

Fitness for Duty The Findings of the ACARP Scoping Study

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INTRODUCTION

The ACARP Underground and Open Cut Research Subcommittees recognised that fitness for duty was emerging as a significant health and safety issue and one that required definition and clarification of the issues. In this way ACARP could effectively prioritise and direct research in this area of occupational health and safety.

Fitness for duty is an integral part of occupational health and safety management. The concept of fitness for duty covers a broad range of individual and occupational health issues including the use of drugs, alcohol, fatigue, psychological impairment and physical impairment. A structured approach is required for effective management of fitness for duty. This approach is reliant upon an identification of the key issues, an effective assessment of the associated scope and magnitude of the issues, identification of potential solutions and therefore future research needs.

The project objectives were to:

- Identify current practice in managing fitness for duty in the coal mining industry
- Identify best practice in managing fitness for duty in other relevant industries
- Identify emerging trends and issues in managing fitness for duty
- Identify the gaps between what is being done and what needs to be done
- Identify the applied research needs arising from this gap

In addition to the project team, input was sought from a range of technical experts, industry personnel, and service providers.

As fitness for duty testing devices are currently of great interest, two reports were specifically obtained for the project to review the current technology. Dr Michael Baynes and Associate Professor Macdonald Christie supplied these reports. In addition Mr Jim Nolan explored the potential legal implications of a number of fitness for duty issues.

The project team compiled a detailed 200 page report that included 44 conclusions and 18 recommendations.

The key findings were:

- The majority of mines defined fitness for duty in accordance with the Queensland Coal Mine Safety Regulations 2001.
- There are basically two views of fitness for duty management:
 - Standard view
 - Extended view
- The mining industry has more testing of fitness for duty than other industries
- The mining industry has not implemented as much education and awareness training as some other industries
- Fitness for duty is not being managed on the basis of objective priority setting
- Corporate policies did not always translate to the sites
- Fitness for duty should be approached using a risk management approach
- Physical impairment should be assessed against the task requirements of the work
- Psychological impairment is poorly defined
- Quality control programs need to be introduced for drug and alcohol testing
- Fatigue is best managed proactively

- General fitness for duty testing devices should be used with caution and require comprehensive support systems

METHODOLOGY

It was recognised that considerable research work has already been undertaken in an attempt to understand, assess and manage various aspects of fitness for duty. The information gained from these efforts, particularly those that are occurring within the coal mining industry, needed to be collected and evaluated. The information collected would help to minimise duplication and possible waste of resources and to ensure that industry as a whole benefits from the work.

The principal investigative tool used for this project was a 32-point questionnaire completed during interviews. Over 80 interviews were carried out. This included:

- 18 open cut coal mine sites;
- 14 underground coal mine sites;
- 15 metalliferous mines;
- 9 corporate mining offices;
- 3 major mining contractors

in addition to a range of mining industry bodies, government mines departments, union representatives, technical experts, service providers and other relevant industries, including, petroleum, power, metals refining and transport.

The questionnaire was divided into five main sections:

1. **Policy and procedures** - this section was used to identify:
 - current detail of policy and procedures used for fitness for duty;
 - future directions, strengths and limitations;
2. **Alcohol and Drugs** - this section aimed to find the current use of alcohol and drug testing equipment, education, testing frequencies and ethico-legal issues;
3. **Fatigue, physical impairment and psychological impairment issues** - this section reviewed the current practices used for managing these issues at the worksite level;
4. **Potential legal issues;** and
5. **Other fitness for duty issues raised**

Other valuable sources of information were the written policies supplied by some of the companies interviewed. These were analysed to investigate consistency with the verbal comments and also to characterise other factors not discussed during the interviews.

Government departments and the Joint Coal Board also provided much useful information. Key service providers were polled to identify what is available.

The project was completed over a six month period from September 2000.

