Introduction

Following the traumatic death of an anaesthetic trainee who was returning home after a night shift, the Fatigue Group supported by the Association of Anaesthetists and RCoA have surveyed UK trainees about shift working and fatigue. With a 60% response rate, the survey highlights a wide variation in access to rest facilities, commuting distances and concerning effects of fatigue on trainees.

Fatigue self-assessment and fatigue risk management are not familiar steps in routine daily practice. This is due in part to a lack of awareness about the causes and effects of fatigue and limited education opportunities. It is also due to working culture where openness about fatigue and tiredness is not encouraged and collective responsibility for staff wellbeing is poorly developed.

Using the results from the survey, the Fatigue Group have developed resources designed to enhance individuals’ knowledge and understanding and to support the culture change required within departments and organisations.

To reduce variation in practice and to better manage expectations, standards have been defined for rest facilities and rest culture at work and individual responsibilities both within and outside of the workplace. These provide a platform to support local audit and quality improvement activity.

Work continues with on-line education materials available on the Association of Anaesthetists fatigue webpage www.aagbi.org/professionals/wellbeing/fatigue and the FICM website www.ficm.ac.uk/fatigue, which also contains links to articles of interest on the subject.

Please find a copy of the standards and accompanying explanatory notes enclosed.

If you have any questions please contact fatigue@aagbi.org if you are in anaesthesia or contact@ficm.ac.uk if you are in critical care.
Fatigue resources

A) Explanatory notes for the Standards

Responsibilities
The responsibilities can be divided into those for organisations and those for individuals. It is important that all parties are aware of the full content, so each knows what to expect of the other and can work together to achieve them.

The organisational (departmental) responsibilities include standards for rest facilities and a rating scale for rest culture. For each of these:

GREEN represents the gold standard or best practice
AMBER represents the minimum acceptable standard
RED is unacceptable

Departments are encouraged to conduct audits and quality improvement projects using these standards and it is hoped that they will be incorporated into other national departmental standards.

Changing culture will require efforts from both individuals and departments and the individual responsibilities are for all staff, both clinical and non-clinical. These set out the knowledge, behaviours and attitudes that, when present, will lead to improved awareness of fatigue, its associated risks and how to mitigate them.

Rest facilities
The wording of the standards has been chosen to allow some flexibility of application, in recognition of the fact that space will vary in different organisations. However, we believe that every organisation is capable of delivering the minimum acceptable standards with the majority being able to achieve best practice. The following points are intended to add clarity to the standards.

“During a shift”:
• Any delay in access reduces the benefit of the rooms. It was felt that any delay longer than 15 minutes would significantly reduce the use of the facilities.
• Restricted access refers to any process which leads to a delay in access, such as having to sign out a key from a distant part of the hospital.
• Limited availability could be due to insufficient numbers of rooms or rooms available for a limited time only.
• Communal areas that are simultaneously used for any purpose other than uninterrupted rest (dining, work) are unsuitable and attract a red rating. It is accepted that appropriately furnished communal facilities are better than none and if they enable bleep-free, undisturbed rest, they may attract an amber rating.
“After a shift”:

- Limited duration could be for any reason, for example due to access for cleaning.
- Poor quality could mean too noisy or light or without bathroom facilities.
- Appropriate walking distance is phrased in this way to allow organisations to determine what is appropriate for the clinical response time required. Rooms need to be easy to access to ensure it is an easy decision to take to use them. (Very tired people are more prone to ‘get home-itis’ – an overwhelming (and understandable) desire to get home. Being severely sleep deprived makes it harder for them to recognise and objectively appraise the risks of driving home tired and the true potential for harm).

Many departments will have different facilities for different on-call tiers of doctors. Each tier will need to be rated separately.

**Rest culture**

Having appropriate facilities available is one aspect of improving rest culture. However, this must be accompanied by supportive behaviours from departments.

Examples of a “positive institutional attitude towards rest” include:

- Staff working night shifts being encouraged and enabled to nap during a break from clinical work, for example using bleep filtering systems and/or teamwork to create a supportive environment and facilitate breaks.
- Educational presentations about fatigue and its risks during departmental meetings.
- Fatigue posters on display and / or available in departmental documents.
- The SLEPT-NOD tool used during clinical handover, with those starting a shift checking that those leaving are okay to get home and encouraging them to take a nap if necessary.

‘Fatigue awareness and introduction to rest facilities included at induction’ could be covered by a presentation delivered during the induction programme or an e-learning module. It is felt that this is only one part of a positive institutional attitude, which would be evident on a daily basis and not just during times of staff changeover.

