



## GUIDELINE ON SAFE AND HEALTHY WORK PRACTICES - FATIGUE

### Purpose

This guideline aims to raise awareness of the issue of fatigue related risk in the health care setting and to highlight the need for all who are involved in the provision of health care to actively manage any fatigue related risk.

### Scope

This guideline is designed to assist individual practitioners, supervisors, employers, operators of health facilities and bodies responsible for medical education in identifying and managing fatigue related risks.

### Context

The Board acknowledges all medical practice attracts a certain amount of risk and that it may be impractical to mitigate all potential risk factors due to the complexity of the profession, differing working arrangements, and the range of settings in which doctors practice. Nevertheless, protective management strategies should be developed, implemented, monitored and reviewed to minimise the risk of fatigue related adverse events.

Should the Board decide to investigate an allegation of unsatisfactory professional conduct where fatigue may be considered to be a contributing factor, the Board would expect to find evidence of protective management strategies having been developed and compliance with such strategies.

In making these enquiries, *the Board is not limited to investigating registrants*. The *Medical Practitioners Registration Act 2001* provides that a person must not aid, abet, counsel, procure or induce a medical practitioner to engage in conduct forming the basis for a ground for disciplinary action.

### Related legislation/standards

*Health Practitioners (Professional Standards) Act 1999* and the *Medical Practitioners Registration Act 2001* - the legislative framework in which the Board has responsibility to protect the public by ensuring health care is delivered by medical practitioners in a professional, safe and competent way by upholding standards of practice and maintaining public confidence.

*Workplace Health and Safety Act 1995* – the primary legislation regulating health and safety in the workplace. An employer or operators of health facilities have a 'duty of care' obligation to ensure that employees or others present at the facility (and those who also may be affected by their acts or omissions) are not exposed to hazards and risks that could arise from their working hours arrangements and to address them through a systematic risk management process. Similarly, workers must not wilfully or recklessly put their own or another person's health and safety at risk.

*Workplace Health and Safety Risk Management Advisory Standard 2000* – provides information on how to identify a variety of workplace hazards and how to manage exposure to the risks associated with these hazards.

### What is fatigue?

There are many definitions of fatigue. For these purposes, it can be defined as the increasing difficulty in performing mental and physical activities as a consequence of inadequate restorative sleep.

### Risk identification and assessment

An individual may not always be able to accurately assess their own levels of fatigue. Therefore, it is important for facilities to have in place processes, instruments or activities to help identify when a person providing a medical service may be becoming fatigued.

The information provided below is not intended to be an exhaustive list of fatigue related risk factors, nor is it to form the basis for negotiating working conditions. It has been provided to raise awareness of circumstances under which the likelihood of an adverse event occurring could increase, particularly if a number of fatigue risk factors were present.

**Note** - In responding to actual and likely fatigue-related risks, it would be important to assess whether the risk of withdrawing the medical related service could exceed the risk of a fatigue-related error occurring.

