Commissioner for
Resources Safety
& Health

Outcomes of 2018 fatigue management workshop

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Objectives of the 2018 fatigue workshop

- To consider existing data and evidence in relation to the hazards of fatigue for workers in mining workplaces.
- To discuss legal, health and productivity implications for the mining sector and those who work in it.
- To identify and prioritise contemporary risk management measures
- To consider practical improvements to existing instruments and interventions.

Key discussion points

Naomi Rogers—Fatigue research and understanding of fatigue

- Risk of fatigue is a continuum NOT a discreet event
- Put the focus on how to manage fatigue not measure it
- Fatigue management is a shared responsibility

John Tate—Fatigue in mining legal environment

- This is a hotly contested area. WHY? Because the elimination of risk is inconvenient
- Humans have biological design limits
- Causation precedents exist for liability
  - Risk created for profit
  - Personal choice and privacy
- Health vs safety—mindset to management

Key discussion points

Andreas Polaris—Fatigue management in the transport industry…a risk-based approach

- The suite of signals—is there alignment to support safe choices?
- Regulatory tools—diverse flawed without accountability (they find ways around it if there isn't sense/alignment re: personal/business priorities)—trainers approved by regulator not ASQA
- Reduce length of work hours
- Have breaks
- Sleep (7hr) between work
- Reset rest breaks
- Everyone is responsible to report (risk)
- Drowsiness—also an issue of risk
- Tell stories/champions/materials to support

Key discussion points

Senior Sergeant Nicole Fox—Fatigue and traffic accidents

- Enforcement—Save people from themselves and others
- Education
  - Management
  - Labour hire
  - Next of kin
  - Workers
- Engineering
- Partnerships—proactive will come to you to look at how to reduce risk and hazards in our environment and circumstances
- Communication/compliance/controls/consistent signals
- Culture of site/company

Key discussion points

- Duty of care doesn’t end at end of shift
- Physiological/psychological state characterised by altered capacity
- Extended hours = > 8 hour shift
- What are the contributors to fatigue?
- What are the targets for fatigue management?
- Do we consider fatigue to be a risk of how we operate or do we consider it to be a hazard that needs to be managed?
- Fatigue safety and health issues not an industrial issue
- How do we identify fatigue; how do we reduce risk of fatigue
- Risk at an Engineering and/ or a Biological level
- Fatigue is analogous to noise
- Avoid unwanted event (priority)

Key discussion points

- Function of guide
  - Before
  - During
  - After

  Scientific evidence—Bowtie assessment
- Technology
- Consider markers of fatigue
- Normative judgements
- DO A BOWTIE
- REVIEW THE GUIDELINE

Critical considerations for fatigue management

- Education—engaging people
- Technology
- Causes of fatigue
- Culture on site
- Best practice
- Regulation
- Responsibility
- Critical control

1. Why does this matter?
2. What needs to happen to be done—actions?

Possible actions

- Courage to keep talking about this issue:
  - Evidence/ science
  - Commitment
  - Recognise sensitivity
- Advise Resources Safety and Health that it is the view of the workshop that Queensland Guidance Note 16 be reviewed having particular regard for:
  - Making the objective of the Guidance note clear
  - Eliminate the risk assessment
  - Risk factors not necessarily individual factors
  - Usual risk matrix should be used not the table style
  - Risk assess fatigue not the roster; fatigue management goes beyond roster
  - Include the framework for a bowtie analysis
  - Commissioner to write to the Executive Director Resources Safety and Health
- Agree to the Objective of the guidance note

Possible actions

- How do “those lists” (PAGES 4–11) compare to what we are doing?
- Take the outcomes of the workshop to the OHMAC
- Videos on fatigue—published on Miners’ Health Matters
- Include the presentations made at the workshop in material provided to OHMAC and circulate presentations to attendees
- Share the information on fatigue coming from the workshop on available technology—translate to present relevant information to safety
- Individual mines could partner with Queensland Police Service
  - Use the information and case studies available and staff
  - Video that collates the relevant information
  - Use regional presence of the Forensic Crash Unit to proactively address fatigue issues and management
- Leadership on this issue required

Possible actions

- Clarify beliefs around WorkCover/workers compensation
  - What is the confirmed situation with regards the commute at the end of a roster
- Clarity around novated lease rules
- Look at NSW fatigue management practices
  - Circulate to attendees
  - Can we improve?
- Have/use credible chronology
- Promote health links to fatigue and shift work—what is the evidence?