ANALYSIS OF INTERVIEWS:

As the questionnaire did not set out to representatively survey the entire mining industry of Australia, the analysis should not be viewed quantitatively. Nevertheless some qualitative analysis was possible in an effort to indicate the scope and extent of the issues. Good coverage of Queensland coal mines was achieved. The coverage of other mine types was not sufficient to ensure that the views of the industry were quantitatively represented. Time and resources prevented a larger interview process. The size of the interview pool was adequate to achieve the project objectives.

The analysis of the answers to the questionnaire showed some recognition that the term 'fitness for duty' is at present made up of its various constituent parts, rather than a comprehensive perspective.

There was also a view that it was an “evolving” issue both in terms of understanding and formal documentation.

The comprehensiveness and formalisation of procedures in place varied from issue to issue and from site to site.

A large number of issues were identified. Most mines mentioned a core of issues, consistent with the new Queensland Coal Mine Safety and Health regulations. A few mines extended the concept to include other issues such as lifestyle.

Sites were asked to identify the key fitness for duty **issues** impacting on their site. Figure 1 depicts the responses to this question and compares them to what the sites indicated they **understood** fitness for duty included generally.

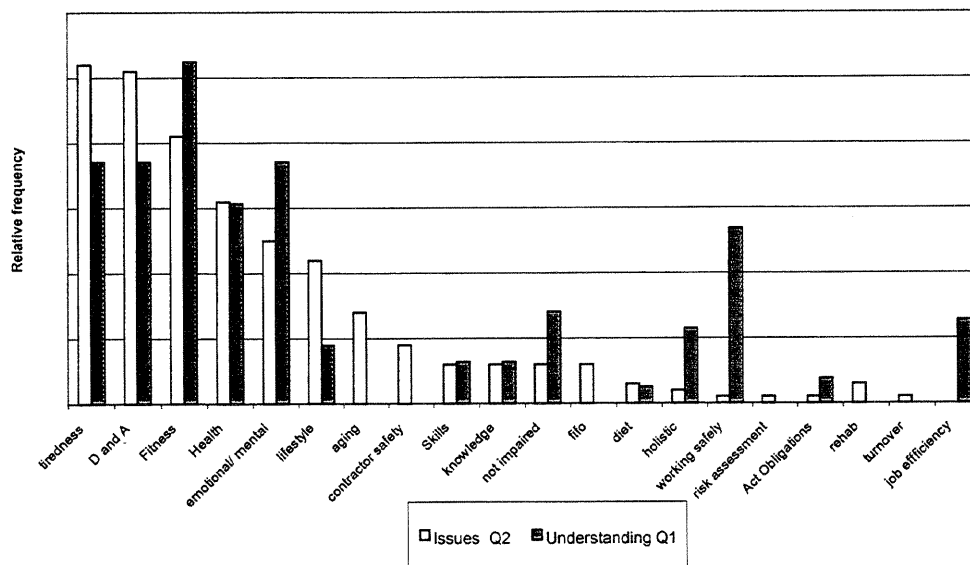


Figure 1. Comparison of issues and understanding

The key differences between the issues at the mine site and what people understood as fitness for duty were:

- Tiredness replaced physical fitness as the most commonly identified issue of concern;
- Drugs and alcohol abuse was ranked slightly more important;
- Aging as related to physical fitness was an issue identified as being of concern but not one that was considered as part of what constitutes fitness for duty;
- Lifestyle figured more prominently in site concerns than in the definition;
- Working safely, holistic safety and working efficiently did not feature significantly in site concerns;
- There was some concern over the travel side of FIFO and also the social/offsite impacts of FIFO;
- Managing contractor safety was a site concern;
- Job efficiency was not a fitness for duty issue on sites.

The major issues identified by mining sector are depicted in Figure 2. The conclusions from this graph are:

General

- NSW coal mines showed some difference to their Queensland counterparts – given the NSW sample size, care should be taken when interpreting the data, as the sample in NSW may not be representative of all coalmines.

