

Comments on the National Transport Commission (NTC)
Developing a heavy vehicle fatigue data framework

Caveat: Safe Work Australia is a tripartite body which includes states and territories. This submission stems from the Data and Analysis team of Safe Work Australia does not reflect the unique stance of jurisdictions. It is understood, however, that jurisdictions have been given a separate opportunity to submit submissions.

Summary:

The *heavy vehicle fatigue data framework* is a positive step to improve the data collection and evidence of the effects of heavy vehicle driver fatigue for both worker and public safety. This is a necessary first step to implement evidence based reform of the fatigue regulations in Heavy Vehicle National Law.

Vehicles incidents continue to dominate work related fatalities, with roughly two-thirds of work-related fatalities from 2003-2013 involving vehicles.¹

Response to Consultation questions:

1. Do you agree with the fatigue issues identified in the discussion paper? Are there other issues that should be included?

While fatigue issues seem appropriate, more focus could potentially be given to:

- Questioning the underlying assumption that drivers have the opportunity to sleep in their time off. Drivers may need to undertake activities including: unloading/ restocking the vehicle; documenting their travel; undertaking safety checks, making calls (and securing their next load), seeking supplies, finding a location to sleep. All of these prevent sleep. Data on 'rest activity' could determine how much sleep can be expected from prescribed breaks.
- Considering collection of data tapping into the work design influencing the pressures, and expectations leading to driver fatigue. While this framework is to collect quantitative data, qualitative data will help inform the interpretation and highlight possible areas of reform. Many questions on the work design remain unanswered. For example are the schedules too tight? Is there enough redundancy for heavy traffic or road-works? Are pay schedules set up to encourage delivery at unreasonable expectations? Is the use of caffeine (or other drugs) creating perceived alertness but not translating into safe driving?

2. What is your view on the proposed prioritisation of fatigue issues identified in the discussion paper?

- Given it is noted that the proposed prioritisation of fatigue issues does not reflect the relative importance of the issue (page 24), the order does not matter as much as addressing all issues identified.

3. What other data collection activities exist in government or industry that the data framework should consider?

- Safe Work Australia collects work related fatalities by the mechanism of incident. For heavy vehicle driver fatalities comes from jurisdiction's police

¹ Safe Work Australia (2014). Work-related traumatic injury fatalities, Australia. Canberra: Safe Work Australia.

records, coroner's reports jurisdictions health and safety authorities and from the media.

- The object, substance or circumstance principally involved at the point at which things started to go wrong, i.e. the breakdown agency, is also recorded. These are reported annually in the Work-related Traumatic Injury Fatalities reports.
- Safe Work Australia also collects bystander fatalities through open source data. Trucks (i.e. large vehicles) are again over represented in work related bystander fatalities².
- It should be noted that currently Safe Work Australia does not collect information on driver fatigue unless provided in police/ jurisdiction reports.

4. Do you agree with the need for more comparable and accessible fatigue data to underpin future reforms? If not, what alternative approach do you propose?

- The heavy vehicle transport industry, by nature, works across jurisdictions. It makes sense to have comparable fatigue data in terms of definitions, methods of collection and legal requirements. This will make it easier for drivers to know their obligations and work health safety rights and will underpin simplified national heavy vehicle reforms.

5. Do you support an open data approach to fatigue data? Consider in your response the benefits and challenges of open data compared to other data handling approaches.

- While there are benefits of open data, there is an inherent risk that the more sources can contribute to and use the data, the less useful it may become for the intended purpose. Given the specific rationale of this framework, to collect data to see if amendments to the fatigue rules are evidence based and inform for future heavy vehicle policy, it may be worth reconsidering the parameters of an open data approach.
- Participation in the dataset is more important than 'open data'. There may be reluctance for some industry bodies/members to share data if it is open. Then there is the risk that having an open dataset may become an incomplete dataset, which would cast doubt over research and limit its use for policymaking.

6. What is your view on the proposed framework methodology relating to proposed terminology and coding, proposed system changes and proposed process changes?

- Safe Work Australia uses multiple sources for gathering data on work-related fatalities and reviews each source internally prior to use to, to ensure quality. This approach yields high quality data while also protecting privacy of businesses, individuals that are the subjects of the data. Privacy is vital for participation, especially when participants may mistake inquiries to collect individual's de-identified data for research purposes, for investigation into regulatory activity. Safe Work Australia could provide further input on this issue if required.

² Safe Work Australia (2014). Work-related traumatic injury fatalities, Australia. Canberra: Safe Work Australia.

- We agree that collecting data in the field, such as by police at the point of an accident is an invaluable method, providing data that would otherwise be lost and usually cannot be acquired from other sources. However the quality and value of this data is dependent on the in-field operationalisation, and therefore should be subject to Police and other staff' operational capacities.
- Research from the survey literature can illustrate how subtle changes in question wording can result in large differences in results. It is therefore important that the interpretation of crash investigators be explored, and preliminary validation of the analytic utility conducted.
- It makes sense to collect both crash data, from police fatality investigation sources, and driver data of when police have pulled vehicles over (for infringements) and collected survey type data of driver activities. However, whether, driver data reflect the wider heavy vehicle driver cohort is questionable.
- Potentially, random sampling of fatigue in heavy vehicle drivers not involved in vehicle incidents could confirm if fatigue is common across the industry. Possibly by surveying heavy vehicles stopped at road-side weighing stations auditing of logbooks (from previous loads) and taking a measure of fatigue (such as reaction time and hour since slept/changed activities) could provide a crude measure of fatigue. This would need the involvement of Jurisdictions so that access to work diaries can be analysed.
- All aspects of the methodology should be pilot tested to ensure the large-scale roll outs are of sufficient quality.
- It would be good to collect real-life operating data in the form of electronic work diaries, IAP's GPS and other satellite navigation technology to track vehicle location, speed and time spent at stops. Data on driver alertness could be collected on devices currently owned by driver's e.g. mobile phones, apple watch, with heart rate monitors and crude sleep recording devices). This could result in greater accuracy and reducing worker time requirements. However, for the time being current log-books should be used given they are in places and mandatory.

7. **What is your view on the validity and characteristics of a fatigue likelihood scale?**

- A fatigue likelihood scale will provide more information than the previous binary scale. However, the 'indicators' for the scale rating appear based on the outcomes of the incident rather than antecedents for fatigue such as lack of sleep or poor sleep quality. While it is noted that signs/precursors of fatigue could be incorporated, perhaps other antecedent indicators would be useful in the description. E.g. less than 7 hours sleep, consumption of drugs e.g. multiple caffeinated drinks, hours since last stop etc. Regardless of submission provider's views on the validity the scale should be tested widely for validity against an external measure of fatigue, such as reaction time, log book records to test the reliability and validity of the scale - see if the scale is consistently measuring what it intends to.

- The validity of any scales, such as that included for discussion, should be separately validated before use in any large scale collection, to ensure efficient allocation of collection efforts.

8. What is your view on the proposed framework principles?

- No comment.

9. What is your view on the data collection and research activities proposed in the discussion paper?

- It is important to ensure the data is representative of the wider heavy vehicle driver population. For this, representative random sampling of heavy vehicle drivers and ensuring drivers are clearly aware that data will be de-identified and not used against them is a must.
- The paper has gone into little detail on the exact methodology to collect the data. The quality of the data will be completely dependent on how the data is collected in a

10. How best should the data framework be funded and governance arranged?

Consider in your response organisations that could be best placed to undertake responsibility for the framework.

- No comment.