data to say that affordability of safety is an issue, but there may also be some broader social forces working in terms of economic stress which may have additional impacts beyond the fairly straightforward relationship between affordability, for instance, and economic stress. So from our point of view, the way we consider this would work is that one of the major contributions that we can make as an organisation is that we have access to data which we can then work on with other organisations in terms of carrying out programs. The programs will need a multifaceted approach with a coalition of partners.

One of the things we feel we can contribute is this statewide collection and interpretation of data and putting that into a context. We have other sources of data which we are working on to put this together in terms of the social context. We have other work to show that health status in general, for instance, in rural areas is poorer than it is in urban areas and that there are some specific determinants within rural areas to do with indices of social disadvantage, of economic disadvantage, of average educational attainment and so forth, all of which determine the overall rate of ill health in the community. We have not worked that through precisely for issues such as injury, but there may be some areas in there which would enable interventions to follow on from those kinds of analyses.

**Mr WALSH** — With due respect, David, you have not touched on the prevention strategies. You have said they are needed. Surely DHS has some ideas as to what they should be?

**Dr HALL** — What I have in fact proposed that we do and what we have started to work on is to draw together a coalition of partners to develop strategies. We have operated in the area that I mentioned earlier, where we have funded some Farmsafe work where there have been specific things to do with rating of tractor safety, with roll bars and so forth and with equipment on tractors. What I would like to do is to take that back a step and do a complete analysis of the numbers of injuries and the burden of injuries, and then build that back up from the ground up. The approach we have had has been on an historical basis, and, as I mentioned earlier, we have had programs that have focused on farm injuries, on child health injuries, on sport injuries and on falls in older people. But my consideration is to go back to the data and then rebuild the strategy as part of a coalition with a range of players in both the government and non-government sectors. So in that sense this is work in progress.

**Mr CRUTCHFIELD** — You had a national injury plan; are you going to include these issues or strategies with respect to 2004 onwards? Is that what you are talking about, in terms of identifying a national approach?

**Dr HALL** — What I want to do is identify a Victorian approach that we can operate. But we are also participants in the national public health partnership, which has the strategic injury prevention process within it, and so we will also be working with them.

**Mr CRUTCHFIELD** — And will you be advocating for some part of that particular national plan to be targeting farm safety?

**Dr HALL** — Yes.

**Mr CRUTCHFIELD** — In what way?

**Dr HALL** — As I say, in our view the data show that there are significant and disproportionate burdens on rural communities and on farm communities, so we need to respond to what we see in the data. That was the reason we have funded part of the Farmsafe work, and we will continue to do that and to develop that work into the future.

**Dr NAPTHINE** — What is your definition of rural in this sort of analysis?

**Dr HALL** — Basically that comes from the Bureau of Statistics definition of urban and rural. For these overall statistical concepts it is based on its way of breaking up the country into urban and rural areas.
Dr NAPTHINE — For my understanding, if I live in the town of Warrnambool, am I urban or rural?

Dr HALL — I do not know the details specifically for Warrnambool, but my understanding is that would be a rural area.

Dr NAPTHINE — So cities or townships within areas outside metropolitan Melbourne would be considered rural.

Dr HALL — Essentially that is what it comes to. One of the capabilities we have is to analyse this kind of data by local government areas. There is a range of ill health and good health throughout the state that is highest in the south-east Melbourne suburbs and lowest out in the Wimmera. The idea is to use that kind of geographically relevant data to try to develop specific programs around specific issues.

Dr NAPTHINE — I do not want to sound callous, but one of the reasons we do all this analysis based on life years, or whatever the words were, is to make comparisons about where, in a public health sense, you get your best return for investment of the public dollar in terms of improvements in health outcomes. In that context where does this issue of rural health sit compared to say cancer and kidney disease and other things? If there was an additional $10 million to spend in health would you get better value by investing it in programs for improving farm safety and rural health or would you get better value in terms of reduction in life years lost or whatever by investing in cancer prevention programs or lowering smoking or whatever? Where does it sit in that broader concept of health?

