

# **The Health Risks of Long-distance Trucking**

## Final Report to the Federal Office of Road Safety

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November 1992

## **Acknowledgements**

Thanks go first and foremost to the truck-drivers and partners who gave up their precious time off to talk to us.

The project was supported by a seeding grant from the Federal Office of Road Safety.

The project advisory group has given valuable advice during the course of the study. In addition to the co-investigators, the members of this group are:

|                              |                                   |
|------------------------------|-----------------------------------|
| Bob Heffernan and Alan Neale | Transport Workers Union (S.A.)    |
| Tony Ryan                    | NHMRC Road Accident Research Unit |
| Peter Larsson                | S.A. Road Safety Division         |
| Alistair Elliot              | S.A. Road Transport Association   |
| Inc.                         |                                   |

We also acknowledge the help of Ian Harris of the TWU, who patiently explained the workings of the trucking industry, and took us with him on site visits.

The cartoon used for the leaflet to drivers was drawn by Simon Kneebone.

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## 1 Executive Summary

This is the final report of the first phase of a project which aims to enrich the understanding of factors underlying the health risks of long-distance trucking. The project explicitly departs from previous methodologies in (a) interviewing truck-drivers personally and at length rather than by postal questionnaire (b) extending the analysis of health risks to the families of truck-drivers. It takes as the target of analysis the **lifestyle** of truck-driving as opposed to the **job**.

Sixteen long-distance truck-drivers based in South Australia, and fourteen partners of truck-drivers were interviewed at length about their health, their families' health, conditions of work and perceptions of aspects of the lifestyle of long-distance truck-driving. The drivers were also asked to complete a Time Use Diary for two weeks, which detailed time spent on the various aspects of the job of long-distance truck-driving.

The study suggests a nexus between schedules, rates of pay, competition for loads, sleep patterns, fatigue and drug-taking. Driving schedules, and the economic conditions underlying scheduling decisions, need further investigation and improvement.

For the partners of truck-drivers, the lifestyle of long-distance truck-driving means a rhythm of isolation and disruption, and resembles the condition of single parenthood where there are children in the home. This aspect of the trucking industry has received too little attention in the past.

It is recommended that further research be carried out in relation to:

- . Determinants of scheduling
- . Rates of pay
- . Effect of the long-term absence of the driver father
- . Use of mobile 'phones to increase the quality of links with families
- . Influence of industrial practices (particularly the Just In Time principle) on trucking schedules
- . Driver 'survival' in the trucking industry

## **2 Introduction**

### **2.1 Trucking as a Public Health Issue**

It is possible to distinguish five ways in which trucking impacts on health.

In descending order of immediacy they are:

- . Accidental mortality/morbidity
- . Occupational health and safety of drivers
- . Quality of life for truckies' families
- . Environmental effects
- . Resource usage (e.g. road-building taking residential or arable land)

The reported study was concerned with the first three of the above impacts.

The Final Report of the Transport Working Group of the Commonwealth Government's Ecologically Sustainable Development project (reference 1) provides a concise overview of the environmental and resource usage issues relating to land transport. The report concerned itself with issues under three broad headings: vehicle exhaust emissions, especially of greenhouse gases: urban form and design; and interurban freight and passenger movement. In relation to the freight industry, the report notes that technological innovations have been pursued and adopted, and principally recommended more rationalisation of the regulatory function across levels of government and state jurisdictions.

In relation to road safety (mortality/morbidity issues), the Federal Office of Road Safety has recently funded a series of studies (references 2 - 10).

Some of these reports have addressed truck safety directly, others as part of a wider analysis of road safety. Some of the studies have addressed the issues of truck speed limits and their relationship with road accident rates, and have generally concluded that there is no evidence of an unfavourable impact on accident rates associated with an increase in speed limits. These studies have not however been without their critics (references 11,12). Other analyses conclude that there may be elevated risks to the public safety associated with particular forms of truck transport (e.g. B-Doubles).

The quality of the research work has been variable. More importantly, there has been little analysis to suggest that there are common factors underlying safety risks to the public and risks to the health of truck drivers themselves.

## **2.2 Occupational health and safety issues**

Long-distance trucking is unique in terms of occupational health risks. In one job it combines three different forms of occupational stress - shiftwork, heavy manual handling and social isolation. Epidemiological studies show that truck drivers fall into the highest risk group for cancers of the lung, lower urinary tract, bladder, pancreas and stomach, renal cell carcinoma and hairy cell leukaemia. They are also in the highest risk group for emphysema, asthma, diabetes, hypoglycaemia, high blood pressure, coronary heart disease, lower back injuries and deafness (references 13 - 20).

Factors which may underly these health risks include shiftwork, stress, isolation, drug use and of course accidents. Shiftwork affects REM sleep patterns, which in turn affects work performance (references 21 - 27). Stress is a notoriously difficult term to define (reference 28), but for long-distance drivers, both truck and bus, there may be several forms of stressors -

schedules, loneliness, financial hardship - and of stress symptoms - depression, sleeplessness, mood swings, headaches (references 29 - 34).

Evidence from the USA and Australia on drug use by professional drivers is mostly based on self-reporting, so may underestimate the extent of drug-taking. Figures reported range from a low of 20% of drivers using drugs to a high of 60%. There is contradictory evidence on the effects of drugs on driver performance (apart of course from the effect of alcohol) (references 35 - 41).

Accidents, whether fatal or not, are the most public form of health risk for long-distance truck-drivers. Factors contributing to accidents include the age of the driver, no. of hours driven without a rest, regularity of driving, type of load, night driving and particular road configurations (references 21 - 23, 42, 43).

The health and well-being of the families of truck-drivers may also suffer, though to date there has been no direct research on this aspect in Australia. Drivers may be away from home for several days or weeks at a time, often without knowing when they will return; they may return in a variety of physical and mental states. Research on other absent-spouse occupations, as well as indirect research on families who experience interpersonal problems, suggests that lack of social cohesion and family support are critical factors (references 30, 44 - 47).

Two recent and ongoing studies have extended the analysis to look at factors contributing to fatigue, and on-road performance and economic reward, respectively (references 48, 49).

### **3 Study Approach**

#### **3.1 Study problem**

Truck-driving is a difficult area to research. First, truck-drivers are a very small minority of the workforce, in a specialised occupation. Truck-drivers are obviously highly mobile. The work involves long periods of absence from the driver's base. Many of the work schedules are unpredictable. There are few other occupations where these characteristics apply - deep-sea fishermen (and occasionally women) are perhaps the only other comparable workgroup in this respect.

Occupational research which gathers information directly from people relies on the regularity and therefore accessibility of most occupations. Not surprisingly, much of the research on trucking has utilised secondary data, or remote and/or abbreviated forms of contact with the drivers themselves, often via mailed questionnaires. Most previous studies have concentrated on assessing the severity or frequency of factors antecedent to truck accidents - principally excess speed, drugs and fatigue - i.e. factors affecting the safety of the public. There has been little analysis to suggest that there are common factors underlying safety risks to the public and risks to the health of truck drivers themselves and the families of drivers.

Excess speed, drugs and to some extent fatigue can be seen as 'coping behaviours', i.e. responses to the conditions imposed by the job of truck-driving itself.

The study this paper reports attempted to look deeper than previous studies, at why such coping behaviour occurs, and at the implications of the job for truck-drivers' families. Essentially, the study posed the questions:

`What is truck-driving like, for drivers and families?'

`How is time structured in the job of long-distance truck-driving?'

`What factors underly speeding, drug use and fatigue as responses to job stressors?'

`How do the families of truck-drivers cope and adapt?'

The purpose of the study was to develop and test a methodology which would illuminate these research questions, at the same time adding to the body of knowledge about issues related to safety, and what factors safety-related policy would need to address to be effective and at the same time avoid `victim-blaming' of truck-drivers (reference 51). The study was therefore both research and meta-research.

### **3.2 Methodological approach**

Given that the study was be exploring new ground, and with a different analytical style (essentially **understanding** rather than **explaining** - reference 52), a qualitative approach was favoured. There is an active debate about the relative merits of quantitative vs. qualitative research methods (see, for example, reference 53). The common view is that each is productive for particular research tasks, and that the latter approach is particularly valuable when phenomena are under-researched. Qualitative research is particularly useful for answering `how' and `why' questions as opposed to `how much' or `how many'.

The methodology involved extensive interviews (carried out by a research assistant experienced in interviewing) with truck-drivers and their partners about the lifestyle of long-distance truck-driving, and describing the pattern of the job via a Time Use Diary, which the truck-drivers have been asked to complete for a period of two weeks. Time Use Diaries give excellent and accurate information about the proportionality of job tasks, and the ratio of work to non-work periods. They have been used to study many occupations, but not to date truck-driving.

### **3.3 Sampling framework**

A full typology of truck-drivers must take account of five parameters:

- . Owner-drivers vs. company drivers
- . Size of company
- . Shuttle vs. general freight
- . Intrastate vs. interstate trips
- . Unionised vs. non-unionised

This was beyond the resources of the reported research, which was a small-scale pilot study. The drivers (and partners) interviewed were however to represent the industry as far as was possible. Truck-drivers were therefore recruited on a quota sample basis, to reflect the structure of the industry in terms of the three major parameters of:

- . interstate vs. intrastate trips
- . owner-driver vs. company driver
- . size of company.

Attempts were also made (unsuccessfully) to recruit ex-drivers, to explore their reasons for leaving the industry.