<b>Risk Factor</b>	<b>Low to Medium Risk</b>		<b>High to Extreme Risk</b>	
<b>Length of work period</b>	8 hours	10 hours	12 hours	>12 hours
<b>Average working hours (including travel) per week</b>	48hrs	60hrs	70hrs	>70hrs
<b>Roster</b>	Standard hours	Forward rotating in a regular and predictable cycle	Forward rotation but changed cycle	No stable direction or speed of rotation
<b>Time of commencement of work</b>	No early morning starts (before 6.00am)	Few early morning starts (before 6.00am)	3-5 early morning starts per week (before 6.00am)	>5 early morning starts per week (before 6.00am)
<b>Number of sequential nights or hours extending into the night</b>	No nights or hours extending into the night	1-2 nights or hours extending into the night	3 nights or hours extending into the night	>3 nights or hours extending into the night
<b>After hours (risk increases if working in unfamiliar clinical area, or awoken from sleep)</b>	No on-call	On-call <3 days wk	On-call >3 days/wk (distance travelled is also relevant)	On-call for >7days (distance travelled is also relevant)
<b>Breaks during work per session</b>	>3 short breaks	3 short breaks	1 – 2 short breaks	No breaks taken
<b>Recovery time (ideally at least 1 day free from duty)</b>	>12hrs between consecutive sessions  7-8hrs sleep/24hrs  50hrs sleep/7 days (mostly at night including 2 full nights)  >2 full nights sleep after last night worked	12hrs between consecutive sessions  6-7hrs sleep/24hrs  50hrs sleep/7 days (including 2 full nights)  2 full nights sleep after last night worked	<12hrs between consecutive sessions  5-6hrs sleep/24hrs  <50hrs sleep/7 days (including 1 full night)  1 full nights sleep after last night worked	<10hrs between consecutive sessions  <5hrs sleep/24hrs  <50hrs sleep/7 days with no full nights sleep  No full nights sleep after last night worked
<b>Patient mix (emergency and/or distressed patients increase risk)</b>	Some acute patients	Many acute patients	Many acute patients + some very acute patients	Mostly very acute patients
<b>High concentration and/or mentally demanding work</b>	Minimal periods of high concentration and/or mentally demanding work	Medium periods of high concentration and/or mentally demanding work	Long periods of high concentration and/or mentally demanding work	Very long periods of high concentration and/or mentally demanding work
<b>Availability of support from other clinicians.</b>	Adequate supervision and staff ratios – given level of experience  Group practice	Inexperienced doctors with limited supervision  Outer metropolitan or regional setting with support from other clinicians	Rural and Remote setting with some support available from other clinicians  Regional setting - no support from other clinicians	Rural and remote setting with no support available from other clinicians
<b>Non-work related factors: Age, health &amp; fitness Stress (eg financial difficulties death/illness in family, divorce, second jobs etc) Lifestyle/Self Management eg. drugs, alcohol, sport, social.</b>	No adverse non-work related factors	Few adverse non-work related factors	Many adverse non-work related factors	Significant adverse non-work related factors (eg sleep disorder + increasing age (>55) +poor overall health)

## Protective strategies

Medical practitioners have different scopes of practice and working arrangements. A protective management approach should be adopted by operators of healthcare facilities and individual practitioners. This approach should address the unique demands of each workplace environment and the personal situation of the individual medical practitioner. **The protective management strategies or countermeasures should match the likely consequence of a fatigue-related error and be developed to suit the local environment.**

## Examples of protective strategies and countermeasures <sup>1</sup>

Risk level	Controls
Low	<p>This level of fatigue risk suggests that a business as usual approach to fatigue management should take place. This does not mean that there is no risk of fatigue. Rather, 'low' risk suggests that fatigue monitoring strategies may be needed to identify any instances where fatigue risk could be elevated. Education and training, as well as keeping fatigue 'on the radar' are critical here. For instance, 'low' risk according to the risk identification and assessment table indicates an inherently low risk of fatigue. However, poor sleep between work periods might translate into higher levels of fatigue risk.</p> <p>Fatigue monitoring strategies may include:</p> <ul style="list-style-type: none"><li>• individual and team monitoring for symptoms of fatigue</li><li>• individual and team monitoring for performance degradation</li><li>• individuals assessing and reporting inadequate sleep or extended periods of wakefulness.</li></ul> <p>No specific controls necessary, except in the presence of indicators of fatigue (i.e. fatigue related symptoms, errors or incidents).</p>
Medium	<p>This level of fatigue risk suggests that there is potential for fatigue to occur. To this end, the actions at this level may involve increased monitoring for fatigue-related impairment, as well as a set of preliminary fatigue countermeasures that can be used to reduce the likelihood or mitigate the consequences of fatigue. In addition to the aforementioned fatigue monitoring strategies, individual fatigue countermeasures may include:</p> <ul style="list-style-type: none"><li>• napping</li><li>• rest breaks</li><li>• adequate hydration and food intake</li><li>• task rotation.</li></ul>
High	<p>This level of fatigue risk suggests that fatigue is likely to occur and that risk mitigation strategies may be required to reduce the potential for harm. In addition to the aforementioned fatigue monitoring strategies and individual fatigue countermeasures, team-based fatigue countermeasures may include:</p> <ul style="list-style-type: none"><li>• individuals reporting elevated fatigue risk to team</li><li>• task reallocation</li><li>• increased supervision and team cross-checking</li><li>• seeking a second opinion on critical clinical decisions</li><li>• not acting as the primary operator in procedural work.</li></ul> <p>Napping and safe-home controls may include:</p> <ul style="list-style-type: none"><li>• priority access to on-call rooms and rest facilities</li><li>• priority access to strategic napping breaks</li><li>• access to taxi vouchers to get home and back to work.</li></ul>
Extreme	<p>This level of fatigue risk suggests that the risks associated with fatigue are significant and the potential for harm is such that risk mitigation strategies should be implemented.</p> <p>In addition to the aforementioned fatigue monitoring strategies, individual and team-based fatigue countermeasures and napping and safe-home controls, fatigue risk decision processes may include:</p> <ul style="list-style-type: none"><li>• implementation of additional controls as developed by work unit</li><li>• decisions about continuity of work to be made in consultation with supervisor (or equivalent). It would be important to assess whether the risk of withdrawing the medical related service could exceed the risk of a fatigue-related error occurring.</li><li>• decisions to be documented with hospital/practice management.</li></ul>

