The Fatigue Management Program- Alternatives to Prescription

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Summary

Compliance is frequently seen as a burden, rather than an opportunity to improve performance, increase returns on investment, enhance safety and meet community standards. Genuinely "smart" compliance strategies are those which achieve the best possible outcomes for all those involved.

Regulators must not lose sight of the fact that we legislate to obtain an outcome - we should not be in the business of legislating without considering what the ultimate benefits a particular regulation seeks to achieve.

This paper aims to challenge the traditional prescriptive approach to regulatory interventions. The prescriptive approach to issue resolution relies on 'rule and rote' methodology which requires clear and unambiguous rules that cover all possible situations. The paper demonstrates that fatigue management safety issues do not meet the criteria for successful implementation of the rule and rote approach.

An example of an alternative approach, the Queensland Transport Fatigue Management Program (FMP) Pilot, is explored. The FMP Pilot aims to develop and evaluate a program, which allows industry and Government to better manage heavy vehicle driver fatigue under alternative compliance arrangements instead of the regulated driving hours regime. The results of the FMP Pilot to date are discussed before highlighting the responsibilities of Government and industry in implementing effective alternative arrangements.

Introduction

When looking for ways to improve a particular situation, it is important to have a full understanding of the causes, risks and issues that contribute to the issue. Equally important is the ability to keep an open mind and consider innovative alternatives in addressing the situation and developing a suitable intervention. This paper seeks to challenge the traditional mindset that assumes a prescriptive solution to all problems.

When assessing the risk of fatigue in heavy vehicle drivers, it is useful to put the situation in perspective. Heavy vehicle drivers are required to operate very large vehicles, many around 42.5 tonnes or more, at speeds of up to 100 kilometres per hour. In addition, these vehicles are travelling for the most part on narrow pavements that are often no more than 6 metres wide. When you consider that these vehicles are themselves 2.5 metres wide, that does not leave much room for error. Another issue to add to this mix is the high interaction on the road with other vehicles, such that on an average trip from Brisbane to Melbourne, a truck would pass thousands of other vehicles. These factors add up to indicate that the potential consequences for the community of fatigued heavy vehicle drivers is very high and the risks need to be managed effectively.

Queensland Transport has been trialing an alternative method, the Fatigue Management Program (FMP), that sets performance based standards and includes the rigours of an accreditation and audit system. The FMP approach has been in place since late 1995 and confidence in its effectiveness as a method of managing driver fatigue is continually growing. Queensland Transport is pleased to provide further information on this trial and its progress.

Prescriptive Approach

The prescriptive approach to issue resolution relies on 'rule and rote' methodology. This has been described by Hood (1) as "explicit rules which cover all conceivable situations which may arise and which admit of no ambiguity in their interpretation". Examples of appropriate applications of this approach include the rules governing and defining the game of chess. Hood (1) identifies the criteria for the successful application of the 'rule and rote' approach as follows:

1. The rules must be clear.
2. The purpose of the rules should be broadly acceptable and easy to see. This means the rules should be reasonable and include valid cause-effect assumptions.
3. The rules must be completely consistent with one another.
4. The conditions in which the rules apply should be completely specified in advance.
5. Standards should be capable of clear verification.
6. Categories of behaviour or other items should be robust and unambiguous.

Rules and regulations provide the community with a level of confidence and security that an issue is being managed and the responsibility to the community and road users is fulfilled. Governments have a role in evaluating the effectiveness of past interventions to ensure the required outcomes are met. Part of this task requires us to take on learnings from research and experiences in other jurisdictions or industries to ensure the best outcomes for the community are achieved.

Traditionally, it was widely held that the use of formal rules is unavoidable and the best method by which all interventions should be made. When assessing whether driving hour regulations are able to meet the above rule and rote criteria, it is important to consider the following issues:

- the type of rules and regulations that have been developed in the past have been broadly unacceptable to industry and are not always based on valid assumptions and lessons learnt from research;
- the prescriptive approach oversimplifies the very complex issue of fatigue by reducing it to a mathematical hours formula;
- due to the inflexibility in this system, the rules can be counterproductive and can lead to situations where a driver is expected to rest or drive at inappropriate times;
- fatigue is highly subjective and affects individuals in different ways; and
- regulation has not been able to address all the factors that impact on a driver's fatigue levels.

Therefore, the fatigue management issue does not meet the criteria for successful implementation of the rule and rote approach and clearly falls outside the areas of administration that can be effectively managed by this method. People are not chess pieces and it is not possible to develop rules that are consistent, unambiguous and cover every conceivable situation.