Those interviewed were recruited via a leaflet sent to drivers through the Transport Workers Union (S.A.) (principally), and secondarily through individual companies suitable to the requirements of the quota controls (the leaflet, 'reminder' and letters

to companies are reproduced in Appendix 1). Drivers who contacted the research team were 'screened' in terms of the requirements of the quota controls, using questions reproduced in Appendix 2. Drivers were also alerted to the research study by an article written early in the project for inclusion in the union newsletter 'Transport Worker' (Appendix 3) and through discussion on a local radio 'phone-in programme (Appendix 4). Despite these measures, the response from drivers was not as good as was hoped. This is discussed below in Section 4.2.

Interview schedules for driver interviews (reproduced in Appendix 5) covered the following conceptual areas:

- 1) Pattern of their employment
- 2) Health status (self-reported and recent morbidity)
- 3) Health-related behaviour
- 4) Perceptions of aspects of truck-driving
- 5) Involvement in accidents.

A total of 16 interviews were completed. The study aimed for more; reasons for the lower than expected rate of completion are discussed below (Section 4.2).

The Time Use Diary took the form of a ring-bound book of pages, each covering the a.m. or p.m. part of each day for 14 days, with a brief introduction and instructions for completion. Each page contained a matrix of half-hour boxes by trucking work activities, so that the driver had only to shade in the number of half-hours used for any of the activities. The Diary was piloted on the first four drivers interviewed, and changed very slightly as a result. The Diary is reproduced in Appendix 6.

Interview schedules for the partners of truck-drivers (reproduced in Appendix 7) covered:

- 1) The family situation
- 2) Health status (own and that of any children)
- 3) Health-related behaviour
- 4) Pattern of family life with/without the driver
- 5) The effect of truck-driving on the home situation.

A total of 14 interviews were completed; the partners of three truckies did not wish to be interviewed; in one case the partner was willing to be interviewed, but not the truckie.

All interviews were tape-recorded and transcribed; office systems were established to ensure confidentiality, including a written confidentiality statement

given to those interviewed (reproduced in Appendix 8); tapes were subsequently given to those interviewed after transcription, with a letter thanking them for their participation (Appendix 9).

## **4 Results**

The 'findings' of the study are divided into two aspects, substantive and methodological, in line with the purpose of the study, which was to develop and test the feasibility of a method to investigate aspects of trucking which are not accessible through routine data sources, or have not been explored by cross-sectional surveys.

Substantive results are reported in terms of their proportionality, rather than percentages; the latter would be of little interest, given the relatively small numbers involved.

### **4.1 Substantive Results**

#### 4.1.1 Interviews with truckies

##### Pattern of employment

Three of the sixteen drivers interviewed were owner-drivers (drivers who own or are buying one or more trucks). The company drivers were predominantly from large companies (defined as operating 30 or more trucks). The median no. of years in the industry was 22, with a range of 10 to 36 years. In the case of the company drivers, the median no. of years working for the company which was the present employer was 5.5, with a range of 3 to 8 years.

Drivers were asked how many hours they usually worked each week driving a truck. The minimum no. of hours driving was 70, the maximum 110. The minimum no. of hours worked ( i.e. involving loading etc. as well) was again 70, the maximum 120. The rigs driven included road-trains (4 drivers), a variety of prime movers and trailers, and were between 340 and 525 h.p. Loads carried were described as Table 1 (a few drivers regularly carried more than one type of load):

Table 1: Descriptions of loads usually or typically carried

| <u>Type of load</u> | <u>No. of drivers</u> |
|---------------------|-----------------------|
| Express             | 5                     |
| General freight     | 10                    |
| Cars                | 1                     |
| Mining equipment    | 1                     |
| `Various'           | 2                     |

There were various arrangements reported for loading and unloading. Loading/unloading was done by others for 6 of the drivers. Six drivers had to load as well as drive (three while picking up or delivering rather than at the start of the trip), and complained of not being paid for this work. Four drivers reported a mixture, sometimes loading/unloading themselves, sometimes driving only. Most drivers complained of the poor standard of loading by those who were not ex-drivers.

Table 2 shows the destinations the drivers regularly drove to (the total exceeds the no. of drivers since each driver obviously could drive to more than one destination):

Table 2: Regular destinations for driver sample

| <u>Destination</u>     | <u>No. of drivers</u> |
|------------------------|-----------------------|
| Perth                  | 9                     |
| Sydney                 | 5                     |
| Melbourne              | 3                     |
| Brisbane               | 2                     |
| Queensland (various)   | 1                     |
| Northern Territory     | 1                     |
| Mount Gambier          | 1                     |
| 'Interstate' (various) | 2                     |

Drivers reported being away from home for at least one night every trip. All drivers except one were away from home for at least 5 or 6 nights at a time, with 1 or 2 nights off. Company drivers had the more regular work; owner-drivers reported that it was not unusual to be away for 2 or more weeks at a time. One of the owner-drivers had been away for 13 weeks on two occasions.

Drivers were asked about the pattern and quality of their sleep. All 16 drivers regularly slept in their truck. Five occasionally slept in company sleeping quarters; all these drivers complained about the poor quality of these quarters (infestation and dirtiness or noise being the complaints). One driver occasionally camped; one occasionally slept at a friend's place or motel.

The length of sleep was sometimes less than 3 hours at a time. The maximum, although exceptional, was 8 hours. Most reported sleeping for 3-6 hours at a time, and infrequently. This of course matches the reported work hours. Most reported the quality of sleep as bad, and frequently restless, though a few drivers said they slept deeply, through exhaustion. All drivers felt that sleep was not basically a part of the work routine of truck-driving, except for short periods, because of time constraints in the driving schedules. As one driver put it:

*When you're really tired you're afraid to go to sleep in case you don't wake up.*

### Health status

Questions included in the interviews which covered health status were taken either from the National Health Survey interview schedule, or from community-based health surveys in Canberra and Adelaide. These questions covered self-assessed health status, consultations with doctors and/or other health professionals, episodes in hospital, drugs and medications taken (including alcohol), and chronic illness. The intent of this section of the interview schedule was to allow initial and tentative comparison with relevant results from the National Health Survey for the general population,

and because the form of question had been previously validated; given the small sample this is not worthwhile.

Drivers were first asked what 'health' meant to them. Table 3 shows the frequency of each concept in the responses:

Table 3: Meanings of 'health' for driver sample

| <u>Concept</u>           | <u>No. of drivers</u> |
|--------------------------|-----------------------|
| Eating right             | 8                     |
| Exercise                 | 4                     |
| Feeling o.k.             | 4                     |
| Not being overweight     | 3                     |
| Being fit                | 4                     |
| 'Looking after yourself' | 3                     |
| Not being ill            | 2                     |
| Sleeping well            | 1                     |

Table 4 shows responses to the question 'In general, would you say that your health is excellent, good, fair or poor?':

Table 4: Self-assessed health status for driver sample

|           | <u>No. of drivers</u> |
|-----------|-----------------------|
| Excellent | 5                     |
| Good      | 8                     |
| Fair      | 3                     |

Poor

0

Fifteen of the 16 drivers reported going to a G.P. if there was anything wrong with their health. One driver, at various times, went to a chiropractor, naturopath or acupuncturist. One driver said he also went to his wife for treatment! Nine drivers had been to their doctor less than 3 months previously. There were varied reasons for visiting the doctor; 5 went to get 'drugs' (which from the descriptions given are superficially treatments for overweight, allergies, etc. but often contain stimulants), 7 for a check-up, the rest for specific problems. Only two drivers had stayed away from work in the last two weeks, one from an elbow injury, the other from a recurrence of bowel cancer.

Five drivers had been admitted to hospital in the last twelve months, 4 once only, one on numerous occasions, after complications following a broken neck in the trucking yard. Two of the five drivers went to hospital because of tumours, two because of work-related accidents, one because of an accident outside work.

### Health-related behaviour

Drug use among truckies is a controversial topic, for obvious reasons. Nearly half of the drivers reported taking stimulants most days and/or nights. one driver reported taking drugs **every** day and/or night. The drugs taken were given as in Table 5:

Table 5: Stimulant drugs taken by driver sample

Stimulant

No. of drivers

|                              |    |
|------------------------------|----|
| Duramine                     | 12 |
| Tenuate Dospan               | 10 |
| Ephedrine                    | 8  |
| Caffeine (other than coffee) | 1  |
| Sudafed                      | 1  |
| Ginseng                      | 1  |
| `Speed'                      | 1  |

Several drivers took more than one drug. Ten of the sixteen drivers took drugs only when driving; three took them also at home; three reported not taking drugs at all. Most (12) drivers who used stimulants took between 5 and 20 doses a week. One driver reported regularly taking 55 doses a week. All the drivers reported **never** drinking while driving, and an unremarkable amount of alcohol at other times.

The use of other drugs or medications was minimal. In each case (during the last two weeks), either one or two of the drivers took the following:

- . Cough medicines
- . Medication for allergy
- . Skin or antiseptic ointments
- . Medications for digestion
- . Fluid or blood pressure medications
- . Tranquillisers or sedatives

Twelve of the drivers reported taking pain relievers, 11 for headaches and one for back pain from prolonged sitting down in the truck. Only one driver took these more frequently than 'less than once a week', however.

There is thus a very particular pattern to the drivers' drug taking, which could be described as virtually all 'occupational drugs'. When asked why they took the stimulants, all drivers reported that the purpose was merely to stay awake, rather than for the effect as such. This contradicts some of the media coverage of this issue, which has often stereotyped drivers as taking drugs for thrills. Some emphasised the necessity to stay awake to complete driving schedules, others that it was better to take drugs, as one driver put it, than to 'wear a tree or run over a car'.