- The NSW open-cut coal mines and Queensland metalliferous mines reported a high percentage of responses to emotional/psychological issues. Stress was indicated as an issue by many of the sites and was seen as primarily associated with workplace change, increased workload and increased job insecurity within the coal industry. There was also concern about the adequacy of current strategies for dealing with it at a workplace level (usually EAP).
- Queensland open-cut coal mines and Queensland metalliferous mines did not mention lifestyle as frequently as other mining sectors.
- FIFO was not identified as a major issue (there are no real FIFO coal operations in Queensland or NSW).
- The aging workforce as it relates to physical fitness, was raised as a significant issue in all NSW mining sectors and Queensland metalliferous mines.
- Contractor safety was rated a more significant issue amongst NSW metalliferous mines than other sectors.
- NSW coal mines mentioned health issues the least of all sectors though they were concerned about physical fitness.

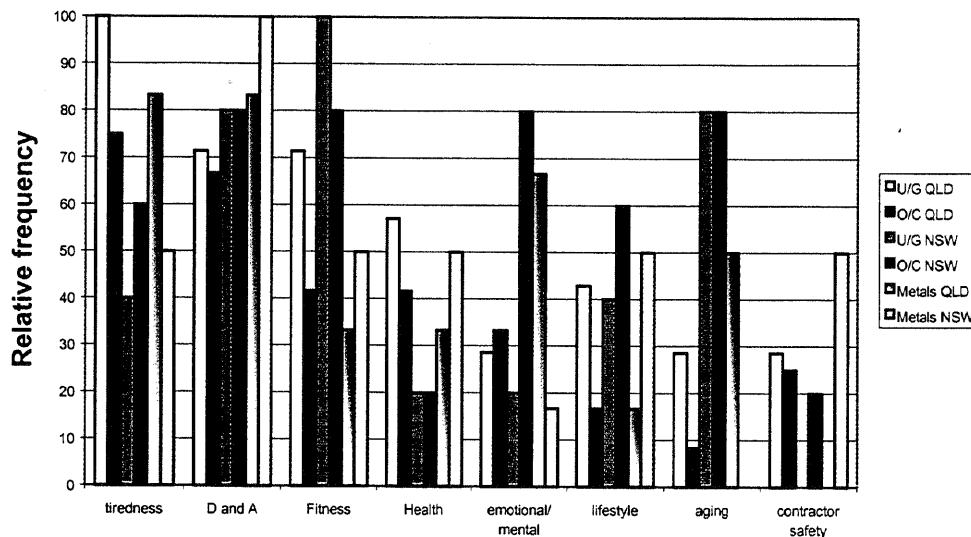


Figure 2. Issues by mining sector and State

Fatigue

- Fatigue rated more highly in Queensland coal mines than NSW coal. This was considered an issue at most sites interviewed for one of the following reasons:
 - Experience of problems and or actual incidents on site (mainly open-cut);
 - Changing work schedules and introduction of compressed shifts (open-cut) and/or increased overtime (underground);
 - Increased awareness of the profile of the issue and the recognition of management responsibilities to minimise risks;
 - Uncertainty about exactly how to manage fatigue and where the respective responsibilities lie.
- The issues associated with fatigue were varied and included:
 - Determining and managing daily fitness for duty (including the issues of impairment);
 - Measuring/assessing fatigue;
 - Managing fatigue on-site;
 - Managing lifestyle and preparation for shift off-site;

- The conflict between the employee desires for overtime against the responsibilities to manage hours.

Physical Fitness

- The health and safety concerns associated with the aging workforce were recognised as a major issue in NSW mines. In particular:
 - declining fitness and health levels (existing fitness for work);
 - management of employees carrying existing injuries (rehabilitation);
 - increased risk of repeat injuries (especially manual handling);
 - increasing challenges associated with rehabilitation due to aging workforce and lifestyle issues;
 - increased risk of lifestyle and aging related injuries such as diabetes, heart disease;
 - decreased tolerance for shiftwork and increased risk of manual handling injuries.
- Functional capacity assessments and task analysis were replacing the traditional standard JCB medical. This was associated with both the aging of the workforce but also the changing work processes and technology across the industry. There was a strong sense that the generic medicals of the past had not been adequate (and were no longer adequate) for assessing an employee's capacity for particular types of work and particular jobs. At present it appears that functional assessment are being used in two ways:
 - as part of the recruitment process;
 - after an injury and as part of the return to work strategy.