**Individual responsibilities**

The responsibilities set out are based around existing guidance on fatigue and shift working. These are thought to be reasonable and achievable, encouraging optimal rest behaviour among all individuals. Demonstration of a “positive personal attitude towards rest” can be done by applying the knowledge and behaviours to daily practice. Demonstrable examples of this could include using a sleep tracking app or keeping a sleep diary.
### Organisational responsibilities

#### Standards for rest facilities

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<td>Quiet, dark, private room with bed and bathroom facilities available for full duration of time between shifts</td>
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<td><strong>Amber</strong></td>
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*including location inappropriate for speed of required clinical response

#### Ratings for rest culture

| Green | Positive institutional attitude towards rest; fatigue awareness and introduction to rest facilities included at induction. |
| Amber | Fatigue awareness and introduction to rest facilities included at induction |
| Red   | Threatening culture towards rest or poor awareness of facilities |

#### Individual responsibilities

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| **Knowledge** | • Understand national guidelines on fatigue\(^1\)  
• Be aware of the location of rest facilities and how to access them | • Understand good sleep hygiene\(^1, 2\)  
• Understand how to manage shift working\(^3\) |
| **Behaviours** | • Where possible, use breaks on night shifts to nap  
• Consider colleagues’ fatigue during the handover process  
• Encourage and enable colleagues to do the same | • Practice good sleep hygiene  
• Use time off before a night shift or on call duty responsibly to prepare for work  
• Use time off after a night shift or on call duty responsibly to rest and recover |
| **Attitudes** | • Demonstrate a positive personal attitude towards rest  
• Act as a role model by supporting colleagues to rest at work  
• Attend and engage with education sessions on fatigue | • Demonstrate a positive personal attitude towards rest  
• Be mindful of fatigue if taking on additional locum work |

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Template for feedback of rest facilities:

Hospital:  
Trust:  

Date of audit:  

Please complete one section per rota tier. (Copy and paste further tables as necessary.)

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Rest culture (circle): Green Amber Red
Fatigue resources

B) Factsheets and handover tools

A series of factsheets and tools have been produced to help convey important facts about fatigue and sleep. The purpose of these is to raise awareness of the issues surrounding fatigue which will help individuals to adapt their behaviour appropriately and lead to improvements in safety and wellbeing. The content is referenced for further reading.

Here is a brief description of each of the factsheets and some ideas about how they might be used.

1) Fatigue: the facts
This summarises key points from the Association of Anaesthetists Guideline ‘Fatigue and Anaesthetists 2014’. It is envisaged that this will be displayed in staff areas to educate about the risks. The content could also be presented at trainee induction.

2) Useful tips to aid sleep
Practising good sleep hygiene regularly is one way to minimise the effects of sleep deprivation. We recognise that some people find it easier to sleep than others and that no solution will be right for everyone. This factsheet has suggestions for how to improve sleep. It could be made available on staff wellbeing pages on intranet sites and included in departmental education.

3) Working well at night
When working nights, often the focus is on managing the clinical workload. However, to be fully effective at night it is important to learn how to manage the effects of sleep deprivation. This is a single page summary of the advice in the RCP ‘Working the night shift’ and other published guidelines. This could be included in a trainee handbook or induction pack.

4) I’M SAFE
This is a checklist adapted from the aviation industry to determine a pilot’s fitness to fly. It is intended to promote awareness of factors which contribute to general wellbeing.

5) SLEPT-NOD
This tool is intended to be used at staff handover. When severely sleep deprived, it can be very difficult to make logical decisions. The SLEPT questions provide prompts to help individuals identify when they or their colleagues are dangerously fatigued and NOD is a prompt to take appropriate action.
Fatigue: The Facts

“Fatigue is the subjective feeling of the need to sleep, an increased physiological drive to fall asleep and a state of decreased alertness.”

1. Restorative sleep
Most adults require 7-8 hours of uninterrupted restorative sleep per night.

2. Sleep debt
A sleep debt occurs after restricted sleep for 2 or more nights.

3. Sleep restriction
Moderate sleep restriction to 6 hours per night for 2 weeks impairs performance equivalent to one night of complete sleep deprivation.

4. Wakefulness
Cognitive function is impaired after 16-18 hours of wakefulness.

5. Dangerous driving
20 hours of wakefulness can cause impaired performance equivalent to being over the UK legal driving limit for alcohol.

6. Age
Sleep patterns are altered and the ability to recover from lack of sleep is reduced by age.

7. Microsleeps
Fatigue induces sleep lapses or microsleeps, which are spontaneous, uncontrolled and often go unrecognised.

8. Recovery
2 consecutive nights of restorative sleep are needed to recover from sleep loss.

The AAGBI guideline Fatigue and Anaesthetists 2014 includes information about good sleep habits and recommendations for individuals and departments about how they can mitigate the effects of fatigue.

Reference
USEFUL TIPS TO AID SLEEP

In order for sleep to occur, there needs to be deep relaxation. Focus on this first. Deep relaxation is very restorative. Sleep should follow, but if it doesn’t, don’t worry. Here are some tips that might help improve your sleep.

Unchallenge your brain

- The absence of light stimulates melatonin release; invest in an eye mask and blackout blinds or curtains.
- Avoid using electronic devices for 30-60 min before bed.
- Eliminate unwanted sound with earplugs.
- Consider listening to a podcast or hypnosis audio on a gentle volume to help you fall asleep.

Have a hot bath

- The drop in temperature the body undergoes after a hot bath or shower aids the onset of sleep.
- Bed socks encourage peripheral vasodilation and can help optimise body temperature. Keep your room cool and your bed warm.