Questions 34 to 43 asked whether the drivers has been advised of any of a number of specific (mostly chronic) medical conditions. Very few of the drivers had experienced any of the illnesses, as Table 6 shows:

Table 6: Specific medical conditions reported by driver sample

| <u>Medical condition</u>      | <u>No. of drivers</u> |
|-------------------------------|-----------------------|
| Chest wheezy or whistly       | 3                     |
| Diabetes                      | 0                     |
| High blood/urine sugar levels | 0                     |
| High blood pressure           | 2                     |
| Angina                        | 0                     |
| Heart attack                  | 0                     |
| Stroke                        | 0                     |
| High cholesterol              | 1                     |
| High triglycerides            | 1                     |
| Special diet                  | 1                     |

## Perceptions of aspects of trucking

Apart from what they liked and disliked in general about the job of truck-driving, the drivers were asked whether each of the following was a problem and encouraged to discuss them:

- . The types of load carried
- . Loading and unloading arrangements
- . The way the work is scheduled
- . The pay rates
- . The amount of control drivers have over their work
- . The time away from family and friends
- . Fatigue while driving
- . The use of drugs to stay awake while driving
- . The maintenance of the trucks
- . The quality of the roads and highways
- . The attitude of the police and road transport inspectors
- . Other road users
- . The system for employing drivers
- . Aspects of truck-driving which had got worse/better during the time each had been driving.

They were also asked whether they believed their health was affected by their job driving a truck.

The aspects of the job **liked** by drivers were predominantly the freedom of being one's own boss (seen as illusory by several of their partners), the money (despite the long hours) and the chance to travel. A few mentioned the comradeship of the job. Aspects disliked were being away from home and

the loneliness, the attitude of law enforcers, the long hours and the general stress of the job. However, drivers were more or less equally divided about whether the job affected their health. Those who felt it **did** affect health identified stress, overweight, bad food, lack of exercise and fatigue as unhealthy aspects.

As to the detailed aspects of the job covered in this section of the interview, there were some about which drivers were in substantial agreement, others about which they differed. Few thought the types of loads a problem, since experienced drivers compensated in their driving style, though there was criticism of some of those who did the loading in the depot, who were reported as being non-drivers, therefore not understanding what was required for a safe load structure. Several felt that loaders should be ex-drivers. Drivers also pointed out that they did not get paid for any loading or unloading they had to do themselves, which effectively reduced their rate of pay further.

All drivers saw driving schedules as generally too tight, though two said their **own** schedules were reasonable. If the times to major cities are true, this seems entirely justified, to say the least. Schedules of 8 hours to Melbourne, 13 to Sydney and 24 to Perth were quoted. Such times would almost certainly involve contravening the Commercial Motor Vehicle (Hours of Driving) Act. The other aspect of scheduling which several commented on was that the times had not increased despite the wider use of speed limiters on trucks. This merely meant that sleep was sacrificed further to maintain times, since many reported financial penalties (or in a few cases the threat of dismissal) if the driver arrived late. One driver produced the following quote, which may or may not be representative:

*Sometimes it's bad, you get a `phone call from the boss who says `put it on the wood'. That means drive it flat - that's how he keeps his work. Some places I'd hit 150 kph. At that speed it wears you out, you're driving not only **your** truck but everyone else's car, everyone else's truck. You're watching every move they make. If you make a fuck-up at that speed you're gone. But that's the job'.*

All drivers reported that few companies paid proper award rates, and that rates had decreased in real terms over the last few years. Large companies were seen as worst in this respect. A majority of drivers saw a problem with the amount of control they had over their work. 11 of the 16 saw the time away from their partners and/or families as a problem; the rest said, in effect, that `you get used to it'.

All drivers, without exception, saw fatigue as a problem. The main factor underlying fatigue was again the scheduling, with drug-taking to stay awake the solution to the dilemma of sleep vs. keeping to times. The majority view, at first surprisingly, was that drugs are a **good** thing, since they enabled the driver to drive `safely' (i.e. without falling asleep at the wheel) but keep to the times demanded by the trucking companies. The problem with drugs was seen by several of the drivers as merely their decreasing availability, as adverse publicity forced stricter controls.

Truck maintenance was not seen as a problem, except for trucks owned by small companies, who were seen as not being able to afford to keep their trucks both on the road enough and well enough maintained. Most drivers saw a trend of gradually decreasing standards, however, as financial conditions deteriorated.

The quality of roads and attitude of law enforcers were seen as highly variable across states, with NSW being worse for both, followed by Queensland. Law enforcers were seen largely as merely revenue raisers, with

variable views as to their underlying attitude or character. Other road users were seen as generally incompetent and in need of education about the capabilities of large trucks. The system for employing drivers was not criticised, apart from the low standard of driver-training in some instances.

Lastly, aspects of truck-driving seen as worsening over their time in the industry were scheduling, speed limiters, money, taxation and the 'fun' which used to be in the job. Other aspects were only mentioned by one driver in each case. Aspects which were seen as improving were the trucks themselves (negated in the opinion of some by speed limiters), and the quality of (some) roads.

### Involvement in accidents

Seven of the drivers had been involved in accidents during their time as truck-drivers (between 10 and 36 years). None of these had involved death; one of the injuries was to the driver himself, while repairing the truck.

All drivers however had witnessed accidents; this is not surprising given the length of time in the industry. Spontaneous comments from 11 of the drivers were about the shock effect, sometimes for several months. Ten drivers spontaneously talked of the need to 'put it behind you' because of the potential effect on concentration. Only one driver claimed that he was not affected by seeing an accident; he commented that 'the wife thinks I'm a callous bastard'.

#### 4.1.2 Interviews with partners

### Family situation

The partners' median age was 40.5 years (mean = 38.4), with a range from 18 to 52. The median time the partners had been with their driver husband or partner was 11.5 years (Mean = 13.3), with a range from 9 months to 32 years. Five of the families involved children still living with the partner, though others had previously had children at home who were now adult and moved away. Some of those whose children had left home discussed questions relating to effects on families in terms of how it **was** when the children were still at home. Three of the partners had children living with them who were from a previous relationship. Six of the partners were working at time of interview, mostly in semi-skilled jobs.

### Health status

Partners, as with the drivers, were asked what 'health' meant to them. Table 3 shows the frequency of each concept in the responses:

Table 7: Meanings of 'health' for partner sample

| <u>Concept</u>          | <u>No. of partners</u> |
|-------------------------|------------------------|
| Diet                    | 7                      |
| Exercise                | 5                      |
| Looking after your body | 6                      |
| Emotional well-being    | 6                      |

|                    |   |
|--------------------|---|
| Absence of stress  | 5 |
| Not being lonely   | 1 |
| General well-being | 1 |
| `Don't know'       | 1 |

The obvious difference between these responses and those of the drivers is the emphasis for the partners on emotional states of well-being as contributing to `health'.

Table 8 shows responses to the question `In general, would you say that your health is excellent, good, fair or poor?':

Table 8: Self-assessed health status for partner sample

|           | <u>No. of partners</u> |
|-----------|------------------------|
| Excellent | 6                      |
| Good      | 7                      |
| Fair      | 1                      |
| Poor      | 0                      |

These responses show a very similar pattern to those given by the drivers.

Three of the partners had been admitted to hospital in the last 12 months, each time once only and briefly, two for limited mastectomy, one after the death of her baby. Only one of the partners reported a child having been into

hospital during the same period of time, after breaking an arm while playing. All 14 partners reported going to the local G.P. if there was anything wrong with their health or their children's health, 7 within the last three months, and mostly for check-ups. None of the women who worked (for pay) had stayed away during the last two weeks because of illness or injury.

### Health-related behaviour

In complete contrast to the drivers, only one of the partners took stimulants. The no. of those taking or using other drugs or medications is shown in Table 9.

Table 9: Medications (other than stimulants) used by partner sample

| <u>Medication</u>           | <u>No. of partners</u> |
|-----------------------------|------------------------|
| Cough medicine              | 1                      |
| Medication for allergy      | 1                      |
| Skin or antiseptic ointment | 3                      |
| Sleeping pills              | 4 (1 `every night')    |
| Pain relievers              | 10 (3 `every day')     |
| Tranquillisers/sedatives    | 0                      |

In a sense, the above pattern can also be seen as 'occupational' use, given the comments below from the partners about the emotional stress of the lifestyle.

Half the women reported drinking alcohol once or twice a week or more frequently (most commonly spirits), though this is not remarkable in terms of the general population. The pattern of drug-taking is therefore very different from the drivers.

Table 10 shows the no. of women who reported any of the medical conditions covered in the interview.

Table 10: Specific medical conditions reported by partner sample

| <u>Medical condition</u>      | <u>No. of partners</u> |
|-------------------------------|------------------------|
| Chest wheezy or whistly       | 6                      |
| Diabetes                      | 0                      |
| High blood/urine sugar levels | 1                      |
| High blood pressure           | 2                      |
| Angina                        | 0                      |
| Heart attack                  | 0                      |
| Stroke                        | 0                      |
| High cholesterol              | 0                      |
| High triglycerides            | 0                      |
| Special diet                  | 1                      |

The main difference between drivers and partners was therefore the higher no. of the latter with respiratory problems, presumably because of smoking.

### Pattern of (family) life

Most of the rest of the partners responses relate to the differences in family life and the home regime when the driver is home and when he is away working. The pattern of working reported by the partners confirmed the general picture of 5/6 nights away for company drivers, generally longer and less regular patterns for owner-drivers. The partners were asked whether the pattern of employment was good or bad, from their point of view, a form of questioning chosen deliberately to avoid the possibility of biasing answers towards a 'bad' response. Generally the responses were that it was not good, particularly for children, causing loneliness, disruption and decreasing the partners' social life.