There was a stated desire to utilise functional assessment as part of a broader, preventative strategy, replacing the generic medicals with these more targeted, specific functional assessments that could be more accurately matched against the requirement of the job. There was also a realisation that this could be used as a potential 'screening' mechanism – i.e. identifying employees who were at risk of injury before they actually had the injury.

Drug and Alcohol abuse

- In NSW there was a fairly strong consensus that alcohol testing has been a successful deterrent and a strategy accepted easily by the workforce. However, there was continuing discussion over drug testing and this was seen as an ongoing issue and still to be resolved. It appeared that even within NSW there are differences between the Hunter mines and the South coast mines. There was some difference between the mines associated with the large corporate players where drug and alcohol testing was introduced as a corporate policy. One of the smaller private mines interviewed had no testing at all and no intention of introducing it (of the 10 mines interviewed, the three without drug testing were all independently owned mines).
- The key point of contention was the use of urinalysis over saliva testing as the preferred reliable method of testing. This was coupled to the continued desire of the workforce for a testing regime that more accurately tested for impairment rather than merely presence of a drug. In Queensland there was also interest in the testing mechanisms. As testing for alcohol and drugs are widespread throughout Queensland there was little discussion over issues relating to its introduction.

Other issues:

Some of the other issues raised included:

- Need for targeted health promotion initiatives;
- Workplace environment issues such as heat stress, environmental hygiene in underground mines;
- Psychological fitness in terms of appropriateness of and available expertise to assess psychological fitness;

- Appropriateness of EAPs as a mechanism to handle stress and other mental health issues.

Metalliferous sector:

- NSW rated physical fitness higher than Queensland.
- Emotional/psychological fitness and aging concerns rated higher with Queensland mines than with the NSW mines.
- Lifestyle concerns were rated more highly in NSW than Queensland.
- FIFO issues concerned both states to some extent. The majority of metalliferous mines interviewed were not officially FIFO operations.
- The detection and management of the effects of drugs and alcohol are ongoing issues, particularly with respect to its management among contractors and the “culture” of the industry. Unlike coal, where there was little stated evidence of positive results after the introduction of testing, many of the sites reported ongoing issues and problems associated with drug and alcohol use, and abuse. The problem was perceived to be one of controlling the use and abuse of drugs that was seen as part and parcel of the “culture of the workforce”.
- Fatigue was cited a significant fitness for duty issues among the majority of sites interviewed. This was considered to be a fitness for duty issue among both core employees and contractors. Similar to the coal industry, issues focused on:
 - Assessing whether someone was fatigued (i.e. impairment)
 - Designing shift systems that would minimise fatigue without threatening productivity or profits
 - Being confident that control measures would work
 - Tensions between profitability (especially in the development phase of new sites), short-term financial interests of the workforce and duty of care

Contractor management:

- The challenges associated with managing fitness for the companies and the contractor were highlighted in NSW. Essentially the problems revolve around understanding how the general duty of care provisions translate down the contractor chain, and ensuring that initiatives and policies that cover core employees also cover contractors and contracting companies.
- In Queensland there was no differentiation between employees and contractors when considering safety issues and contractor safety was not raised as a separate concern.

Summary:

The analysis of the questionnaires showed that there was good recognition of the basic issues as outlined in the new Queensland Coal regulations. Beyond that there were many factors that were relevant to only a few sites and depended on such things as the age of the workforce and the location of the mine. There was some difference in the views expressed between Queensland and NSW coal mines and between open-cut mines and underground mines. This was possibly due to differences in the demography of the mine populations, the age of the mines, the content and specificity of the regulations in each State and location of the mines relative to major population centres.