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Critical controls

CRITICAL CONTROL

What are the elements

- Must be critical control
  - Act
  - Object
  - Technical systems
- Control decision tree to decide if it is critical

Possible Actions

- Implementation Verification
  - Build verification system/ implementation based on control
  - Responsible person
  - Monitor/ audit
  - Review
  - Place for technology to monitor effectiveness
- A procedure is not a control **EVER** but it **might** contain a critical control

Culture on site

CULTURE ON SITE

What are the elements

- Understanding of current status
- What does good look like—picture of the promised land
- Gaps from what good looks like—from above point
- Drivers for change (or desire for change)
- Restraints to change
- "Culture of Responsibility"
  - Fitness for work—All
  - Work design—Management
  - Recognising and reporting—All

It needs boardroom accountability

Possible Actions

- Survey and analyse
- Gap analysis—gap analysis what good looks like and where we are now

Education/engagement

EDUCATION/ ENGAGEMENT

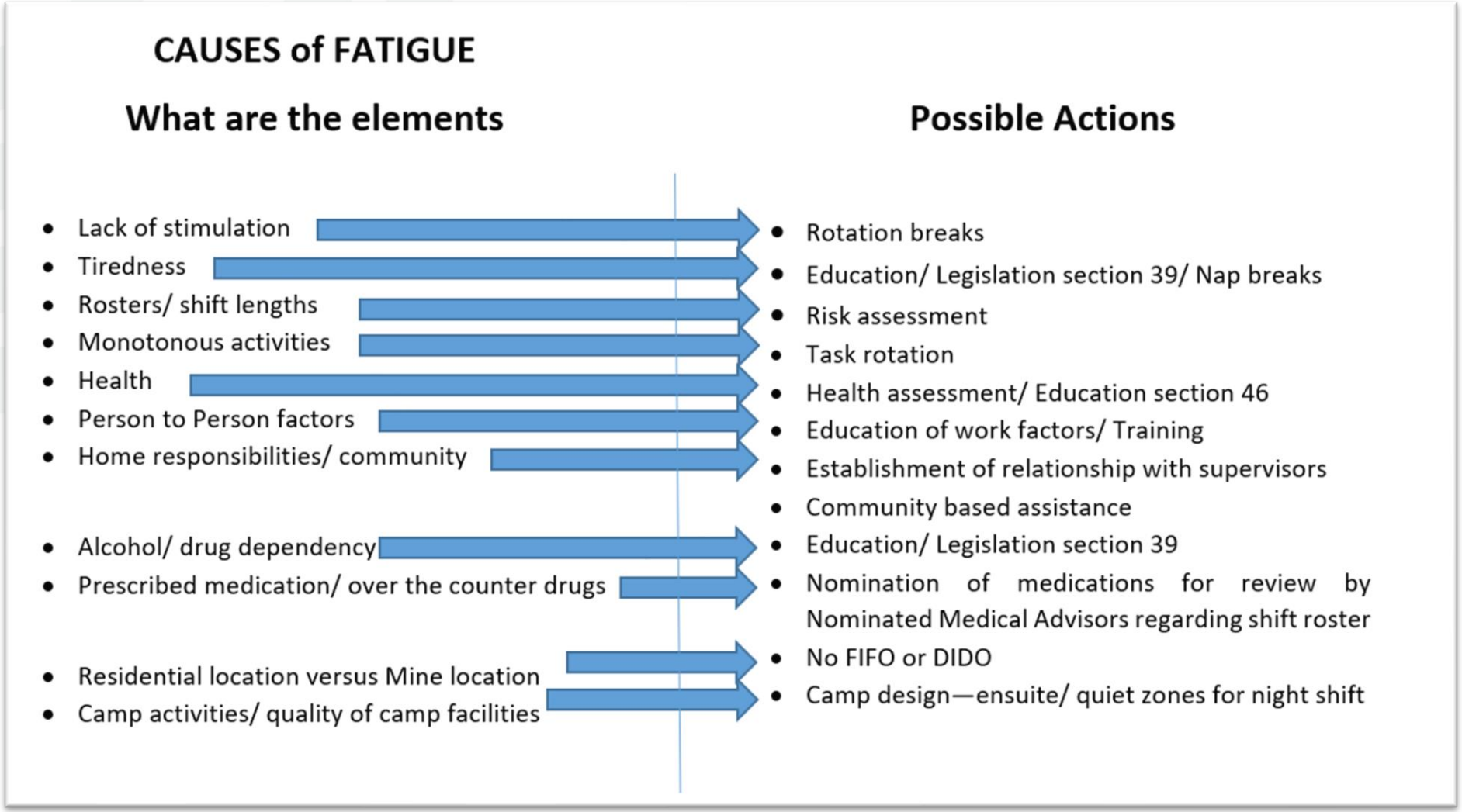
What are the elements

- Understand physiology of fatigue
- Recognise your limitations—how fatigue affect us?
- Consider multiple inputs to fatigue
- Recognise short term and long term impacts on health and safety
- Know legal liability and
  - consequences
  - Community expectations
  - Standards
- Other perspectives:
  - Family
  - Community
  - Co-workers
  - Police
  - Employer
- Multimodal delivery of information—age specific
- Sustainable and ongoing education

Possible Actions

- Have someone who knows what they are talking about—expertise
- Agreed learning outcomes
- Review available/ existing programs
- Develop education courses for mining industry
- Multi modal delivery—combination of F2F, hypothetical, web based, app based involving community, family and police
- Ongoing review/ evaluation of effectiveness
  - Assess competency/ retention of information
  - Assess behaviour change
  - Assess incidents—incidence and prevalence
- Share learnings from incidents—"safety share"
- Education/ training in incident investigation
- Industry wide education includes contractors and labour hire
- Cultural acceptance of behaviours related to fatigue e.g. survey monkey (anonymous)

Causes of fatigue



Best practice

BEST PRACTICE

What are the elements

- **Airline industry (pilot)**
- What are you measuring against
- Identifying the issues are alike
- Best practice is not static/ dynamic
- Rests on a desire to share information

Possible Actions

- **48 hour alcohol free and 8 hr sleep prior to shift**
- Central advisory body to take ideas and disseminate
- Government/ industry sharing information
