



## SERVICE STANDARD 3.1.14 FATIGUE MANAGEMENT

ITEM	DESCRIPTION
Title	Fatigue Management
Number	3.1.14
Version Number	2.0
SOPs	> Operational Protocol 1.4.4
Owner	Executive Director, Operations
Contact	Manager, State Operations
Approved Date	15 March 2016
Next Review	15 March 2019
Classification	Unclassified
Document Control	Electronic - Printed Copies are Uncontrolled

### 1 Purpose

- 1.1 Managing the risks associated with fatigue is complex for emergency services such as the NSW Rural Fire Service (NSW RFS) because of the:
  - a. Unexpected nature of emergencies;
  - b. Need for working hours outside of 'normal' hours;
  - c. Work environments that present health and safety risks to members; and
  - d. Difficulties in prescribing the activities of volunteers outside of NSW RFS work.
- 1.2 Fatigue management plays an important part in the effectiveness and safety of the activities of the NSW RFS, particularly those that involve shift work arrangements.
- 1.3 The purpose of this Service Standard and accompanying Operational Protocol is to provide:
  - a. The recommendations from the NSW RFS for work and rest period planning;
  - b. Organisational strategies for managing fatigue caused by sleep loss during incidents;
  - c. An understanding of a non-prescriptive approach;
  - d. Methods to determine individual fitness for duty with respect to fatigue and an appreciation of the importance of being physically prepared;
  - e. Information about fatigue and its impact on individual and organisational capability; and,
  - f. An outline of the responsibilities of various members of the NSW RFS in relation to fatigue management caused by sleep loss during incidents.

## 2 Definitions

- 2.1 For the purpose of this Service Standard and accompanying Operational Protocol the following definitions apply:
- a. **Critical Incident Support Services (CISS):** Critical Incident Support Services provided by a team of specially trained personnel to assist NSW RFS members to deal with the effects of critical incident stress
  - b. **Crew Resource Management (CRM):** a technique of management consisting of making best use of all the available resources including:
    - i. People;
    - ii. Equipment;
    - iii. Supplies; and
    - iv. Information
  - c. **IC:** Incident Controller
  - d. **IMT:** Incident Management Team
  - e. **I'MSAFER:** the acronym used by the NSW RFS as a checklist against which members may assess their ability to respond to an incident and consists of:
    - Illness or injury
    - Medication
    - Stress
    - Alcohol or drugs
    - Fatigue
    - Expertise
    - Review

("Review" is a new component of I'MSAFE. It asks the question: "Am I fit for frontline firefighting today?"; or as a Leader/Supervisor, "Are all my crew fit for frontline firefighting duty today?")
  - f. **Microsleep:** a brief and unintended period of sleep, often characterised by head snapping, nodding or closing your eyes. Microsleeps commonly occur while trying to stay awake while performing monotonous tasks, like driving
  - g. **Nap:** any sleep period of less than 3 hours duration
  - h. **OIC:** Officer in Charge
  - i. **SA:** Safety Advisor (works in the field and reports to SO)
  - j. **SO:** Safety Officer (works within the IMT and reports to IC)

## 3 Policy

- 3.1 This Service Standard should be read in conjunction with the NSW RFS Operational Protocol for Fatigue Management which provides guidance on strategies that can be considered in developing programs for managing fatigue.
- 3.2 The effects of fatigue can often be experienced for some time after returning from an incident. Chaplaincy and Critical Incident Support Services (CISS) are available to assist members and their families.
- 3.3 A risk management approach is to be taken in developing strategies and programs to assist in the management of fatigue.
- 3.4 The NSW RFS I'MSAFER check is to be used by individuals to perform a personal assessment of their individual state of fatigue. At the commencement of a shift, periodically throughout their shift/deployment and on resuming duties after a break of any length, members should exercise the I'MSAFER check. If they feel they are fatigued, or are at risk of fatigue they must advise their supervising officer or a colleague.
- 3.5 The requirements of this Service Standard and associated Protocol apply equally to all members.