The most interesting views came in response to a questions about the main differences between life when the driver was home and when away. There was a decidedly mixed reaction. Some felt they had **more** freedom when the driver was away, some less. The main finding was that the pattern of driving work was intensely disruptive of several aspects of the family's routine. Some felt resentful about this; others had adapted, or could see the inevitability of it and/or strain placed on the driver.

Other questions illuminated the variety of the partners' feelings. Those with children saw the absence of a regular relationship with their father as potentially or actually damaging, while at the same time acknowledging that the children were actually more relaxed when the driver was away. The most frequent form of comment, however, was about the sheer disruption to routines occasioned by the driver's return, even if scheduled, and worse if unexpected. An important aspect of home life disrupted was the moral

authority of the household (*they defy me more because they know he'll say yes - it makes me mad*). Some saw this benign attitude on the part of the driver as obviously making up for the time away from the children, and as a way of assuaging guilt. There was even disruption of family sleeping patterns in a few cases, since the mother and one or more children slept together when the driver was away; this could cause resentment of the father's return.

There were several areas of family life which the partners saw their families missing out on. Regular social functions had suffered; drivers were rarely home for birthdays and other celebrations. Generally, there was sadness among those with children that the father and children were missing most of the normal relationship between the two. This amounted, in one or two cases, to the disappearance of childhood altogether for the father, so that he never actually knew his children in any real sense; he was almost literally a stranger, akin to an estranged parent. One poignant quote from a partner summarises the extent to which this effect can operate:

*Just a couple of weeks ago one of [driver]'s mates was killed in a truck, which was so just ordinary. I don't think he even sheds a tear, it's something, he's not tough but he can't let that sort of thing affect him. He's got miles ahead of him. It happened on the Sunday. [Driver] rang me on the Monday and said about [dead driver] being killed and [driver] was doing someone else's job so he had a mobile 'phone in the truck...and I hung up the 'phone and I just felt really sad for him. That one of his good mates that he travelled with, and they're a completely different breed of people the truckies, they talk a different language, they're sort of like aliens, they come from somewhere else...So I rang up our eldest daughter and our son...and I said I've just spoken to Dad and one of his mates was killed yesterday in the truck, I said I wonder if you just want to ring and say hello. I thought he might just like to hear from someone from home who loves him...and they didn't ring...and it wasn't until just a couple of days ago they both said to me we didn't ring Dad that night because really we don't know him...really we don't know him. That's true when I look back; it just made me feel so sad.*

Some partners in fact likened their situation to that of a single parent. One or two saw the advantage, however, of a much greater income than many single mothers; interestingly, one or two others saw the relative

**disadvantage** of their lack of the freedom of some single parents, of their own social life, since they felt obliged or forced to wait at home for the driver, despite the fact that he was only occasionally there. All admitted to a degree of loneliness; some had adapted and 'got used to it', others still felt it acutely, to the point where they would frequently visit or stay with relatives or occasionally friends when the driver was absent. Several commented on the high divorce rate in the industry.

There were several specific effects the partners were asked about. Half the partners reported their sleep disturbed by the drivers being home, to the point where one or two were exhausted by the time he left (often combined with intense activity to help prepare him for another period of driving). Nine of the 14 partners reported that the drivers snored when asleep, which was both obviously disruptive of sleep and a worrying finding in terms of possible sleep apnoea. The sleep patterns of the children were not disturbed, except as above (children no longer being able to sleep with their mothers).

Sadly, most of the partners with children, either presently or in the past, reported that the children were more relaxed when the driver father was away. A couple of mothers reported that the pattern had changed as the children had grown; they had missed their father when young, but increasingly resented his presence when older. Generally there was either sadness or resignation, about the loss of a significant relationship between father and children.

Several of the women had come to arrange their own social life independent of their life with the driver partner. This may or may not be a 'bad' thing, and is a reasonable adaptation to the circumstances faced by the women.

Several felt it unfortunate that they had missed a 'normal' social life; others

were simply not going to miss out if they could avoid it. In a couple of cases this had caused problems of jealousy between driver and partner.

Partners were asked about arguments. Twelve of the 14 reported arguments when the driver was home; 5 reported arguments 'most times he's home' or 'every time he's home'. Most of the arguments were about either the children or money, followed by the driver being away so much, or jealousy. Four reported that the arguments had involved threats of or actual violence, on at least a few occasions.

Eating patterns changed for 9 of the 14 households. All 9 reported a reliance on snack, junk or take-away foods when the driver was away, sometimes as a concession to the children.

The last few questions of this part of the questionnaire covered the feelings of driver and partner about the job, the perceived effect on the health of both, and the aspects of truck-driving which had changed over the time of the driver's employment in the industry.

Most (10) of the partners saw the drivers as loving the job, some seeing this as a falsely romantic notion about freedom (*'He likes to feel he's in control - think he's the boss on the road. But the company tells him what to do - it's a sad joke really'*). They, on the other hand, either hated the job or had 'got used to it'. The remaining three said they were 'happy if he's happy', perhaps a form of getting used to it, perhaps something more positive.

Many more partners than drivers saw the effect of the job on the drivers' health. The partners saw the loss of sleep, the weight problems, stress, drugs, bad food, the aches and pains which resulted from the excessive

driving. In terms of their own health, most reported some emotional impact, either in terms of worry about the possibility of an accident or loneliness. There was little perceived effect on the children's health.

Lastly, the partners saw several changes in the nature of the job over recent years. The most frequent perception was that there was increased pressure on drivers from the companies, and that the job was 'less friendly' than it used to be. A few commented on the decrease in the financial return, and work conditions deteriorating.

4.1.3 Time Use Diaries

The difficulty of retrieving completed Time Use Diaries illustrates well the inaccessibility of the drivers for most of the time which prevented more information being collected. To the time of this report, only six of the completed diaries have been returned. These were however all completed correctly and clearly, and drivers were able to complete the Diaries without problems.

Table 11 shows the results from these six Diaries, in terms of the mean percentage of time during the two-week sample period which was used for each of the 11 categories of work activity. The time used for each activity is expressed as a percentage of the total time, and as a percentage of working time, i.e. time other than 'time off'.

Table 11: Percentage of time used for each work activity (n=6)

| <u>Percent of total time</u> |              | <u>Percent of work time</u> |              |
|------------------------------|--------------|-----------------------------|--------------|
| <u>Mean %</u>                | <u>Range</u> | <u>Mean %</u>               | <u>Range</u> |

### Activity

|                            |       |             |       |             |
|----------------------------|-------|-------------|-------|-------------|
| Driving                    | 40.11 | 20.28-60.35 | 55.62 | 39.45-80.16 |
| Loading truck              | 2.18  | 0.00- 5.80  | 2.63  | 0.00- 6.75  |
| Unloading truck            | 1.96  | 0.00- 4.94  | 2.28  | 0.00- 5.12  |
| Waiting while truck loaded | 0.93  | 0.00- 2.47  | 1.69  | 0.00- 6.67  |
| Sleeping                   | 16.60 | 6.82-26.49  | 21.99 | 12.19-30.80 |
| Repairs/ maintenance       | 2.48  | 0.99- 5.48  | 3.47  | 1.31- 5.71  |
| Doing paperwork            | 1.01  | 0.30- 2.01  | 1.42  | 0.35- 2.08  |
| Taking a break             | 7.32  | 3.64-11.61  | 9.90  | 4.83-13.50  |
| Waiting for a load         | 0.88  | 0.00- 2.68  | 1.01  | 0.00- 3.11  |
| Time off                   | 26.53 | 3.40-63.29  | n/a   | -           |
| Other                      | 0.00  | -           | 0.00  | -           |

The Time Use Diary figures largely confirm the picture of work patterning which emerged in the relevant parts of the driver interviews. The range of driving hours, as a percentage of total time, represents approx. 35 hours per week (this driver was however semi-retired, so driving a short week) to approx. 100 hours per week. Similarly, and again disturbingly, sleep time ranged from less than 7 % of work time to 26.5 % of work time. The former figure is cause for concern, and confirms that some truckies are contravening the Hours of Driving Act, in all probability. The Time Use Diary is potentially a very powerful research instrument, if a more reliable retrieval system could be devised.

## **4.2 Methodological results**

Methodologically, we have learned a great deal. It has been much harder to recruit drivers for interview than anticipated, even with the help of the union and some companies. This is principally a reflection of the almost parallel universe the lifestyle of truck-driving represents. Even drivers on regular runs, let alone those who find work where they can, have only a small amount of precious time at home in which to have some form of family life,

recover, and prepare for the next trip. Understandably, a research interview is not a priority.

#### 4.2.1 Sampling

We were unprepared for the lengths of time that truckies were away from home. It is possible to contact a few via their mobile 'phones. Otherwise, recruitment has depended on the good will of the driver in contacting us. This is a great pity in our opinion, since the results so far convince us that there is a wealth of information about the trucking lifestyle, and the more subtle aspects of the job which contribute both to road safety and occupational health risks, to be gained with this methodology.

It would have been possible of course to recruit drivers who stopped at truck-stops on the highway. This seemed at first an obvious strategy, but was rejected for several highly cogent reasons. First, the study explicitly focussed on the partners of drivers as well as the drivers themselves; we were therefore looking to recruit drivers based in South Australia only. Drivers stopping at truck-stops in S.A. are unlikely to be S.A.-based drivers, however, since it is well known that outward-bound drivers do not voluntarily stop close to the departure point, and homeward-bound drivers keep going rather than stop 2 or 3 hours from home base (this is even recognised in the regulations of the Hours of Driving Act).