Dr HALL — It helps with showing where if you are able to achieve reductions there would be the most profit in terms of improved health and achieving reductions. The second part of the equation has to do with the effectiveness of programs and that is not captured in these measures — that has to be done as a separate exercise. One of the reasons we fund a chair in applied injury research is to do research into interventions in an applied sense that can then be rolled out in an effective and data-driven way. The years of life lost and life with disability show where the problems are and then there is a further exercise that needs to be done in terms of development of interventions and studies that need to be done to show that those interventions are in fact effective. Then there comes the issue of making comparisons between, say, things like stop smoking programs and anti-cancer programs where this is one of the criteria used in the decision-making process — it is not the only criterion.

Dr NAPTHINE — I understand all that. We as a committee are looking at farm safety and making recommendations. If in the scheme of the broad context of health and safety this is only a small amount compared to significant gains that could be achieved over there, we would be remiss in making recommendations to the Parliament and government that they spend money on programs X, Y and Z if that money would really be better spent on other more significant programs that can return better returns to the health and safety of the nation. When I look at these figures, if you take suicide out and you look at, say, spinal cord injury for which there might be specific programs like ‘Do not dive in shallow water’ which apply across the board and not just to farms, if you take out some of those more significant things that might be better targeted in different ways, the question is: is the issue of farm safety of such significance compared to other public health issues that we should be concentrating dollars on it or are we better off spending our dollars somewhere else?

Dr HALL — The way I read the figures is it is an area that is worth concentrating on because there is a disproportionate burden on farm injuries as shown by the figures which, as I say, are a floor — because of the way the data is collected they will be an underestimate rather than a true estimate. It is not the greatest burden of disease, that is true. That is one of the questions that is always difficult in public health work: how do you most effectively deploy your resources? That is partly reflected by the size of the problem through the various measures and also the effectiveness of the program.

Dr NAPTHINE — If the government gave you another $20 million tomorrow to spend on public health measures and said it wanted you to get the best value in terms of health outcomes, what portion of that would you allocate to on-farm safety issues versus other health issues?

Dr HALL — I cannot tell you the exact proportion; there would be a portion because I think it is a significant enough issue, but there are bigger issues.

Mr WALSH — In the ratings that you have there, is any work being done on how important the golden hour after an accident is? If you look at your definition of rural, a lot of those people do not have access to good health services or do not have access to a health service in a reasonable time. Have you done any work on how that impacts on the other side of your equation as far as the cost to the community goes?
Dr HALL — We have not done work on the public health side; our function is primarily to prevent accidents from happening in the first place. I would have to ask my clinical colleagues what they have done in terms of work, as you say, for that golden hour.

Mr WALSH — For argument’s sake, a fall from a horse might have a lot less impact if you get to a hospital in half an hour than would a fall from a horse if it takes 2 hours to get to a hospital.

Dr HALL — Absolutely. I can recall from earlier stages in my career where I have actually seen that happen and somebody in a motor vehicle accident where if they had had the accident in town they would have survived but because it was in the bush they did not.

Mr WALSH — Is it worthwhile for work to be done on that?

Dr HALL — I think that is something the clinical services people work on a lot. My understanding is the availability of trauma services is predicated around some of those arguments. However, it is not my field so I am afraid I would have to defer on that.

Mr WALSH — If this committee wanted information on those sorts of things would it be available through another part of the DHS?

Dr HALL — I am certain that would be the case.

Dr NAPTHINE — Can I ask specifically about suicide. There was a particular investigation into suicide about five or six years — I think the Kirby committee examined it — and there was a raft of recommendations and moneys allocated. What has happened to that subsequently? What work is currently going on within DHS in terms of suicide prevention?

Dr HALL — Again it is not in my particular part so I can only give you a general view, but my understanding is this is a high priority part of the mental health program, that young males in country areas with suicide is well recognised as being a major problem. A lot of the mental health work focuses on those people, but I am afraid I cannot give you more than that as a general comment.

The CHAIR — Are there any further comments you would like to make in regard to the toddler drownings and the reports done there through DHS and the kinds of programs that are being implemented or being talked about being implemented?

Dr HALL — We have done some specific work on that area in conjunction with the state coroner mainly through his office. My understanding is there are statements and recommendations that he makes, but we fund a research officer working for him to provide him with a more statistical overview to inform the particular incidents that he examines.

The CHAIR — Thank you for giving us your time today. You will receive a copy of the transcript in about a fortnight. Any obvious errors of fact or grammar can be corrected, but not matters of substance. Thank you very much.

Witness withdrew.