## Procedures

- 3.6 The NSW RFS has adopted a non-prescriptive approach to the management of fatigue.
- 3.7 This non-prescriptive approach takes a broader safety risk management approach and proposes systems that allow individuals on the frontline to make informed decisions on managing fatigue, based on the local conditions, rather than having rules imposed on them from above. Such fatigue risk management systems are premised on having a workforce which is informed, trained and given techniques to monitor, recognise and mitigate the effects of fatigue.
- 3.8 Incident Managers have responsibility for ensuring that all personnel understand they are responsible for managing their own fatigue.

### Example of the non-prescriptive model

- 3.9 Figure 1 below shows one non-prescriptive model of fatigue management. The model uses James Reason's hazard control framework and uses multiple layers of defence to control the hazards.

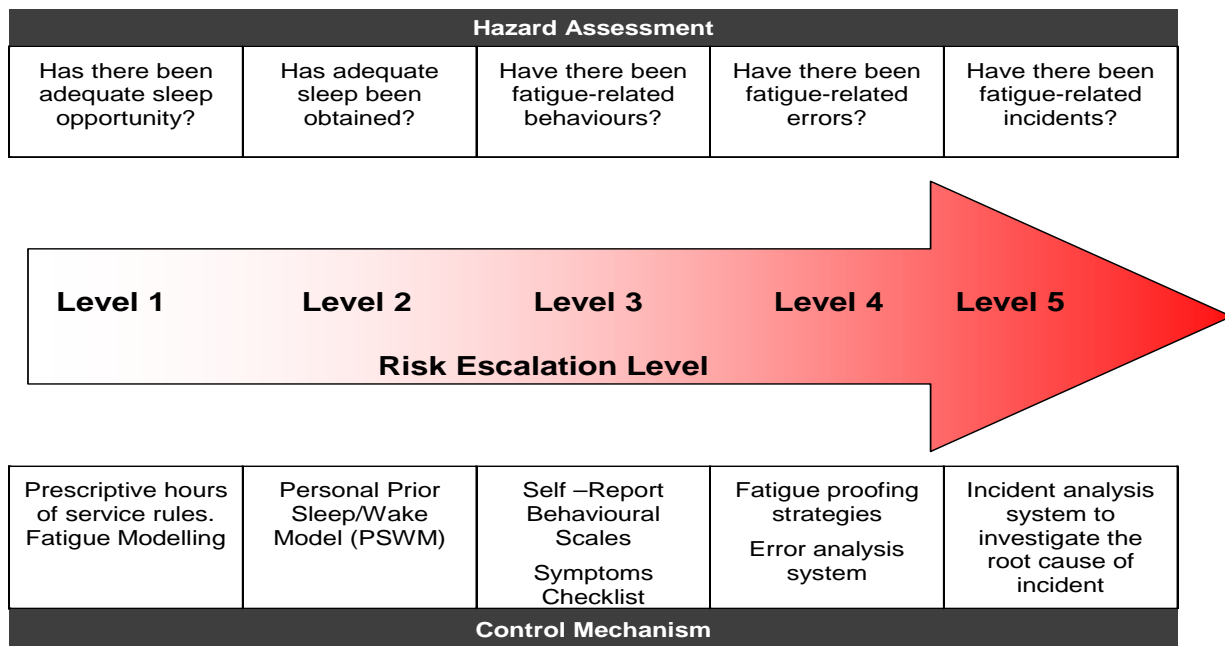


Figure 1 Adapted from Dawson & McCulloch (2004) Fatigue Risk Escalation

- 3.10 There are multiple levels that precede a fatigue-risk incident, for which there are identifiable hazards and controls. An effective fatigue risk management system should attempt to manage each level of risk. Refer P7.1.10 Organisational Risk Management for further information.