This position is shared by Haworth (2) who advises that there are many factors that increase the risk of fatigue other than driving hours. The present regulations fall short in effectively addressing fatigue in that they do not address factors such as time of day driving, activity during rest breaks and activity prior to commencing work. Driving hours legislation that attempted to incorporate all of these elements would be too complex and impractical as the resulting legislation would be too difficult to understand and enforce. This is the main impetus behind the development of alternative compliance programs to manage fatigue.

Fatigue Management Program (FMP) - The Performance Alternative

Queensland Transport is currently piloting a Fatigue Management Program (FMP) in conjunction with the Australian Trucking Association (ATA). The aim of the FMP pilot is to develop and evaluate a heavy vehicle fatigue management program, which allows industry and Government to better manage heavy vehicle driver fatigue under alternative compliance arrangements instead of the prescriptive driving hours regime.

The FMP is designed to identify all the factors that cause and increase the risk of fatigue, and influence behaviour to improve road safety. As the FMP takes into account more than just the number

of hours spent driving and holds operators to a challenging set of standards, the result is a much higher standard of safety than can be provided by the existing hours and logbook regime. A summary of the FMP Standards is provided in the Appendix.

It is anticipated that the FMP pilot period will be completed in late 2001 and the FMP package will be presented to Transport Ministers for approval and national implementation in May 2002.

Under the FMP, heavy vehicle operators are required to manage the main factors contributing to driver fatigue by providing compliance assurance and undergoing audit checks. To gain FMP accreditation an operator must have scheduling and rostering practices that consider:

- the driver's previous working time, schedule and roster;
- safe driving time and adequate rest requirements;
- non-driving time and work activities;
- vehicle suitability and roadworthiness;
- identification and management of fatigue risk factors specific to the freight task (type of load, night or city driving etc.);
- driver readiness, health and competence on the day;
- use of relief drivers and sub-contractors; and
- driver involvement and flexibility in altering the trip schedule.

Management of non-conformance with the program standards is one of the most important components of FMP, as it allows the operators to manage the problem by assessing the driver's fitness and applying appropriate countermeasures.

Benefits of FMP

Since the pilot program began in 1996 many benefits have become apparent. A re-evaluation survey of three companies that had been operating under the FMP for 4 years, was conducted in early 2000 to assess the impact of FMP on the fatigue of drivers and the business.
Analysis of the survey data showed the following results:

- Operations of the companies ranged from general freight, refrigerated goods, bulk freight, mining products and petroleum fuel;
- The FMP drivers surveyed had an average age of 40 years with 22 years driving experience;
- On average, the drivers drove 3553km and worked 68 hours per week;

Fatigue Impacts

- Increased awareness of fatigue issues (causes, risks etc.) and management/preventative strategies, improved effectiveness of training;
- Improvements to lifestyle (more home time/family time for drivers);
- Decrease in frequency of fatigue symptoms and use of negative strategies;
- Over the four years since 1996, the ratio of drivers reporting the use of 'stay awake' pills has dropped from 11 in 31 to only 1 driver in 25;

Business Impacts

- Improved competitiveness and customer/contract sustainability;
- Flexibililty to meet customer demands, resulting in improved customer satisfaction;
- Improved awareness of balance between safety and productivity outcomes;
- More effective and productive management practices;
- Increased equipment utilisation;
- Decrease in accidents, injuries and subsequent workers compensation claims; and
- improved staff morale.

Costs for the implementation and running of FMP varies from company to company. However, estimates from companies participating in Phase 1 of the FMP pilot ranged from $38,000 to $118,000 for implementation and from $36,500 to $70,000 per year to operate. These companies ranged in size

from 24 driver/32 truck to 49 driver/41 truck operations. These amounts are significant, however, each company considered FMP a worthwhile investment and scored it 8 to 9 out of 10 when asked to rate the positive influence of FMP on their company. FMP was also described by operators as an excellent culture change tool and a 'whole of operation' approach integral to how the company runs the business.

Conclusions

In order for alternative arrangements such as the FMP Pilot to be effective, Government, industry and the community need to be able to accept that there are alternatives to the prescriptive hours approach. Recognising that fatigue management is a cultural change issue that cannot be resolved by legislation alone often means a large shift in attitudes and perceptions as the old beliefs and maths formulas need to be let go.

We need to enact modern and responsive primary legislation that enables the performance-based approach to be pursued and prudential supervision arrangements to be established. Our role is to clearly identify the safety outcomes that are required and allowing operators to develop their systems and processes accordingly. This requires a mature relationship to be built between Government, industry and organisations that includes trust in the system and operator's willingness to comply.

