Crashes on the way to and from coal mines in New South Wales

Nick Mabbott, Debbie Cornwell, Bob Lloyd & Anna Koszelak

ARRB Group Ltd. nick.mabbott@arrb.com.au

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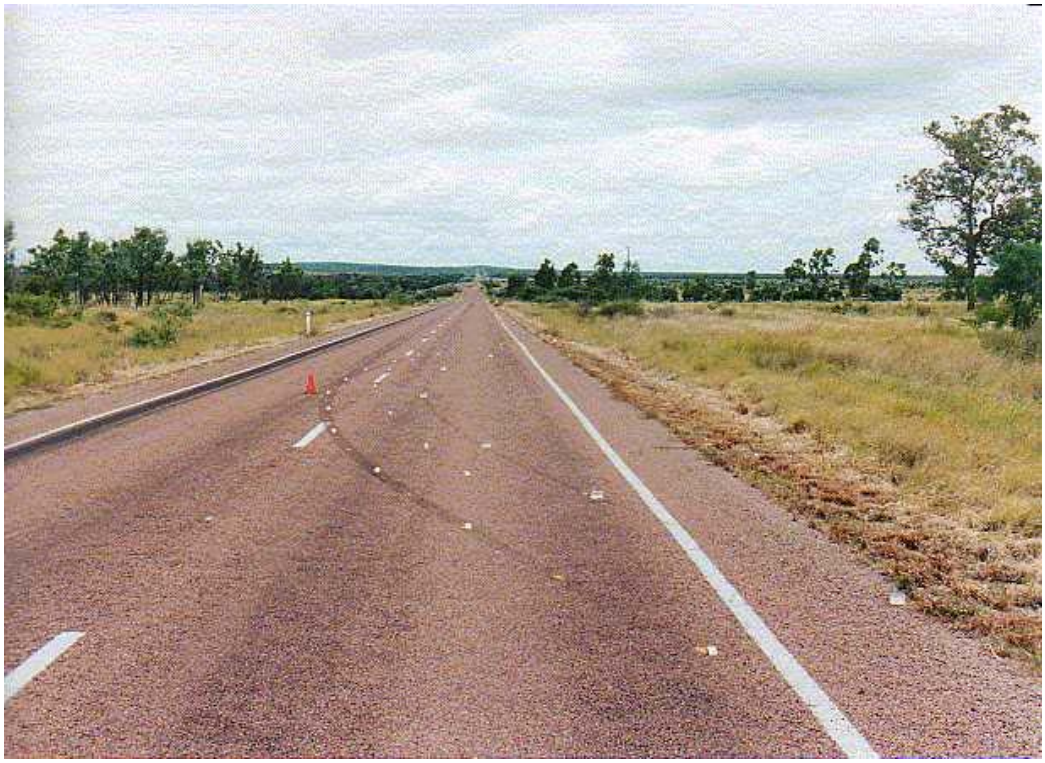

The general perception of the state of fatigue-related crashes in transit home from coal mining workplaces in New South Wales (NSW) is that it is occurring, although the prevalence is somewhat unknown. Coal Services Health and Safety Trust commissioned ARRB Group to investigate the following research questions within the study:

1. What is the prevalence of coal mine workers having road crashes on the way to or way home from coal mines in the Hunter Valley, Newcastle Coalfields and Wollongong areas?
2. What proportion of these crashes has fatigue as a contributing factor?
3. Are there any differences in crashes for people who work in underground mining versus open cut mining?
4. Does the length of shift or time of day have an influence on any of these crashes?
5. What are the similarities and differences between travel crashes for coal miners in NSW compared to Qld?

Two sets of data were collected. The first was travel injury data matched with health data, supplied by Coal Services. A second data set was obtained through questionnaire to 18 mines. The data pertains to incidents and near misses that occurred within the last twelve months. Both crash data and incident data results are shown together where possible to highlight both the

crashes and the near misses that have occurred on the way to and from coal mines in New South Wales. The basic findings are shown in the following table.