- 3.11 In this model, a fatigue related accident or incident is seen as the final point of a longer chain of events or risk escalation path. An examination of the risk escalation path (shown in Figure 1 as the red arrow) indicates that the fatigue related accident is merely the end point of a chain of events and is always preceded by four levels of antecedent events that lead to the actual accident.

A *fatigue related incident* (Level 5) is always preceded by a *fatigue related error* (Level 4). Each fatigue related error, in turn, is associated with an individual in a fatigued state exhibiting *fatigue related behaviours* (Level 3). The fatigued state of the individual will, in turn, be preceded by *insufficient sleep* (Level 2).

Insufficient sleep will be caused by *inadequate sleep opportunity* (Level 1) - either by:

- a. An inadequate sleep opportunity not being available/identified; or
- b. An individual who did not utilise their sleep opportunity appropriately for reasons which may include:
  - i. Failure to obtain sufficient sleep for reasons beyond their control; or
  - ii. A sleep disorder.

- 3.12 Each of the four steps in the risk escalation path for a fatigue related incident provides the opportunity to use risk management tools to identify potential incidents and implement appropriate control mechanisms. Some examples of control mechanisms at each level of the hierarchy are shown in Figure 1, above the heading "Control mechanism". They include:
- a. Having prescriptive hours-of-service rules to ensure members are provided with adequate sleep opportunity;
  - b. Using group sample data to estimate the average levels of fatigue;
  - c. Having individuals assess their own fitness for duty and ensuring they have obtained sufficient sleep;
  - d. Using tools or risk indices (such as the "Prior Sleep/Wake Model" proposed by Dawson and McCulloch, 2004) to assess the actual sleep obtained by individuals and ensure sufficient sleep was obtained;
  - e. Using self-report behavioural scales or symptoms checklists to ensure members who obtained what is considered sufficient sleep are not exhibiting fatigue related behaviours/symptoms;
  - f. Having Error Analysis Systems to identify the incidence of errors (e.g. Near Miss and Accident Reporting Systems); and
  - g. Having Incident or Accident Analysis Systems to investigate instances where fatigue related accidents/incidents actually occurred.

3.13 A gap or a hole at any of these five levels may trigger an appropriate response such as:

- a. Standing down individuals;
- b. Moving individuals to lower risk duties;
- c. Providing local sleeping arrangements;
- d. Providing more frequent rest breaks; and/or
- e. Pairing members to work together.

Other appropriate responses are provided in the Operational Protocol – see clause 4.10 of the guideline for methods of enhancing the quality of sleep and clause 4.9 for methods for improving wakefulness.

3.14 It is important that no single control mechanism is used on its own because this is unlikely to protect against fatigue related incidents.

For instance, an organisation that provides 8 hours of sleep opportunity may be providing adequate opportunities for sleep for the majority of its workforce. However, an individual who requires more than 8 hours sleep will not prevent the risk escalation path projecting beyond Level 1. By having multiple layers of defence (Levels 2-4), the system is better able to defend against fatigue related incidents.

3.15 The multiple layers of defence have other benefits. The insidious nature of fatigue means people who are fatigued are not always able to gauge their own level of impairment. In other words, fatigued people are often unaware that they are not functioning as well as they would be if they were not fatigued. By having control mechanisms at different levels that do not rely solely on an individual's self-assessment of their own level of fatigue, the system is better able to detect errors and improve safety. Encouraging a culture of mutual scrutiny, and utilising CRM where everyone looks out for each other is another way of managing the insidious nature of fatigue.

## Responsibilities

The following responsibilities exist in the NSW RFS with respect to fatigue management.

### NSW RFS

- 3.16 The NSW RFS is responsible for designing, implementing, recording, monitoring, reviewing and evaluating arrangements for managing the risks caused by fatigue.
- 3.17 All members have a responsibility for ensuring these guidelines are understood and that guidance is both sought and provided to assist line managers and officers on how to manage instances where members have had insufficient sleep or have been awake for extended periods.

