

FAID and Commuting

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We are often asked whether, and how FAID takes into account the time taken by workers in their commute to and from work.

The following two paragraphs reflect what InterDynamics' scientific advisor Dr Adam Fletcher (from whose thesis FAID resulted) has indicated on the subject.

The subjects in the studies that were done when FAID was developed were working in a range of operations with various commute times as occurs in most companies and industries. On average, the commutes were 30-45mins each way. This time period is not a separate inclusion within FAID, but rather reflects the living conditions/situation of the people involved in the scientific research project. Thus we have (over the years) come to define long commutes as longer than 45mins.

Around 30mins each way in terms of FAID, has come to be considered 'normal' and anything significantly over 30-45mins is likely to mean FAID is underestimating the impairment and overestimating the recovery sleep. The resolution is not so high however that we should get caught up about 5 or 10 mins. in commute time when we know other factors (such as how boring/monotonous the drive is, the time of day of the commutes and the conditions) all play a role as well.

Having said that, clients should be aware of the commuting profiles of their workforce, including any individuals that have exceptionally long commutes, as this can add significant fatigue that should be looked out for, and appropriately risk managed. By extending shifts by the extra commute time each way (above say 45 mins.), an organisation can model and get a sense of the additional impact from a FAID (Hours of Work related fatigue risk) perspective of the long commuting profile. Once the profile is understood in terms of the added impact of long commutes on Hours of Work related fatigue, as well as increased risk during commutes themselves, appropriate measures can be considered to deal with any increase in risk.

Having a look at the impact of excessive commutes by modelling extended shifts within FAID can show relativities between sections of the workforce with 'normal' commutes, and those considered 'excessive'. This can be useful for ensuring adequacy of controls, both Hours of Work related and other. The following should always be kept in mind however, to protect against the misconception that working within a certain FAID Score is what keeps workers safe/organisations compliant, or what managing fatigue is all about:

FAID is a tool to be used as a way of bringing greater risk management rigour to the rostering process by considering four key scientific factors that impact on fatigue from an Hours of Work perspective:

- Duration of work & breaks
- Time of day of work & breaks
- Work history from preceding 7 days, and the
- Biological limits on recovery sleep

FAID is a decision support (statistical model) that considers the probability of sleep and recovery over a 7-day period, and predicts fatigue exposure associated with hours of work (only). *It is not a pure measure of fatigue.*

As such:

- FAID Scores or FAID outputs should not be used as the sole input for determining individuals' fitness for work. Individual circumstances, operating environments, task impacts and other fatigue risk factors should also be considered when assessing work-related fatigue risks.
- There is no magical threshold number within FAID at which operations are "safe" or "unsafe". Rostering practices that take into account set 'tolerable' peak FAID Scores and compliance percentages to a FAID Fatigue Tolerance Level (**FTL**) need to be determined by each organisation from a process of risk assessment that quantifies the risks associated with the job task/role, environmental, and other factors that could contribute to an intolerable event occurring when a worker is in a state of heightened fatigue. This assessment should take into account existing controls in place to mitigate against the likelihood of an adverse event occurring. From this process, a target Compliance Percentage to a FAID benchmark figure (FTL) can be selected as a 'lever' if you will, for attempting to regulate the Hours of Work related fatigue exposure present for the workers, and reduce the likelihood of fatigue being the cause of an adverse event.
- The FTL selected for compliance to be measured against can be modified up or down based on the 'Review' phase of the Risk Management process - where the performance of the controls in place are reviewed to determine if they are continuing to provide adequate protection or not. Thus after assessing against employee experience of fatigue (from staff surveys, fatigue self-rating scales, targeted assessment projects reviewing actual sleep through actigraphy, or drowsiness screening tools etc.) and accident and incident data, it is possible that it may be determined to modify original organisationally selected FTLs, with higher or lower FTLs and Compliance percentages trialled to refine the determination of the most appropriate level of Hours of Work related fatigue exposure for the operation.
- Thus rostering within Compliance Percentage targets to appropriate FTLs, rather than firm FTLs alone assists in the promotion of understanding within the workforce that FAID is a risk mitigation tool rather than the generator of a safe/unsafe "go/no-go" number.

At the end of the day, what is required is to be able to demonstrate that you have identified and assessed your risks (including long commutes), have a regular process in place to review non-compliance, and are doing everything reasonably practicable to mitigate against the risks.