

Examples of approachable fatigue management practices in transport companies in the Netherlands.

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Best Practices fatigue management

Ministry of Transport (NL):

- For all drivers: a mass campaign (“Word geen slaaprijder”);
- For professional drivers:
a toolkit with ‘best practices’ for fatigue management;

The best practices should:

- Be based on state-of-the-art knowledge on what an effective fatigue management system looks like;
- Focus on organisational measures (not technical);
- Consist of user friendly, practical and transferable measures.

Fatigue in road transport

Fatigue related to working conditions is accepted as a major health and safety issue, in Oil & Gas, Offshore and Transport (aviation, marine, road).

Fatigue in transport:

Recent research has shown that approximately 10 – 25 % of all accidents in transport companies have been related tot fatigue.

Fatigue in transport: what can be the causes?



Causes of fatigue

- A wide variety of factors can contribute to its occurrence, for example:
 - *unfavorable scheduling and rostering,*
 - *working at night,*
 - *traveling to and from work,*
 - *physical fitness,*
 - *medical conditions (OSAS),*
 - *substance use or abuse and the quality of sleeping accommodations*
 - *family issues*

Fatigue management approaches try to take account of the complex causes of fatigue.

Risk based Fatigue Management

Definition: Fatigue Risk Management:

"a set of measures related to organizational and safety policies that collectively reduce fatigue-related risk.

Fatigue (Risk) Management Systems tools or programs are comparable in that the main shift is **away from compliance** with a prescriptive set of rules toward an **integrated hazard management system**".



Old and new approaches to managing fatigue

The 'old' approach:

- aimed at the **direct** cause of fatigue, e.g. a person who is already fatigued;
- **individual** responsibility;
- **well known** measures against fatigue were used (drinking caffeine, napping, training on awareness),
- **prescriptive** hours of service (e.g. legal=safe).

Old and new approaches to managing fatigue

The 'new' approach:

- need to look at the **chain of events further away** in time and location from the actual event;
- initiated from within the **organization's policy** and **existing safety management**;
- **shared** responsibility (e.g. operators, schedulers and executives).
- **proactive** - how to assess personal fatigue risks (e.g. early warning signals);
- countermeasures are defined for at **several levels**
- the F(R)MS should be **evidence based**, scientifically defensible, auditable and appropriate for the operator **risk profile**.

Effective elements of a FMS

Management commitment & communication

Training programs

Working hours & Shift System assessment

Qualitative sleeping environment

Diet

Technical devices (alarms)

Fatigue prevention tips (napping, caffeine)

Fit for duty

Fatigue reporting

Themes for interventions, as selected in stakeholder workshop.

1. *Fatigue Awareness*

- workshops focused on collective understanding and agreement;
- social dialogue based on the results of a fatigue survey;

2. *Working conditions*

- implementation of fatigue procedures related to the working conditions;
- flexible rostering;

3. *The driver's health*

- prevention of stress and workload;
- stimulation of a healthy lifestyle;
- rules of thumb at the beginning of the work shift.

4. *Dealing with fatigue at the road.*

- rules of thumb: what to do.
- rules of thumb: recognizing of fatigue;

5. *Learning from incidents and accidents in the past*

- tips for analyzing accidents (based on Horne & Reyner, 1995).

6. *Assurance of fatigue management /fatigue management policies.*

- Driver coordinators
- “Barers” of Culture as facilitators for the issue of fatigue.

Examples Company cases

Company case: Rules of thumb

- Posters with rules of Thumb
- For drivers and dispatchers

Thumbs rule: Fit for duty

3 questions before driving:

Did you have less than **5 hours sleep** in the last 24 hours before the shift?

Risk!

Did you have less than **12 hours sleep** in the last 48 hours before the shift?

Risk!

Have you been **awake longer than you have slept** in the last 24 hours before the shift?

Risk!

If there is a risk, discuss this with your supervisor to mitigate the risk of fatigue, for example by changes in the planning, different routes, more frequent moments of rest, other activities.

Thumbs rule: Fatigue and alcohol

Awake for 17–19 hours -> **0,5 promille**

Awake for 25 hours -> **0,8-1,0 promille**



And: a legal dose of alcohol use will have a more severe impact when fatigued..

Other: recognizing early sleep signals, what to do if you are tired, sleeping tips in the daytime

Company case: Prevention of workload and stress.

“A training is given by an experienced truck driver at the workplace, in which a lot of attention is given to the values and standards. The importance of maximum working hours and maintaining resting times during the day, and taking your own responsibility are part of these values.”

Company case: Fatigue management by introducing a special night shift

“The company decided to install a special night shift, with (ex-) truck drivers, to take over loading tasks from truck drivers, early in the early morning. This will take away work stress from drivers and to give drivers a longer night rest.

Also this provides new job opportunities for employees who need to work in a more steady time schedule, due to for example family or personal circumstances) need to work in a more steady time schedule”

Company case: condensed workshop in weekend.

“A condensed workshop was organized in weekend hours, in which representatives of all levels in the company (e.g. drivers, dispatchers and management) were present. They all discussed and voted upon the best ideas to be implemented in the future.”

Also a quick self-test questionnaire - derived from literature - was used, to confront participants with their own experiences and facilitate discussion.

Conclusions

Fatigue management approaches are difficult to realize in small companies, but a lot can be done in small steps.

- workshop settings: a shared responsibility between management and drivers is promoted - by initiating and discussing ideas in several organizational levels -> **ownership**
- small creative/innovative changes in the working process -
>**related to what people already do**;
- the use of a quick questionnaire will help to give drivers insight into their own fatigue-> **tangible, facts.**

Crucial for mitigating fatigue is openness of culture, social dialogue and communication on the workfloor!