

Joint JDC/AoMRC Trainees' Committee position statement on on-call rooms

Background

Since the advent of the EWTD, doctors have increasingly begun to work full shifts instead of traditional on-call rotas. This has led to some hospitals removing on-call rooms on the grounds that staff on full-shift rotas should not be sleeping while on duty. However, there is ample evidence to suggest that sleep, or at least adequate rest, on night shifts is beneficial for patient care and is likely to prevent adverse incidents.

A natural circadian dip occurs between 02:00 and 06:00 in the morning. Many strategies have been used to try and counteract this of which the most popular methods are the use of caffeine, bright light or a short nap. A combination of bright light and caffeine has been shown to be able to overcome the circadian drop in performance observed during a 45 hour sleep deprivation exercise (1).

However, the circadian rhythm is a powerful force that cannot be overcome by strip lights and caffeine alone. The everyday experience of jet-lag provides a simple demonstration of the difficulties involved in persuading the human body to sleep 'out of rhythm'. Humans are naturally programmed to sleep at night, and to be awake and most alert during the day. Road accidents are most likely to occur at night or during the early hours of the morning. The incidents at Chernobyl, Three Mile Island and Bhopal – all due to human error – happened at night, when the circadian rhythm is at a low ebb. Similarly if doctors are exhausted, they are more susceptible to making errors (2,3).

A full-shift working pattern does not counteract fatigue. Doctors working night shifts can still be sleep-deprived. It is more difficult to sleep during the days between shifts and the quality of sleep is different with less slow wave and REM sleep (4). As the number of night shifts mounts, there is an accumulation of daily sleep deficits and increasing fatigue (5). A week of night shifts is the pattern most associated with poor performance and accidents (6). Risk increases exponentially over the course of the night and increases further still over consecutive nights (7).

Sleep deprivation results in decline in psychomotor performance, similar to exceeding the legal safe blood alcohol limit for driving (8,9). Fatigue impacts on the ability to learn and a decline in morale in doctors working on shifts has already been described (7,10) which may well lead to long-term implications for recruitment and retention to the acute medical specialties.

Evidence for 'power-naps'

There is evidence that a nap of between 5 and 120 minutes during a night shift improves performance and alertness, and decreases fatigue (11,12). Most of the evidence comes from within the aviation industry, where pilots and cabin crew are now rostered to sleep on night shifts, but there have also been several studies conducted with emergency physicians and anaesthetists.

Naps have been shown to counteract the performance deficit on the first night shift. A 20 minute nap has been shown to increase response speed on a vigilance task during a night shift (12). They have also been shown to cause no ill effects on the quality or duration of the sleep obtained during the following day, when compared with a shift without a nap (12).

A side effect of napping is that the short period after waking may be affected by 'sleep inertia' i.e. a period of reduced awareness. This inertia (1) effect varies from between five to 20 minutes, depending on the study, and such evidence has been used to support decisions not to allow people to sleep on night shifts. There are ways of designing rotas and working patterns to minimise the effects of sleep inertia, and the benefits of having a nap at night far outweigh the risks associated with a period of sleep inertia after waking.

Where should rest occur on night shifts?

How can we can maximise performance in what are already naturally adverse conditions?

In order to minimise fatigue, adequate facilities are important. Doctors need a quiet place to rest away from the ward on nights: the doctor's mess or an office that is used by others is *not* suitable for rest. There is evidence that for adequate rest to occur, the body must recline at an optimal angle (13). This strongly supports the retention of on-call rooms for doctors.

Shift patterns

In June 2005 an editorial in the *British Medical Journal* (2) suggested that a two hour rest break during night shifts should be scheduled during the course of a night shift, with a work shift partner taking the bleep for that period of time. This arrangement should be considered wherever practicable.

The JDC and the AoMRC Trainees Committee believe that doctors should not be prevented from sleeping when there is no work for them to do on a night shift. Where their shifts are so busy that they are unlikely to get to sleep, regular breaks should be enforced, as per the New Deal. To this end, on-call rooms should be retained for use by medical staff on night shifts. Where this is not possible, the absolute *minimum* provision should be adequate arrangements for 'quiet' resting areas, separate from those used for making tea and coffee. This should be by agreement with the junior doctors. Ideally, there should be a room behind a door, so that medical staff are not disturbed when trying to rest.

Summary

- Doctors should not be prevented from sleeping when there is no work for them to do
- Tired doctors are not safe and productive doctors
- Doctors should be adequately rested in order to effectively care for their patients
- Doctors need adequate facilities in which to rest at night
- Existing on-call rooms should be retained for use by medical staff on night shifts

Glossary

AoMRC – Academy of Medical Royal Colleges

EWTD – European Working Time Directive

REM – rapid eye movement

References

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