For individual organisations that are implementing an FMP it is essential that a strong commitment to FMP is maintained right through the organisation, from senior management to drivers. An important part of managing the cultural change required to implement FMP is ensuring the full participation of all stakeholders, especially the drivers. All drivers, people involved in the administration of the FMP or the rostering of drivers need to be trained in fatigue management strategies, to allow the operator to properly balance safety and productivity requirements. FMP has often required operators to assess their operations and contracts leading to education of their customers and negotiation of new agreements to meet the safety outcomes of FMP. Organisations need to design simple, effective administrative systems to demonstrate that they meet the standards, including the use of technology as management tools to allow informed decisions to be made.

Queensland Transport believes that with Government and industry working together to resolve fatigue management issues using performance-based approaches there is a much higher potential for significantly improving road safety than trusting to prescriptive legislation alone.

References

1. Hood, C., 'Administrative Analysis - An Introduction to Rules, Enforcement and Organisations', 1986, Wheatsheaf Books, Sussex.
2. Haworth, N., 'The Role of Fatigue Research in Setting Driving Hours Regulations', in Driver Impairment, Fatigue and Driving Simulation : Conference Program and Proceedings, 1993, Fremantle, Western Australia.

Appendix - FMP Standards

The FMP Standards identify and attempt to assist the operator with managing all of the factors the cause fatigue and increase the risk of fatigue. The standards form the basis of all FMP audits. In order to operate under the FMP, the operator must develop and implement management systems and procedures that will allow them to meet the standards and to achieve and maintain the level of performance that is required. A brief description of the FMP standards is provided below.

Scheduling. Scheduling of all trips must be planned and incorporate fatigue management measures required to undertake the transport task and provide drivers with the flexibility to reschedule driving and rest periods.

Rostering. Rostering systems must be in place to incorporate fatigue management measures and assign drivers to tasks in accordance with their recent work history, welfare and preference, where appropriate.

Time Working. Drivers must have the ability and opportunity to effectively manage their driving and non-driving work time in a way that allows them to combat the effects and onset of fatigue. Operators must not allow or cause a driver to work outside the operator's approved limits for periods that may endanger the safe operation of the vehicle and expose the driver, other road users and the environment to unacceptable levels of risk. An operator must demonstrate scheduling and rostering policies and techniques are being practiced and ensure accurate records of each drivers daily Time Working including rest activities, are kept.

Readiness for Duty. An operator must ensure all drivers are in a fit state to safely perform driving and non-driving duties.

Time Not Working. An operator must ensure a driver has sufficient continuous hours of Time Not Working to recover from the effects of fatigue caused by a period of Time Working and cumulative effects of fatigue caused by the extended periods of Time Working.

Health. The operator must ensure a health management and screening system is in place to best prevent and combat the onset and effects of fatigue and to address as a minimum such factors as medical history, sleep disorders, diet and substance abuse and provide preventative and remedial measures to assist drivers with the management of their health.

Management Practices. Management practices must ensure all drivers are suited to the transport task and that open lines of communication are fostered between management and drivers on matters that may enhance the safe operation of the business.

Workplace Conditions. The workplace conditions must provide environments which assist in the prevention of fatigue.

Vehicle Safety and Road Access Requirements. The operator must ensure that all vehicles owned and/or operated by them are safe to use on the road and that these vehicles do not expose other road users to unacceptable risk.

Driver Road Use Requirements. The operator must ensure drivers are licensed and authorised to drive the applicable category of vehicle safely on the road and in accordance with prescribed driving standards.

Training and Education. The operator must identify the fatigue management training and education needs of all employees and ensure that every staff member including managers are provided with training and education on the management of fatigue and the operator's fatigue management program.

Documented Policies and Procedures. The operator must prepare, implement and maintain documented policies and procedures that ensure the effective management, performance and verification of the fatigue management and accreditation requirements of the operator's FMP.

Responsibilities. The operator must assign and document the responsibilities and authorities of all positions involved in the management and operations of their FMP.

Management of Non-Compliance and Corrective Action. The operator must ensure all FMP non-compliance occurrences are reported, corrective action and preventative measures are taken in accordance with the level of risk identified, and an internal disciplinary system is in place to manage performance.

Records. The operator must ensure the identification, collection, storage and maintenance of records that demonstrate compliance with FMP standards. Records are to be kept for a minimum of 3 years.

Documentation Controls. The operator must operate a system to authorise, review and control all documents, including manuals, procedures, reference materials and legislation, required for the administration of a FMP.

Internal Audits. The operator must have an internal audit system to verify that all FMP activities and record keeping procedures comply with directions given in the relevant policy, procedures and instructions and any corrective action required, has been undertaken. This standard also requires the completion of a quarterly compliance statement.