It would therefore have been prohibitively expensive to travel to truck-stops in other states just to recruit - the second reason. The remaining reasons came from talks with the Transport Union and members of the advisory group when designing the sampling strategy. We were told that the drivers who stopped at truck-stops were often tired, on schedules which allowed them

only a relatively short stop, and in a context which would militate against interview rapport. The drivers would therefore be unlikely to take the research interview seriously enough to give the considered views on a range of aspects of the job that the research study was seeking. The reliability and validity of the information would therefore be highly questionable.

#### 4.2.1 Interview schedule

The interview schedule worked well, and allowed drivers and partners to tell their story while standardising the coverage of the conversation. We have a much more sophisticated understanding of the structure and workings of the industry. Some economies are possible in the form or extent of questioning, which would further streamline this aspect of the research.

#### 4.2.2 Time Use Diary

Results to date suggest that the Time Use Diary is a realistic task for drivers, and can provide powerful information about the nature of the job, as well as validating part of the interview information. It allows a far more sophisticated understanding of the pattern of work than the driver's Log Book. If a reliable form of retrieval could be devised, there would be great merit in further study using this technique.

#### 4.2.4 Future strategies

We have learned that this form of research is difficult to do. It is akin to researching drug use or other 'deviant' behaviour, without the stigma that goes with those forms of behaviour. It is, however, worthwhile. Also, of course, research studies on truck-driving which have used a postal

questionnaire have achieved very low rates of return (around 15% only in phase one of the Worksafe study reported in 1992, for example - reference 36). It is tempting to do 'easy' research on available people. An old proverb describes a man who comes across a friend at night, searching the ground near a street-light. The friend explains that he has dropped his door-key. The man helps look for a while, then asks his friend where exactly he dropped the key. 'Over there, by the front door', says the friend. 'Then why are you looking here?', says the man. 'Well, there's more light here.'

Truck-drivers in many senses occupy a separate society, peopled by their own kind, in part because of the driving schedules they are required to operate to. Understandably, drivers are annoyed that the media in particular depict them as thrill-seekers and irresponsible. This 'victim-blaming' aspect of media accounts of research results undoubtedly affected our chances of recruiting drivers, judging by comments from union officials, some of the drivers, and drivers who responded to a radio 'phone-in about the results of a Worksafe study which were sensationalised in terms of drug-taking. Several drivers commented that research on trucking had a bad name because of that aspect.

A revised strategy would be based on a recruitment strategy which relies on 'snowball' sampling via the partners of truckies, who are an easier point of entry to the trucking network. Recruitment through the union was problematic in that two transport industry disputes coincided with sending our recruitment leaflets out. On the other hand, the employers body did not, as agreed, endorse the study with a covering letter, which may have decreased the credibility of the research. Some time was also lost exploring the idea of focus groups and participant observation (rides in trucks), neither of which was in fact possible.

## **5 Discussions/Conclusions**

The study has increased our respect for both truck-drivers and their partners. Both face considerable difficulties in their way of life; those that stick it out are undoubtedly a tough breed. At the same time, this so far small study and other research convinces us that there are profound risks to health, of different forms, for both drivers and families. For drivers, increasingly tight time schedules and decreasing real returns encourages forms of behaviour which are a direct threat to their own health, and in turn increase the chance of accident. This confirms the results of previous studies which have considered these factors (the recent Worksafe study, and a survey undertaken by the U.S. Insurance Institute of Highway Safety - references 48 and 50).

The findings relating to drug use are of course worrying. At the same time, given the schedules required of the drivers, it may, as the drivers claim, be preferable for drivers to take drugs rather than wipe out and perhaps take others with them. The study suggests a nexus between schedules, rates, competition for loads, sleep, fatigue and drugs, which is evidently worthy of further investigation. The provisions of the Hours of Driving Act are patently being ignored. Driver education and training are unlikely to be effective; this study suggests drivers are perfectly aware of the factors operating in their worklife.

For the partners, the trucking life means a rhythm of isolation and disruption which takes its toll in terms of their emotional health. Whether the lack of a normal father/child relationship has a lasting effect is beyond the scope of this study, but deserves attention.

Future work, if funded, will extend and refine the analysis, concentrating on those aspects which have emerged as critical to the physical and/or emotional health of drivers and their families. More interviews would allow some tentative conclusions about the range of symptomatic health effects which are not evident in hospital- based mortality and morbidity statistics.

The value of these findings, and of this form of research in supplementing epidemiological research, can we believe be illustrated by two quotes, one from a driver, the other from his partner:

*And jeez, it plays on your mind. You know, when you're away and your kids are playing up.....I've spent two and a half hours on the 'phone, trying to talk to her, and it just doesn't help.....it hasn't helped you, 'cause you're going down the highway with these things churning through your mind. Next thing you know, you're pulling up in the next - before we had mobile 'phones - you're pulling up in the next damn town, and the next 'phone box, and ringing her up again, and saying well, what about this and what about that, 'cause you've thought of something else. Then you're going down the road churning your guts out and having an argument with your missus 'cause she's not thinking like you are, and sometimes I really think to myself, well, phew, it's not a nice way to be driving down the road, when you're angry like that.*

*You never know when he's going to come home.....could be [away] between a fortnight and six weeks. They don't tell him where he's going until he's unloaded and ready to load again...and if he's next in line...there could be twelve other people waiting in line for the next load.....I think without that mobile 'phone our marriage would have disintegrated.....I think the wife has to be the stronger, unless the children are grown up, and you're going with your husband on a trip all the time, and you learn to drive the truck, and you're actually a mate with him, and a lot of women do, that's the only way you can bring your marriage close together.....we haven't got very many friends.*

## **6 Recommendations**

Obviously a small-scale pilot study such as this can legitimately only recommend areas for further and more intensive study. This is an important

function of this form of research, however, and was the main purpose of the study. There are several aspects of long-distance trucking which we believe should receive more research attention.

First and most urgently, the pattern of scheduling, and reasons for scheduling decisions, must be looked at. This and other studies suggest this to be the major factor underlying occupational health problems (including drug-taking and sleep deprivation), stresses for the families of drivers, and safety to the general public.

Second, there should be systematic research on the determinants of rates of pay, and the abuse of the award system universally reported in the present study.

Recent FORS-funded studies have begun to address these two issues (the Worksafe study and the Sydney University study of drivers' on-road performance referred to earlier), but much more information on these aspects of trucking needs to be collected and acted upon.

Third, the effect of long-term and habitual absence of the father on the children of truck-drivers needs to be addressed in a more extensive form of research than partner interviews.

Fourth, it would be worth looking at the difference to the driver/family relationship that the provision of a mobile telephone makes; this would be a relatively straightforward piece of research. Anecdotal evidence from the present study would suggest that this relatively simple technological innovation may have a subtle but considerable stabilising effect on family life and the psychological well-being of both driver and family, particularly in the

event of truck crashes, when they may be used to reassure the family without delay.

Fifth, the influence of wider industrial practices on trucking schedules, particularly the Just In Time principle employed in some industries, should be looked at more closely.

Sixth and last, a longitudinal study of driver 'survival' in the industry, in particular reasons for drivers leaving the industry (apart from death), would provide enormously powerful information about the nature of long-distance truck-driving, despite the methodological complexities.

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# **Appendices**

## **Appendix 1**

- . Leaflet to Drivers**
- . Reminder to Drivers**
- . Covering letter to trucking companies re distribution of leaflets**

## **Appendix 2**

**. Quota `screening' questions**

**'The Health Risks of Long-Distance Trucking'  
Research Study**

Filtering questions for potential interviewees

- 1) When did you first start working as a truck driver?
  
- 2) Have you stopped working as a truck driver for any periods of time since then (apart from holidays)?
  
- 3) What sort of truck driving do you do at the moment for most of your worktime - that is, for at least half of your worktime?
  
- 4) How long have you been doing this sort of driving as the major part of your work?

**[If company employee or prime contractor]**

- 5) How many trucks does the company you work for operate?
  
- 6) Do you have a wife or de facto partner you're currently living with?



## **Appendix 3**

**. Article printed in `Transport Worker`**

(Short article for 'Transport Worker')

### **'The Health Risks of Long-Distance Trucking' Research Study**

To introduce myself - my name is **Dave Abbott**, and my work is doing research on health. For some time now several people who work in areas of research to do with transport have felt that more information is needed about how a truckie's work affects his health. It's well known, of course, that conditions at work can have a good or bad effect on your health, depending on the way any job's organised. Unlike a lot of jobs where workers are static - i.e. they work at a fixed place - there is not a lot known, apart from statistics on accidents, about what a truckie's job involves that could be improved in terms of his health.

I originally came to talk to Keith Cys, who agreed it was a good idea, and who suggested the TWU could help. I then applied for some research money from the Federal Office of Road Safety, who somewhat to my surprise gave it to me. It's what's called a 'seeding grant' - in other words, it's a small amount of money to be spent doing some preliminary research with a view to maybe a bigger research study later. The study is based at the Department of Community Medicine at Adelaide University. Most of the money will be used to employ a Research Assistant, whose name is **Dave Arblaster**, to help in gathering information. I'll be supervising the work. Neither of us is employed by the Federal Office of Road Safety, however - they're just providing the money.

Keith Cys, and now Bob Heffernan, suggested I write this article to introduce the research idea, and to ask some of you for help with it.

The main idea of the research is to gain an understanding of what a truckie's worklife means in terms of not only occupational health and safety matters, but also in terms of how a truckie's work affects other aspects of his well-being, and the health and well-being of his family. Some of the information is available from statistics on sickness, Workcover claims and so on. But this is only a small part of the story. Statistics don't tell us what parts of the truckie's work are particularly stressful, for instance, or whether changes in work conditions etc. have improved things or made things worse. The best way to understand these 'hidden' aspects is to ask the man on the job.