<sup>1</sup> adapted from the *Fatigue Risk Management System Resource Pack* – Queensland Health

**Additional team-based counter measures could also include:**

- create and foster a culture where it is safe to indicate when practitioners are fatigued and set objective thresholds for fatigue leave and task reallocation after busy on-call periods
- ensure a safe system of work for subordinates, allocate available resources in a manner that reduces fatigue -related risks to as low as reasonably practicable and respond appropriately to reports of fatigue related behaviours
- consider setting a limit for the last hour at which elective procedures may be commenced
- consider whether 12 hour or greater sessions are necessary
- minimise critical tasks at circadian low points
- consider skill mix/level of staff, experience of staff and patient acuity
- develop a formal process to manage and approve shift swaps or extended shifts
- provide at least 24 hours notice before commencement of night shift
- where recall is frequent, avoid scheduling clinical work following a night on-call
- develop procedures for being contacted while on-call
- ensure high risk sick patients are reassessed and a management care plan established by 9.30pm to reduce chance of emergency call-outs occurring during the night

**An individual medical practitioner should:**

- present at work in a state fit to conduct duties safely by maintaining their health and making an effort to utilise time away from work to obtain sufficient sleep to minimise the risk of fatigue-related errors
- discuss any concerns regarding possible fatigue with colleagues or mentors
- understand and execute responsibilities with respect to fatigue risk management
- inform an appropriate individual when adequate sleep has not been obtained and declare any work hours outside of rostered work at the primary place of employment
- allow sufficient time to travel to place of work (eg country rotations) and recognize effects of travel, particularly jet lag
- identify, report and respond to your own and colleagues actual and potential fatigue-related risks
- match the level of risk control to the likely consequences of a fatigue-related error

**Related policies**

*Good Medical Practice* – sets out general principles in relation to the practice of medicine in Queensland and is available at [www.medicalboard.qld.gov.au](http://www.medicalboard.qld.gov.au)

**References and other sources of information:**

- *Managing fatigue – A guide for the workplace* - Queensland Department of Employment and Industrial Relations
- *Policy Guidelines for a Risk Management Approach for Shiftwork* - A Baker, A Fletcher and D Dawson
- Test your own fatigue risk on the Australian Medical Association's risk calculator at their website: <http://safehours.ama.com.au>
- *Medical Fatigue Risk Management Human Resources Policy I1* - Queensland Health
- *Fatigue Risk Management System Resource Pack* - Queensland Health
- Hospital at Night: <http://www.healthcareworkforce.nhs.uk/hospitalatnight.html>
- Doctors Health Advisory Service: <http://www.dhas.org.au>