- Shorter duration of night shifts
- Shorter 1st and last shifts
- Contractors to include cost of post-shift motel rest prior to driving home
- Walk the talk
- Industrial manslaughter legislation

Responsibility

RESPONSIBILITY

What are the elements

- **Where are the boundaries**
- Legal precedents and obligations under Act section 39
- Gutter to Gutter
- Legal/ Social/Enforceable/ Relevant/ Appropriate/ Logical
- Right level of hierarchy
- Simple/ Understandable/ Clear

Possible Actions

- Am I covered by WorkCover? (consistent signals)
- Establish review of workers compensation issues regarding sleep post shift/ journey claim
- Level of delegation
- Education
- Regulation
- Severity of offense against incident
- Company of Individual

Technology

TECHNOLOGY

What are the elements

- Key purpose? Is it monitoring effectiveness e.g. control **OR** is it Big Brother
- If it is the Principal Control what happens when it fails?
- What is reliability?
- Does if work?
- Is it considered a Critical Control—what is the process for managing?
- Do you know what it is measuring?
- Is it real time?
- Is it passive or an intervention?

Possible Actions

- Eye movement
- Head movement
- Vibrating seat
- Wearable heart rate

Regulation

REGULATION

What are the elements

- Meaningful and simple
- Based on accepted evidence and fact
- Rules to follow must be clear
- Focussed on achievement of an outcome
- Commensurate with risk/ hazard

Possible Actions

- Agree on the outcome
- Agree on the severity (consequence and response)
- Education of all
- Engagement (understanding of aim)
- Legal consideration

Conclusions

- Commitment to better fatigue management
- Good to move forward
- Don’t get bogged down in the detail
- Great presentations
- Keep the momentum—it is up to us
- Real lives are affected—focus on preventing the grief and consequence of loss
- It is about people
- Great discussion—keep it going
- Learned a lot today—ideas today could deliver positive outcomes where it counts
- Valuable day—make fatigue a sustainable priority

Conclusions

- Fantastic fatigue programs exist—keep focussed
- No one person has the answers—look at how others are dealing with this issue successfully
- Good day—fatigue is a moral issue
- It is complex but we must be effective
- Queensland Guidance Note is hard to use as an audit tool—make it useful
- We want to stop people being hurt
- We are all responsible to do something—engage with our people to make it work
- Thanks for presence today
- We have the skills to solve our own problems

Panel Session – What can we do differently to better manage fatigue the coal mining industry?

- Professor Naomi Rogers
- Dr Nick Mabbott
- Glenn Hamilton, QFES
- Jason Hill, MEU
- Jacques le Roux, RSHQ