The end result of this should be a series of ideas about improving the way trucking is organised so as to ease the health burden of the job for both the truckie and family. To get to that end result, we want to interview about 50 truckies and their families (that's how many the research money will allow us to do), and then ask the truckies to keep

a record for two weeks of how their time is spent when working. All the information we gather will be **absolutely confidential** - there will be no names, either of truck drivers or companies, in the research report.

The research project has only been going for a short while, so it will be a few weeks before we approach anyone about being interviewed. However, if anyone wants to know more about what we're doing, we're very happy to chat about it. Get in touch with Dave Arblaster (228 4637) or me (374 1177). We hope the research will improve conditions for all truckies.

## **Appendix 4**

**. Media information for radio 'phone-in**

## **THE HEALTH RISKS OF LONG-DISTANCE TRUCKING**

### **Research Study**

#### Media Information

This is a research study on the effects of the job of long-distance truck-driving on the health and well-being of truckies and their families. The study is being carried out through the Department of Community Medicine of Adelaide University, with a small research grant from the Federal Office of Road Safety.

Long-distance truck driving is unique in terms of occupational health risks. In one job it combines three different forms of occupational stress - shiftwork, heavy manual handling and social isolation. The health and well-being of the **families** of truck-drivers may also suffer. Drivers may be away from home for several days or weeks at a time, often without knowing when they will return. They may return in a variety of physical or mental states.

Truck-driving is a difficult area to research. Most previous studies have concentrated on assessing the severity or frequency of factors associated with truck accidents - principally excess speed, drugs and fatigue. This study is looking deeper, at why such coping behaviour occurs. The study will involve extensive interviews with truck-drivers and their partners about the lifestyle of long-distance truck-driving, and describing the pattern of the job of truck-driving via a Time Use Diary.

We are recruiting drivers for interview who are based in S.A., have been driving for at least three years, drive long distance (min. 500 kms or interstate) for more than half of their trips, and are currently living with a wife or partner. They (or their partners) can contact Dave Arblaster (Research Assistant for the study) on 228 4637 or pager no. 414 1968.

**For more information on the research** contact **Dave Abbott** (Senior Research Officer, SA Community Health Research Unit), tel. **374 1177**.

## **Appendix 5**

### **. Interview schedule - Drivers**

ID [ ][ ]

DATE [ ][ ][ ][ ]

TIME[ ][ ]

## **'The Health Risks of Long-distance Trucking'**

### Interview schedule - TRUCKIES

#### INTRODUCTION

i) This interview is part of a research study about how a long-distance truck driver's work affects his health and his family's well-being. The main idea of the research is to gain an understanding about what the truckie's worklife means in terms of not only occupational health and safety matters, but also in terms of how a truckie's work affects other aspects of his well-being, and the health and well-being of his family.

ii) The interview will cover:

- the type of work you do
- your present and recent state of health
- aspects of your work as a truck-driver
- a few basic facts about yourself
- any comments you wish to add about trucking and health

Since this is part of the first round of interviews, we'd welcome any comments you may have about any of the questions

iii) This [hand interviewee Confidentiality Statement] is a copy for you to keep of the ways we will keep any information you provide **absolutely confidential**. To summarise what it says, however, no-one except me will be able to identify that it was you that told me whatever you tell me. **We also do not tell any of the truckies we interview what their wives or partners said, and vice-versa**. We are very strict about confidentiality in this research study.

iv) We want to reassure you about confidentiality, because it's **very** important in this research study that people we interview do tell us the truth about their work. Trucking is a difficult job to do research on, so it's particularly important that we get correct and accurate information

v) As I've just said, no-one apart from me will know who said what. However, if there are any questions you do not want to answer, we'll just move on to the next one.

vi) Do **you** have any questions before we start?

SECTION 1 - BACKGROUND INFORMATION

*The first part of the interview deals with the type of work you do*

- 1) When did you first start working as a truck-driver?
  
- 2) How did you come to work as a truckie?
  
- 3) Have you changed jobs, or had any break of employment, since then?

Yes [ ]      No [ ]

If **NO**,

*[PROBE:    Times  
             Length of time  
             Nature of work  
             Reason for break]*

- 4) So for the last ... years your main employment has been driving trucks?

- 5) Are you an owner/driver, or company driver?

Owner/driver                      [ ]

Company driver    [ ]

***[If OWNER/DRIVER]***

***PROBE type of employment status***  
(subbie, independent, etc.)

***[If COMPANY DRIVER OR PRIME CONTRACTOR]***

- 6) How long have you worked for the company you work for at the moment?

***ALL DRIVERS***

- 7) How many hours do you usually work each week driving a truck?  
[PROBE: *variation across weeks*  
*minimum/maximum hours worked*]
- 8) Is any of your worktime spent doing paid work unrelated to truck-driving? (*i.e. other part-time work*)  
[PROBE]
- 9) What sort of rig do you usually drive? (*i.e. more than half the time*)  
[PROBE - *make, type, h.p. rating, etc.*]
- 10) What sort of trip do you usually drive? (*i.e. more than half the time*)  
[PROBE: *Distance*  
*Interstate vs. intrastate*  
*Destinations*]
- 11) What sort of load do you usually carry? (*more than half the time*)  
[PROBE]
- 12) How often are you away from home at least one night?  
[PROBE *frequency in terms of no. per unit time - not just e.g. 'often', 'sometimes', etc. - If NEVER, go to Q.19*]
- 13) Where do you spend the night when away from home overnight?  
[PROBE]

14) What sort of sleep do you usually get when away from home?  
*[PROBE: Amount  
Depth  
Quality  
Frequency of waking]*

15) How is the loading and unloading organised for the trucks you drive?  
*[PROBE]*

## Section 2 - Health

*The next set of questions is about your health*

16) First of all, what does 'health' mean to you?  
*[PROBE - e.g. what do you think are some of the things that keep you healthy? make you sick?]*

17) In general, would you say that your health is excellent, good, fair or poor?

18) Where do you usually go if there's anything wrong with your health?

19) Have you been admitted to hospital in the last twelve months?

Yes [ ]      No [ ]

If **YES**,

20) Not counting the times you just went to the outpatients clinic or casualty, how many times have you been admitted to hospital in the last twelve months?

**If ADMITTED TO HOSPITAL IN THE LAST TWELVE MONTHS,**

*I want to talk about (this/your most recent) stay in hospital*

21) How many nights did you stay in hospital?

- None
- 1 night to less than 7 nights
- 1 week to less than 2 weeks
- 2 weeks to less than 1 month
- 1 month or more

22) What medical conditions were you in hospital for?  
*[PROBE sufficient detail of condition]*

23) When was the last time you consulted a doctor about your own health?

- Less than 3 months ago
- 3 months to less than 6 months ago
- 6 months to less than 12 months ago
- 12 months ago or more
- Never/Don't know

Unless **NEVER/DON'T KNOW**,

*I want to talk to you about (this/your most recent) consultation*

24) What were the conditions you had which caused you to consult the doctor?  
*[PROBE]*

25) In the last twelve months, have you consulted anyone else about your own health?

Yes  No

If **YES**,

- 26) Who did you consult?  
*[PROBE type of health worker, etc. and condition/problem]*

If **WORKING**,

- 27) In the last two weeks have you stayed away from your job because of any illness or injury?

Yes [ ] No [ ]

If **YES**,

- 28) What was the illness or injury?  
*[PROBE]*

- 29) In the last two weeks, have you taken or used any of the following?

Cough medicines or any other remedies for colds [ ]  
Medications for an allergy [ ]  
Skin ointments or creams such as heat rubs,  
antiseptic creams or creams for rashes [ ]  
Medications for your stomach, or any laxatives [ ]  
Fluid tablets or medications for heart problems  
or blood pressure [ ]  
Dietary pills or medications [ ]

**[If any taken or used, PROBE details**, particularly whether taken or used while driving]

- 30) How often do you usually take sleeping pills or medications?

[ ] Every day and/or night (6-7 days/nights per week)  
[ ] Most days and/or nights (4-5 days/nights per week) [ ]  
1-3 days and/or nights a week [ ]  
Less than once a week [ ]  
Never [ ]

**[If any taken or used, PROBE details, etc.]**

31) How often do you usually take pain relievers?

- Every day and/or night (6-7 days/nights per week)  
 Most days and/or nights (4-5 days/nights per week)   
 1-3 days and/or nights a week   
 Less than once a week   
 Never

**[If any taken or used, PROBE details, etc.]**

32) How often do you usually take medications, tranquillisers or sedatives?

- Every day and/or night (6-7 days/nights per week)  
 Most days and/or nights (4-5 days/nights per week)   
 1-3 days and/or nights a week   
 Less than once a week   
 Never

**[If any taken or used, PROBE details, etc.]**

33) a) How often do you usually take stimulants?

- Every day and/or night (6-7 days/nights per week)  
 Most days and/or nights (4-5 days/nights per week)   
 1-3 days and/or nights a week   
 Less than once a week   
 Never

**[If any taken or used]**

b) What type of stimulants do you take?

c) Do you take them only while driving?

d) What quantity do you take?



43) Are you on any sort of special diet?

Yes [ ] No [ ]

If **YES**,

*[PROBE details]*

44) How often, on average, do you drink alcohol?  
*[PROBE and record one of following]*

Daily [ ]  
Several times a week [ ]  
Once or twice a week [ ]  
Less than once a week [ ]  
Never [ ]

Unless **NEVER**,

45) What types of alcohol do you usually drink?

Beer (normal strength) [ ]  
Light beer [ ]  
Cider [ ]  
Wine [ ]  
Spirits [ ]  
Fortified wine (port, sherry, etc.) [ ]  
Other (please state) [ ]

46) How often do you drink alcohol while driving the truck?