Sleep in a way that works for you

Before the existence of artificial light, natural sleep was in two distinct phases, with a break of several hours in-between. Not everyone manages to sleep for a solid 8 hours; it’s what’s right for you that matters.

Be prepared

Here are some suggestions to help reduce anxiety and cognitive load, facilitating relaxation.

- Exercise regularly, but not too close to bedtime.
- Download a yoga nidra or meditation audio and use it.
- Write a ‘to do’ list rather than inevitably thinking of one as you try to sleep.
- Accept help with tasks you can delegate.

References

www.sleepcouncil.org.uk
Miguel Cervantes, Don Quixote (1615)
I’M SAFE

A checklist adapted for clinicians to assess fatigue and fitness to work

Illness

• Have you been unwell or suffering from symptoms of pregnancy?
• Has your health been put at risk by clinical work; e.g. needle-stick injury, or risk of exposure to infectious disease?
• Do you need to talk to the Occupational Health team?

Medication

• Are you taking prescribed or over-the-counter medication that might be affecting you?

Stress

• Are there work or non-work related factors that might affect your performance?
• Do you need to speak to someone before going on or off shift?
• Does the team need to debrief / give feedback?

Alcohol

• Could there still be alcohol in your system?
• Consider your consumption in the last 24 hours, not just the last 8 hours.

Fatigue

• Have you had restricted sleep* in the last 2 weeks?
• Do you have a sleep debt*?
• Have you had trouble speaking coherently or keeping your eyes open?
• Would a short sleep make you safer?

*Please see ‘Fatigue: the Facts’ poster for more information about these.

Eating

• Have you had something to eat or drink? Do you need to?

References

Do they feel SLEEPY?

Has it been a LONG shift?*

Are they relying on caffeine or ENERGY drinks to stay awake?

Do they need a POWER nap?

Do they look TIRED? Are they finding it hard to concentrate?

If the answer to any of these is “YES”
Take Action! Don’t let them NOD off!

NAP before driving home; miss rush hour & feel more alert.

Are there OTHER ways to get home than driving? Train, taxi, bus, tram, walk, get a lift?

DRIVING when tired is DANGEROUS!

*Remember to EXCEPTION REPORT in England, if the work schedule has been breached.

Produced by the Association of Anaesthetists Trainee Committee and the Fatigue Working Group 2017
WORKING WELL AT NIGHT

Before nights

- Make sure you usually have a good sleep routine.
- Get extra sleep before your shift. An afternoon nap is ideal as it reduces the length of time you have been continuously awake. A lie-in is an alternative.
- Plan how you will get home. Is there an option other than driving?
- Will you need to rest before driving home?

During nights

- Keep well hydrated and eat healthy snacks. Calories on nights DO count; they contribute to the adverse health effects of night working.
- Maximise exposure to bright lights in non-clinical areas.
- Breaks are essential: work as a team to cover each other for these.
- A 15-20 min nap can significantly improve alertness.
- Longer naps may result in sleep inertia.
- Be vigilant for the 04:00 dip: your lowest physiological point.
- Work as a team to check calculations and be aware of the effects of fatigue on decision making.
- If you can, a consistent routine during shifts can help.

Between nights

- If you are too tired to drive, have a short nap before leaving work.
- Have a snack before sleeping so you don’t wake up hungry.
- Go to bed as soon as possible to maximise the amount of sleep you will get.
- Do not plan deliveries or daytime activities for the days between night shifts. Warn your housemates that you need to sleep.

Recovery after nights

- Have a short sleep in the morning and then get up.
- Aim to go to bed at your usual time; avoid a long lie in the next day.
- You’ll need at least 2 normal nights sleep to reset your sleep routine.

References

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Please appraise both your own fatigue levels and those of your colleagues on a regular basis.

If you are in any doubt as to your ability to drive home, please do NOT take the risk with your life and that of others. Remember that driving when fatigued has similar physiological legal consequences to driving when drunk.

The Trust’s recommended taxi number is: 

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A RESTED DOCTOR IS SAFER

1. Arrange bleep cover
2. Consider a caffeinated drink before you rest
3. Find a quiet, dark room to lie down in
4. Set your alarm
5. Close your eyes
6. Just rest...*

* even if you can’t sleep, resting is still beneficial

10 - 20 MIN NAP (IDEAL)

Early stages of non-rapid eye movement sleep. This is optimal to improve mental alertness and ensure you wake up feeling sharper.

30 - 40 MIN NAP

Restorative BUT may result in sleep inertia (feeling groggy and slowed-down) upon waking before improved mental alertness is apparent.

60 MIN NAP

Recall of facts and faces improves. It includes the deepest type of sleep BUT you may feel groggy when you wake up.

90 MIN NAP

This constitutes a full sleep cycle. Your memory will be greatly improved and you’ll avoid feeling groggy BUT it may impair your sleep post-shift.

“The perfect nap: sleeping is a mix of art and science.”
The Wall Street Journal. September 2013

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Association of Anaesthetists is the brand name used to refer to both the Association of Anaesthetists of Great Britain & Ireland and its related charity, AAGBI Foundation (England & Wales no. 2393705 and in Scotland no. SC040897).

www.anaesthetists.org/fatigue