



Winner of Best Paper for implications
for Workplace Road safety

NRSPP
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**PARTNERSHIP
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Risk and Reward: Translating managing risks into real, proven safety and business benefits

The most effective risk management strategies, including monitoring fatigue and encouraging driver input into safety decisions and risk assessments, translate into on-the-ground safety improvements that also improve a business' bottom line, particularly by reducing insurance costs.

Recent research identified several safety management characteristics that showed clear evidence of efficacy in safety management in trucking operations. New research compared those characteristics against risk management factors included in the risk assessment process adopted by a major truck insurer.

The result is a list of safety management practices that have been shown to improve safety performance. These characteristics, which have also driven such bottom line benefits as lower insurance costs, can help transport operators refine their risk assessment and risk management processes.

Key findings

Supported by road safety regulators and a major transport insurer, the original empirical research was in response to the heavy vehicle transport sector being over-represented in vehicle incidents and crashes.

The major research project, led by Dr. Lori Mooren, a global authority on road safety from the Transport and Road Safety Research Centre at UNSW, involved assessing the research evidence, surveying 50 Australian companies that operated heavy vehicles and completing further investigation of 15 of those companies. The research identified many common characteristics across three areas: risk assessment and management, driver risk management, and safety culture (see Appendix 1).

It found strong safety performers had:

- A strong safety culture, where driver input to health and safety decisions is encouraged and all managers respond quickly to drivers' safety concerns.
- Systematic fatigue monitoring and documenting of fatigue risk management practices.
- Risk assessments completed in consultation between managers and drivers, so drivers can anticipate, and potentially avoid, risks before they start a journey.
- Provided all appropriate safety equipment, including safety features on trucks.
- Maintenance and pre-trip vehicle checks that ensured trucks were in a safe condition for all trips, rather than relying only on regular scheduled maintenance.
- Route, site and job risk assessments were carried out when planning all journeys.
- Driver fitness was assessed to ensure drivers' abilities to safely carry out duties, and recruitment criteria included safe driving records.
- Identified unsafe behaviours were formally investigated, and driver training was based on individual tuition by experienced drivers.
- Drivers are paid for all hours worked regardless of task or activity and drivers receive incentives linked to work safety efforts.
- Managers take responsibility and show leadership in making safety a clear priority.

Surprising findings identified

Some findings also surprised researchers. For example, companies accredited under the National Heavy Vehicle Accreditation Scheme for fatigue management had higher insurance claims and more fatigue policies and training than better performers.

Companies with in-vehicle monitoring systems (IVMS) also tended to be higher insurance claimers. This could be because IVMS-generated data was used for business purposes, such as tracking delivering times or reducing maintenance costs, rather than for safety.

The research project also compared insurers' risk engineering focus with proven effective injury prevention measures. This highlighted:

- substantial parallels between truck insurers' focus on financial risk, informed by the expertise of insurance risk engineers, and safety management practices proven to reduce injury risk; and
- safety management features that distinguished lower insurance claimers from higher insurance claimers.

What does it mean?

Transport companies, and their insurers, can use these research findings to improve their risk assessment and risk management processes.

"From this research, there is a direct correlation between effective heavy transport fleet risk management and lower incidents, crashes and claims," according to Zurich's Mervyn Rea, who was a co-author on the comparative research.

"Investment in effective risk management therefore reduces insured and uninsured financial loss, increases productivity, provides consistency in delivering a premier and reliable customer service, promotes and sustains brand and reputation, and maintains and increases profitability.

"Risk management is not a cost – it's a profitable investment."

For Lori Mooren, the implications of this research for heavy vehicle transport companies' daily operations are simple:

Take the findings and implement them in your business.

A key message was that a strong safety culture, where management demonstrated through their actions that safety was a priority and encouraged drivers to raise issues and be involved in finding solutions, was a distinguishing feature of good risk performers.

"Those characteristics we found are the only ones that have ever been demonstrated in such a rigorous way to be likely to affect good outcomes," she said.

"We're not saying these characteristics are a comprehensive safety management system but we do know these key characteristics can affect outcomes, so why wouldn't you check you at least have those characteristics in place?"

"It became clear to me when I spoke to managers whose companies had lower insurance claims that they were on top of everything and worked very closely with their drivers to ensure that no truck left their yard in an unsafe condition and no driver was going to leave and do something stupid – and if they did they'd be out the door.

"With their actions, they personally showed a commitment, leadership and responsibility for safety management. That one characteristic in a sense enhances the effectiveness of all the other characteristics.

"If you think about it, if you're a driver and you have a manager who's pretty ho-hum about safety – 'I'll just send you off on this training course and that training course, tick the boxes' – how seriously are you going to take their commitment to safety?"

"All the other things are important but if drivers don't have a sense that management is committed and is accepting their responsibility for helping them, then it's not going to work."



APPENDIX 1: Research findings— in a nutshell

Topic Validated Characteristics

Insurance Risk Grading Factors

Evidence-Based Management Policies

Risk assessment and management

Safety features in choosing vehicles

Safety features in vehicles have been determined through a risk assessment process

All appropriate safety equipment, including safety features on trucks, is provided

Fleet

Fewer defect notices

Maintenance program is proactive. Policy requires all drivers to carry out regular (daily) vehicle inspection/check

Maintenance and pre-trip vehicle checks ensure that trucks are in a safe condition for all trips

Pre-trip inspection checks

Journey risk assessment

Check traffic conditions

Ensure that medium, long and infrequent trips are suitably planned. Regular route assessment

Route risk assessments are done for all delivery journeys

Speed limiting on poorer quality roads

Safety audits at own sites

Ensure assigned parking areas are not in proximity to storage or manufacture of dangerous materials

Site and job risk assessments are regularly carried out

Fatigue monitoring

Document fatigue management

Fatigue monitoring systems are applied consistently across the organisation

Monitor fatigue management practices

Response to safety concerns

Time limits on response to drivers' safety concerns

The Fleet Risk Manager is 'actively' responsible for improving the loss performance of the fleet

All managers respond quickly to safety concerns raised by drivers

Driver risk management

Recruitment and employment

Check accident history

No more than 1 on-road crash in past 3 years. Pre-employment aptitude/behavioural assessment

Recruitment criteria focus on safe driving records

Fewer drivers over 60

Frequent proactive measures such as medical checks, eye exams and training essential to control losses from a maturing workforce

Driver fitness is assessed to ensure drivers' abilities to safely carry out all job duties

Pay and conditions

Pay by time worked (not by trip or load)

Drivers are paid for all hours worked regardless of task or activity

Pay to wait

Training

Experienced drivers check/coach other drivers

Ensure all new drivers undergo mentoring/buddy system training, if not formal on road training, for the first weeks of employment

Training for drivers is based on individual tuition by experienced safe drivers

Discipline

Formal investigation of unsafe behaviour

Ensure that an incident investigation form is established to facilitate investigations

Identified unsafe behaviours are formally investigated

Incentives

Offer incentives for safety innovations

Pay and benefits package above regional/national averages (no additional safety incentives included)

Drivers are given incentives, including monetary incentives, clearly linked to work safety efforts

Safety Culture

Encourage driver input into WHS

Procedure to incorporate driver in management process including daily planning

Managers encourage driver input to WHS decisions

Show management commitment to safety management

Create measurable key performance indicators

Managers take responsibility and show leadership in making safety a clear priority