***[READ OUT]***

Often [ ]  
Occasionally [ ]  
Never [ ]

47) Have you ever smoked regularly?

Yes [ ] No [ ]

If **YES**,

Do you currently smoke?

Yes [ ] No [ ]

If **YES**,

How many cigarettes, on average, do you smoke each day?  
.....cigarettes

#### Section 4 - Aspects of Job

*This is the main part of the interview - it's about what trucking's like as a job these days*

- 48) First of all, what do you like about truck-driving as a job?  
*[PROBE]*
- 49) What do you dislike?  
*[PROBE]*
- 50) Do you think your health is affected by your job driving a truck?  
*[Unless believes that health unaffected]*  
How is your health affected?  
*[PROBE]*

***I'm now going to go through a list of aspects of trucking as a job, and in each case ask you whether it's a problem for drivers in the industry.***

***[PROBE in each case - including, for problems identified, how serious the problem is]***

- 51) The types of load carried.

*[If a problem identified]*

Why is it like that?

- 52) Loading and unloading arrangements.

*[If a problem identified]*

Why is it like that?

- 53) The way the work is scheduled.

*[If a problem identified]*

Why is it like that?

- 54) The pay rates.

*[If a problem identified]*

Why is it like that?

- 55) The amount of control drivers have over their work.

*[If a problem identified]*

Why is it like that?

- 56) The time away from family and friends.

*[If a problem identified]*

Why is it like that?

57) Fatigue while driving.

*[If a problem identified]*

Why is it like that?

58) The use of drugs to stay awake while driving.

*[If a problem identified]*

Why is it like that?

59) The maintenance of the trucks.

*[If a problem identified]*

Why is it like that?

60) The quality of the roads and highways.

*[If a problem identified]*

Why is it like that?

61) The attitude of the police.

*[If a problem identified]*

Why is it like that?

62) The attitude of road transport inspectors.

*[If a problem identified]*

Why is it like that?

63) Other road users.

*[If a problem identified]*

Why is it like that?

64) The system for employing drivers.

*[If a problem identified]*

Why is it like that?

65) Is there anything else about truck-driving which is a particular problem?

66) Have you been involved in any accidents as a truck-driver?

*[PROBE fully -      how many times  
                         nature of accident(s)  
                         deaths/injuries  
                         whether driver himself hurt]*

67) Have you witnessed any accidents as a truck-driver?

*[PROBE fully - how many times  
nature of accident(s)  
deaths/injuries]*

68) During the time you've worked as a truck-driver, which aspects of the job have got worse?  
*[PROBE]*

69) Which aspects have got better?  
*[PROBE]*

*Lastly, a couple of questions about yourself*

70) How old are you?

[ ]

71) Have you been married to, or lived with anyone, before your relationship with .....

Yes [ ] No [ ]

If **YES**,

*[PROBE details]*

72) Which of these income groups *[SHOW CARD]* did your income from truck-driving and travelling expenses, but before tax, fall in for the last tax year? - that is, income after truck

- 1) Less than \$9000 per year [ ]
- 2) \$9001 - \$15000 per year [ ]
- 3) \$15001 - \$22000 per year [ ]

- 4) \$22001 - \$32000 per year
- 5) \$32001 - \$50000 per year
- 6) \$50001 - \$60000 per year
- 7) \$60001 - \$75000 per year
- 8) Over \$75000 per year
- Refused

Those are all the actual questions, but is there anything else you think we should know about truck driving as a job which has an affect on your health and well-being, or the health and well-being of your family?

***THANKS VERY MUCH FOR YOUR TIME***

Explanation of Time Usage Diary

Interview length [     ]

## **Appendix 6**

### **. Time Use Diary**

**[As supplement attached]**

## **Appendix 7**

### **. Interview Schedule - Partners**

ID [ ][ ]

DATE [ ][ ][ ][ ]

TIME [ ][ ]

## **'The Health Risks of Long-distance Trucking'**

### Interview schedule - PARTNERS

#### INTRODUCTION

- i) This interview is part of a research study about how a long-distance truck driver's work affects his health and his family's well-being. The main idea of the research is to gain an understanding about what the truckie's worklife means in terms of not only occupational health and safety matters, but also in terms of how a truckie's work affects other aspects of his well-being, and the health and well-being of his family.
- ii) The interview will cover:
- you and your family
  - the present and recent state of health of you and your family
  - the - pattern of your life living with [*truck-driver's name*]
  - a few basic facts about yourself
  - any comments you wish to add about trucking and health
- iii) This [*hand person Confidentiality Statement*] is a copy for you to keep of the ways we will keep any information you provide **absolutely confidential**.  
To summarise what it says, however, no-one except me will be able to identify that it was you that told me whatever you tell me. **We also do not tell any of the truckies we interview what their wives or partners said, and vice-versa.** We are very strict about confidentiality in this research study.
- iv) We want to reassure you about confidentiality, because it's **very** important in this research study that people we interview do tell us the truth about truck-driving as a job. Trucking is a difficult job to do research on, so it's particularly important that we get correct and accurate information

- v) As I've just said, no-one apart from me will know who said what. However, if there are any questions you'd prefer not to answer, we'll just move on to the next one.
- vi) Do **you** have any questions before we start?

## SECTION 1 - BACKGROUND INFORMATION

*The first few questions are about you and your family*

- 1) When did you marry ..... /start living with ..... ?
- 2) Have you separated for any time since then?
- 3) So you've been married/living together for ..... years?
- 4) Do you have any children living with you?  
Yes [ ] No [ ]  
If **YES**,  
[PROBE details - age and sex of each child]
- 5) Are any of the children from a previous relationship with someone other than ..... ?  
Yes [ ] No [ ]

If **YES**,

[*PROBE details*]

6) Do you have a paid job at the moment?

Yes [ ]      No [ ]

If **YES**,

What work do you do?

[*PROBE - job title, type of company/organisation, brief job description*]

-----  
SECTION 2 - HEALTH

*The next set of questions are about your health - most of these questions are the same as used in the National Health Survey, which is done with a sample of people right across Australia every few years*

7) First of all, what do you understand by the word 'health'? What does

'health' mean to you?

[*PROBE - e.g. what do you think are some of the things that keep you healthy? make you sick?*]

If **WORKING**,

8) Does your work have any effect on your health?

[*If necessary*]

Is it a good effect or a bad effect?

In what ways is your health affected?

[*PROBE fully*]

9) In general, would you say that your health is excellent, good, fair or poor?

10) Where do you usually go if there's anything wrong with your health or (*if appropriate*) the health of any of the kids?

11) Have you been admitted to hospital in the last twelve months?

Yes [ ] No [ ]

If **YES**,

12) Not counting the times you just went to the outpatients clinic or casualty, how many times have you been admitted to hospital in the last twelve months?

If **ADMITTED TO HOSPITAL IN THE LAST TWELVE MONTHS**,

*I want to talk about (this/your most recent) stay in hospital*

13) How many nights did you stay in hospital?

None [ ]  
1 night to less than 7 nights [ ]  
1 week to less than 2 weeks [ ]  
2 weeks to less than 1 month [ ]  
1 month or more [ ]

14) What medical conditions were you in hospital for?  
*[PROBE reasonable detail of condition]*

15) When was the last time you consulted a doctor about your own health?

Less than 3 months ago [ ]  
3 months to less than 6 months ago [ ]  
6 months to less than 12 months ago [ ]  
12 months ago or more [ ]  
Never/Don't know [ ]

Unless **NEVER/DON'T KNOW**,

*I want to talk to you about (this/your most recent) consultation*

16) What were the conditions you had which caused you to consult the doctor?

*[PROBE]*

17) In the last twelve months, have you consulted anyone else about your own health?

Yes [ ]      No [ ]

If **YES**,

18) Who did you consult?

*[PROBE type of health worker, etc. and condition/problem]*

If **WORKING**,

19) In the last two weeks have you stayed away from your job because of any illness or injury?

Yes [ ]      No [ ]

If **YES**,

20) What was the illness or injury?

*[PROBE]*

***If no children, go to Q.25***

21) Have any of your children been admitted to hospital in the last twelve months?

Yes [ ]      No [ ]

If **NO**, go to Q.23

If **YES**,

[*PROBE which child(ren) and what medical condition(s)*]

22) How many nights did [*each child mentioned*] stay in hospital?

| Child<br>Condition | Child<br>Condition | Child<br>Condition |
|--------------------|--------------------|--------------------|
|--------------------|--------------------|--------------------|

None

1 night to less than 7 nights

1 week to less than 2 weeks

2 weeks to less than 1 month

1 month or more

23) When was the last time you consulted a doctor about any of your children?

|                                     |     |     |
|-------------------------------------|-----|-----|
| Less than 3 months ago              | [ ] |     |
| 3 months to less than 6 months ago  | [ ] | [ ] |
| 6 months to less than 12 months ago | [ ] | [ ] |
| 12 months ago or more               | [ ] |     |
| Never/Don't know                    | [ ] | [ ] |

Unless **NEVER/DON'T KNOW**,

[*PROBE which child(ren) and what condition(s)*]

24) In the last twelve months, have you consulted anyone else about your children's health or well-being?

Yes [ ]      No [ ]

If **YES**,

[*PROBE which child(ren), type of health worker etc. and condition/problem*]

*Back to your health*

25) In the last two weeks, have you taken or used any of the following?

[**READ OUT**]

Cough medicines or any other remedies for colds [ ]  
Medications for an allergy [ ]  
Skin ointments or creams such as heat rubs,  
antiseptic creams or creams for rashes [ ]  
Medications for your stomach, or any laxatives [ ]  
Fluid tablets or medications for heart problems  
or blood pressure [ ]

**If any taken or used, PROBE details**

26) How often do you usually take sleeping pills or medications?