### **Members of an Incident Management Team (IMT)**

- 3.18 Members of an IMT who are tasked with arranging work rosters have a responsibility for ensuring that each individual's work hours comply with the NSW RFS Operational Protocol for Fatigue Management. That is, members of an IMT who are tasked with arranging work rosters are responsible for ensuring that each individual is:
- a. Provided with adequate sleep opportunities;
  - b. Is not continuously awake for excessive periods of time;
  - c. Is not working for excessive periods of time; and
  - d. Is provided with adequate rests between and within shifts, and after deployments.
- 3.19 The relevant members of an IMT are responsible for providing food, snacks and drinks to members that facilitate better sleep, wakefulness and body functioning. Appendix 3 of the Operational Protocol for Fatigue Management provides guidance on the types of foods and drinks that enhance the quality of sleep.

### **Safety Officer**

- 3.20 The Safety Officer (SO) advising an Incident Controller is responsible for checking the rostering and shift work arrangements of those personnel deployed to an incident, to ensure that:
- a. Individuals do not work hours that exceed those recommended in the NSW RFS Operational Protocol for Fatigue Management that accompany this Service Standard; and
  - b. That adequate opportunity for sleep is provided.

### **Safety Advisor**

- 3.21 Safety Advisors (SAs) operating at a field level are responsible for monitoring and addressing fatigue-related behaviour that is, or has the potential to, adversely impact on the performance of individuals and teams operating in the field.

### **Incident Controller**

- 3.22 The Incident Controller (IC) has overall responsibility for the safety of all members involved in an incident. This includes:
- a. Ensuring that arrangements for fatigue management are provided and adhered to; and
  - b. Promoting a culture where the risks associated with fatigue are taken seriously.

### **Individual Members of the NSW RFS**

- 3.23 Using a risk management approach, all members of the NSW RFS have a responsibility to ensure they do not carry out or continue to carry out work if they are fatigued. All members of the NSW RFS have a responsibility to:
- a. Remove themselves from duty if they exceed their personal limits. The I'MSAFER check may be used to make this individual risk assessment; or
  - b. When reporting for duty, to inform their supervisor if they feel unfit for duty due to fatigue, or if, through the course of their shift they become unfit for duty due to fatigue.
- 3.24 Individual members of the NSW RFS have a responsibility to use the time provided to them before commencing duties and in between shifts to attempt to obtain sufficient sleep. It is acknowledged that sometimes getting to sleep may be difficult after a shift due to the lingering effects of adrenaline or stress.
- 3.25 Individual members of the NSW RFS have a responsibility to raise issues and concerns related to fatigue and monitoring and reporting fatigue related behaviour in the people they work with.
- 3.26 Concerns related to fatigue may be raised by discussing it with the member's immediate supervisor in the first instance, using assertive communication skills taught in Advanced Firefighter training (e.g. "Are you aware...?" and "I am concerned ...") or if all else fails, reporting to a SA/SO or IC. Raising concerns related to fatigue should not be considered dobbing on mates, rather it should be viewed as a way of improving overall safety by having everyone look out for everybody.

## 4 Related Documents

- > Operational Protocol OP1.4.4 Fatigue Management
- > P7.1.10 Organisational Risk Management
- > SS 3.1.6 Operational Protocols
- > SS 7.1.1 Chaplaincy
- > SS 7.1.2 Critical Incident Support Services (CISS)
- > Fire Fighters Pocketbook (IMSAFE check)

## 5 Amendments

AMENDMENT DATE	VERSION NO	DESCRIPTION
27 August 2011	1.0	Initial release
15 March 2016	2.0	<ul style="list-style-type: none"><li>&gt; Repealed v1.0</li><li>&gt; Complete review of Service Standard following assessment of the effectiveness of the SS and Operational Guideline; minor changes made to ensure all individuals understand their responsibilities.</li><li>&gt; Guideline removed and formed into OP 1.4.4 Fatigue Management.</li></ul>