Crash/incident causal factor	Crash	Incident on way to work	Incident on way home
1. Fell asleep	6 (2.7)	15 (9.8)	28 (21.9)
2. Lost control due to inattention	27 (12.3)	6 (3.9)	5 (3.9)
3. Lost control due to conditions	28 (12.8)	5 (3.3)	4 (3.1)
4. Hit another vehicle from behind	12 (5.5)	0 (0)	0 (0)
5. Failed to give way	17 (7.8)	5 (3.3)	3 (2.3)
6. Other driver on wrong side of road	23 (10.5)	15 (9.8)	13 (10.2)
7. Other driver lost control	0 (0)	3 (2.0)	4 (3.1)
8. Hit or swerved to miss an animal	37 (16.9)	87 (56.9)	63 (49.2)
9. Other driver hit you from behind	35 (16.0)	5 (3.3)	1 (0.8)
10. Other driver failed to give way	34 (15.5)	12 (7.8)	7 (5.5)
Total	**219 (100)**	**153 (100)**	**128 (100)**

At January 2005, approximately 9,760 coal miners worked in New South Wales. A total of 219 vehicle crashes were recorded in the 7.5 year period of data supplied. Of these four were fatal. Therefore, there were 215 injury crashes, or 28.6 crashes per year. This represents a prevalence of approximately 0.3% of NSW coal miners being injured in a motor vehicle crash per year on the way to or from work. The four fatal crashes give a rate of 0.53 fatals per year. This represents 0.005% of the coal mining population of NSW being fatally injured in a motor vehicle crash per year on the way to or from work.

Costs of motor vehicle crashes to society include at least the following: Loss of future income, medical costs, damage costs, pain and suffering, emergency services, etcetera. A fatal non-urban crash in NSW is estimated to cost society $1,726,700 whilst an injury crash is estimated to cost $124,300 per crash. **The total cost to the coal NSW mining community per year is approximately $4,470,131 in June 2002 dollar terms.**

This research has highlighted the fact that around 29.2 coal miners in NSW will crash and be injured and 0.5 drivers will be killed on the way to or from work in any one year. This number is likely to increase as the mean age increases and the BMI of individuals increase. Further, the cost to the NSW coal mining community per year is approximately $4,470,131 in June 2002 dollar terms.

There are several benefits that can be gained through the implementation of this project. The most important is the knowledge concerning what are the factors that contribute most to coal miners crashing on their way to or from work. The information arising from the results of this project has provided a strong platform for which to base strategies to reduce the prevalence of coal miners suffering road trauma.

The five research questions are addressed in detail within the report, which is available from Coal Services Health & Safety Trust http://www.coalservices.com.au/

The body of text discusses justification for the recommendations provided. The following recommendations are made in an effort to reduce the trauma associated with travel crashes on the way to and from coal mines in NSW.

Recommendation 1: That a working party be established to investigate and initiate any recommendations from this report.

Recommendation 2: All NSW coal mines should undertake to ensure that all staff can adequately manage the current roster designs that are in place.

Recommendation 3: All NSW coal mines should undertake fatigue management training of all staff and management.

Recommendation 4: A health program for NSW coal miners is put in place, either through the mines or the NSW Government.

Recommendation 5: All mines should investigate opportunities for utilising buses as an alternative means of transport. If not practicable, car pooling should be encouraged.

Recommendation 6: Further investigation of traffic volumes and movements is conducted through the working party.

Recommendation 7: The working party initiates road safety audits to investigate the delineation of roads in the Hunter Valley Region.

Recommendation 8: That the working party investigates the costs associated with treating the two edges and the centre line of the New England Highway, between Singleton and Musswellbrook, with audio-tactile edgeline (raised).

Recommendation 9: That the working party discuss costs associated with mitigation of animals in the road reserve and recommend countermeasures to Government.

Recommendation 10: That the working party assess the outcomes of any treatments using similar performance indicators as used within this study.

Further information on the working party or the report can be obtained from Nick Mabbott, Key Account Manager, Mining, ARRB Group Ltd. Phone (08) 9227 3000 or 0404 057066.