Every day and/or night (6-7 days/nights per week) [ ]  
Most days and/or nights (4-5 days/nights per week) [ ]  
1-3 days and/or nights a week [ ]  
Less than once a week [ ]  
Never [ ]

**If any taken or used, PROBE details**

27) How often do you usually take pain relievers?

- Every day and/or night (6-7 days/nights per week)
- Most days and/or nights (4-5 days/nights per week)
- 1-3 days and/or nights a week
- Less than once a week
- Never

**If any taken or used, PROBE details**

28) How often do you usually take medications, tranquillisers or sedatives?

- Every day and/or night (6-7 days/nights per week)
- Most days and/or nights (4-5 days/nights per week)
- 1-3 days and/or nights a week
- Less than once a week
- Never

**If any taken or used, PROBE details**

29) How often do you usually take stimulants?

- Every day and/or night (6-7 days/nights per week)
- Most days and/or nights (4-5 days/nights per week)
- 1-3 days and/or nights a week
- Less than once a week
- Never

**If any taken or used, PROBE details**

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### SECTION 3 - SPECIFIC MEDICAL CONDITIONS

*Now I want to ask you about some specific medical conditions - again, these are standard questions used in the National Health Survey*

30) Apart from when you have had colds, has your chest ever sounded wheezy or whistly?

Yes [ ] No [ ]

*Have you ever been told by a doctor or nurse that you have....?*

31) Diabetes? Yes [ ]  
No [ ]

32) High sugar levels in your blood or urine? Yes [ ]  
No [ ]

33) High blood pressure? Yes [ ]  
No [ ]

34) Angina? Yes [ ]  
No [ ]

35) Had a heart attack? Yes [ ]  
No [ ]

36) Had a stroke? Yes [ ]  
No [ ]

37) High cholesterol? Yes [ ]  
No [ ]

38) High triglycerides? Yes [ ]  
No [ ]

39) Are you on any sort of special diet?

Yes [ ] No [ ]

If **YES**,

*[PROBE details]*

40) How often, on average, do you drink alcohol?  
*[PROBE and record one of following]*

Daily [ ]

Several times a week [ ]  
Once or twice a week [ ]  
Less than once a week [ ]  
Never [ ]

Unless **NEVER**,

41) What types of alcohol do you usually drink?

Beer (normal strength) [ ]  
Light beer [ ]  
Cider [ ]  
Wine [ ]  
Spirits [ ]  
Fortified wine (port, sherry, etc.) [ ]  
Other (please state) [ ]

42) Have you ever smoked regularly?

Yes [ ] No [ ]

If **YES**,

Do you currently smoke?

Yes [ ] No [ ]

If **YES**,

How many cigarettes, on average, do you smoke each day?

.....cigarettes

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#### SECTION 4 - LIFE PATTERN

*The next set of questions are about the differences in home life, for you and the kids, when ..... is away driving, and when he's home. I'll just mention again that everything you tell me is **strictly confidential**.*

43) How often is ..... away at work before the children are awake?

Is that good or bad, from your point of view?  
[PROBE]

44) How often is ..... away at work during the evenings?

Is that good or bad, from your point of view?  
[PROBE]

45) How often is ..... away overnight when he's working?

Is that good or bad, from your point of view?  
[PROBE]

46) What are the main differences in your home life between when  
..... 's here, and when he's away driving?

[PROBE fully]

[If necessary]  
How do you feel about that?

**If necessary, PROBE aspects as follows:**

47) Are there any differences between when ..... 's here, and when  
he's away, in your sleep patterns?

[PROBE fully]

[If appropriate]  
How do you feel about that?

48) Does ..... snore when he's home and asleep?

Yes [ ]      No [ ]

- 49) Are there any differences between when ..... 's here, and when he's away, in the kids' sleep patterns?

[*PROBE fully*]

[*If appropriate*]  
How do you feel about that?

- 50) Are there any differences between when ..... 's here, and when he's away, in the kids' behaviour?

[*PROBE fully*]

[*If appropriate*]  
How do you feel about that?

- 51) Are there any differences between when ..... 's here, and when he's away, in your relationship with the kids?

[*PROBE fully*]

[*If appropriate*]  
How do you feel about that?

- 52) Are there any differences between when ..... 's here, and when he's away, in your social life?

[*PROBE fully*]

[If appropriate]  
How do you feel about that?

53) Do you and ..... ever argue when he's home?

Yes [ ]      No [ ]

If **YES**,

How often do you argue?

[**READ OUT**]

Every time he's home [ ]  
Most times he's home [ ]  
Only a few of the times he's home [ ]

What do you usually argue about?

54) Have any of the arguments ever involved threats of violence, or actual violence?

Yes [ ]      No [ ]

If **YES**,

How often has that happened?

[**READ OUT**]

Every time you've argued [ ]  
Most times you've argued [ ]  
Only a few of the times you've argued [ ]

55) When ..... 's away driving, do your meal arrangements change? (e.g. type of food eaten, meal times, change from formal to informal meals)

Yes [ ]      No [ ]

If **YES**,

56) What changes occur?

[*PROBE fully*]

57) Do the children eat differently when ..... 's away?

Yes [ ]      No [ ]

If **YES**,

[*PROBE fully*]

**REMEMBER TO ASK THE FOLLOWING QUESTION**

**Another researcher is interested in this subject, of nutrition and different types of work. Would you be willing to take part in an interview with him as well?**

Yes [ ]      No [ ]

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SECTION 5 - ASPECTS OF TRUCK-DRIVER'S JOB

*Now a few questions about what you think about ..... 's job driving trucks.*

**[PROBE AS NECESSARY]**

58) How does ..... feel about his job driving trucks?

[*PROBE*]

59) How do you feel about his job?

[*PROBE*]

60) Does ..... 's work have any effect on his health?

[*PROBE*]

[***If necessary***]

Is it a good effect or a bad effect?

[***PROBE***]

In what ways is his health affected?

[***PROBE FULLY***]

61) Does ..... 's work have any effect on your health?

[*PROBE FULLY*]

[***If necessary***]

Is it a good effect or a bad effect?

[***PROBE***]

In what ways is it affected?

[***PROBE FULLY***]

62) Does ..... 's work have any effect on the children's health?

[***PROBE FULLY***]

[***If necessary***]

Is it a good effect or a bad effect?

[***PROBE***]

In what ways are they affected?  
**[PROBE FULLY]**

63) Are there any other particular things about truck-driving that you think are significant in terms of health and well-being?

[PROBE]

64) Has truck-driving as a job changed in any ways since ..... started working in the industry?

[PROBE]

65) Last few questions.....how old are you? [ ]

66) Have you been married to, or lived with anyone, before this relationship with .....?

Yes [ ] No [ ]

If **YES**,

[PROBE details]

67) Which of these income groups [SHOW CARD] did your income from truck-driving and travelling expenses, but before tax, fall in for the last tax year? - that is, income after truck-driving and travelling expenses, but before tax.

- 1) Less than \$9000 per year [ ]
- 2) \$9001 - \$15000 per year [ ]
- 3) \$15001 - \$22000 per year [ ]
- 4) \$22001 - \$32000 per year [ ]
- 5) \$32001 - \$50000 per year [ ]
- 6) \$50001 - \$60000 per year [ ]
- 7) \$60001 - \$75000 per year [ ]
- 8) Over \$75000 per year [ ]

Refused

[ ]

*Those are all the actual questions, but is there anything else you think is of importance about driving a truck as a job which has an effect on your health or ..... 's or the kids' health and well-being?*

**THANKS VERY MUCH FOR YOUR TIME**

Interview length [ ]

## **Appendix 8**

### **. Confidentiality Statement**

**'The Health Risks of Long-Distance Trucking'  
Research Study**

CONFIDENTIALITY STATEMENT

- 1) This confidentiality statement gives written information about the research study you're taking part in, and the steps we've taken to keep the information you provide as confidential as is possible.
- 2) The interview you've been asked to take part in is part of a study called 'The Health Risks of Long-distance Trucking'. This is a research study about how a long-distance truck driver's work affects his health and his family's well-being. The main idea of the research is to gain an understanding about what the truckie's worklife means in terms of not only occupational health and safety matters, but also in terms of how a truckie's work affects other aspects of his well-being, and the health and well-being of his family.
- 3) The money for the study has come from the Federal Office of Road Safety in Canberra. However, none of those who are organising or working on the study works for the Office of Road Safety. The study is being done by the Department of Community Medicine at Adelaide University, who are independent of any government department.
- 4) The people who have organised this study all have many years of experience in research and understand well the need for information to be kept strictly confidential. We are taking several steps to ensure this, as follows.

We have to be able to identify each truckie and family so that we know how many we have interviewed, and what sort of driving work they do. However, to keep the information about identity to a minimum, the following arrangements apply:

- i) Only those actually doing the research will know your name, address or telephone number, and what you said in the interview.
- ii) Your name does not appear anywhere on the form which we use for interviews. There will only be a number, which has to be matched with a list kept under lock and key in order to identify anyone interviewed.
- iii) We have undertaken in writing not to publish the names of anyone involved in the study, and not to present the findings in a way that will identify you.
- iv) You are free to refuse to answer any question you do not wish to answer.

- v) Tape-recording interviews is a way of making sure the information given in the interview is accurate, and keeping the interview as short as possible. None of the tapes will be copied. After the information from each interview has been written out, the tape will be returned to you.
- 5) If at any time you have any questions about the research, please contact us.

Signed

**David Abbott, Research Supervisor**

## **Appendix 9**

**. Letter of thanks accompanying return of interview tapes**