An analysis performed on the content of the supplied hardcopy policies indicated that very few had formal fitness for duty policies. Many aspects of fitness for duty were dealt with under individual policies, such as drug and alcohol abuse management or rehabilitation.

MINE SITE FITNESS FOR DUTY DETERMINATION

The mining industry undertakes more fitness for duty testing than other industries and routine testing for alcohol and drugs was not common outside the mining industry. The following comments generally apply to all areas of testing.

- OSPAT and FIT2000 were only in use in Queensland mines – OSPAT had been trialed in Western Australia;
- All sectors to some extent used peer, self and supervisor evaluation;

- Education and training was offered by all sectors to some degree – the exception was in the area of psychological impairment;
- Some general industries were using shiftwork suitability assessments;
- Ergonomic assessment was becoming widespread;

WHAT MAKES A GOOD FITNESS FOR DUTY POLICY?

The following factors were identified for fitness for duty policies and procedures to be effective. The policy needed to be relevant, pro-active and interactive, supportive and fair.

More specifically the policies and procedures need to consider:

Relevance – The policy should be site focussed, job specific and include community and family issues.

Proactive – The policy should assist culture and health behaviours change by providing education in individual, peer and supervisor responsibilities that reflect community standards and expectations.

Workforce involvement - The policy needs to be owned by workforce. To encourage worker support, it should be adapted (where possible) to local cultures.

Supportive not punitive - The emphasis should be on managing the “unfit” worker – no matter what the cause - rather than excluding them. This includes rehabilitation.

Fair – If testing is undertaken, it should be easy, quick and impartial. The testing need for the site needs to be well researched and the process should be open.

FUTURE DIRECTIONS

The industry people interviewed and other key stakeholders were asked what they considered were the future directions for the coal, metalliferous and extractive industries. The responses have been grouped into the following areas:

- **Education and training**

There was general recognition of the need for better education, information and training in all areas affecting fitness for duty. Some of the particular areas mentioned were stress, fatigue, harmful effects of drugs and effects of weight and age. It was suggested that more effective health promotion programs could assist in addressing many of these issues.

- **Testing**

Testing for all areas was considered important. It was recognised that the testing needed to be reliable, accurate and acceptable to the workforce. The difficulty associated with the issue of drug presence versus drug impairment was identified as a major issue needing resolution.

Before currently available testing devices can be used for assessing fatigue and psychological impairment, considerable work will need to be undertaken to ensure validity.

The introduction of task analysis was seen as being used by the industry more widely to assist in identifying physical fitness.

- **Standards**

The development of guidelines/standards covering some of the testing areas would assist the industry in managing fitness for duty. Risk management of fatigue was recognised as a possible way forward.

OTHER ISSUES

A number of other issues were investigated through the project. These included:

- Quality control of drug and alcohol testing processes;
- The link between an abnormal response and impairment for testing equipment and what you do when an abnormal test response occurs;
- Legal implications of discrimination and obligations under "Duty of Care";
- The need for strategic health surveillance to identify emerging issues;
- What else apart from stress constitutes psychological impairment.

Copies of the report are available from ACARP and the summary of findings is available from the ACARP, QMC and NSWMC websites.

CONCLUSIONS

In general, the mining industry is pursuing the management of fitness for duty in a manner consistent with the requirements of the legislation.

There needs to be an increased emphasis on holistic management through education, training and the encouragement of sharing responsibility between mine management and the individual.

There are examples of fitness for duty testing being undertaken without real understanding of the limitations of such testing.

In addition to the standard issues there are number of areas that need more research before mines can routinely manage them effectively.

ACKNOWLEDGEMENTS

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Finally this project relied upon the active involvement of members of the mining industry and other industries. Without their support this project could not have been completed. This required a significant commitment in time each person and we are very grateful for this support.