Health Services Safety Investigations Body

Launch report

Fatigue risk in healthcare and its impact on patient safety

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Theme:
NHS staff,Patient safety themes

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Purpose of this report

The purpose of this report is to introduce the concept of fatigue and the risk it poses to patient safety. It also outlines the investigation that the Health Services Safety Investigations Body (HSSIB) will be conducting to explore fatigue risk in healthcare and its impact on patient safety.

Introduction to fatigue

Fatigue presents a potential significant risk to patient safety and staff wellbeing. Fatigue has been cited as a contributory factor in major accidents across safety-critical industries including:

- the space shuttle Challenger accident
- the capsizing of the Herald of Free Enterprise ferry
- the American International Airways Flight 808 crash
- the Clapham Junction railway accident.

In other safety-critical industries, fatigue is monitored and routinely considered as a potential contributory factor in safety incidents. In healthcare, there is limited evidence that staff fatigue is considered as part of patient safety incident investigations. Following a review of patient safety intelligence, HSSIB has launched an investigation to explore staff fatigue in patient safety incidents.

What is fatigue?

Fatigue refers to:

> ‘The issues that arise from excessive working time or poorly designed shift patterns. It is generally considered to be a decline in mental and/or physical performance that results from prolonged exertion, sleep loss and/or disruption of the internal [body] clock. It is also related to workload, in that workers are more easily fatigued if their work is machine-paced, complex or monotonous.’

(Health and Safety Executive, n.d.)

There are different types of fatigue including:

- **Acute fatigue**, which is caused by a loss of sleep (ideally people need 7 to 8 hours of uninterrupted sleep per night) or extended hours awake within 1 or 2 days. For example, a healthcare staff member staying on after their 12-hour shift because of staff shortages could experience acute fatigue.
- **Cumulative fatigue**, which is influenced by repeated reduced sleep or extended hours awake across several days. For example, a healthcare staff member working a series of long shifts over a period of 7 days may be at risk of cumulative fatigue.
- **Circadian fatigue**, which refers to reduced performance that is influenced by the internal body clock during certain times of day, such as the early hours of the morning between 02:00 hours and 06:00 hours. For example, a healthcare staff member working through the night could be influenced by circadian fatigue.

How does fatigue affect a person’s performance?

Fatigue can have physical, psychological, and emotional effects on a person, which can negatively affect physical performance and the way in which people think and make decisions. Research shows that there is a significant increased risk of being involved in an incident after 12 hours of work. In addition, after being awake for 17 hours, a person’s reaction times are the equivalent to being at the legal alcohol limit for driving.

Physical effects

The physical effects of fatigue are often visible and include:

- yawning, eye-rubbing, head-drooping
- reduced energy
- microsleeps – spontaneous and uncontrolled periods of sleep lasting 5 to 30 seconds
- a deterioration in motor skills; that is, the ability to move the body’s muscles to perform a certain task.

Psychological effects

The psychological effects of fatigue include:

- decreased concentration and/or lapses in attention (where thoughts shift away from the task that is being conducted)
- impaired communication skills
- reduced logical reasoning and problem solving
- reduced ability to switch between tasks
- increased risk taking
- decreased ability to learn and retain information.

Emotional effects

The emotional effects of fatigue can affect team working and communication. Emotional effects include:

- being quiet and withdrawn
- a lack of empathy
- increased irritability and grumpiness.

Who does fatigue affect?

Fatigue affects everyone. However, people who work shifts, and at night, are more likely to be affected. Healthcare is a 24-hour service where staff work shifts throughout the day and at night. Healthcare staff are also under significant pressure because of staff shortages and increasing workload. As such, healthcare staff are working intense and long hours and this increases their susceptibility to fatigue. All patients accessing a range of NHS services can therefore be directly or indirectly impacted by the effects of fatigue on staff involved in their care.

Evidence of fatigue risk in healthcare staff

There is evidence that fatigue is a risk that exists for many healthcare staff. For example, a General Medical Council (2023) survey with over 45,000 doctors showed that over two thirds of trainees said they always or often feel worn out at the end of the working day and 26% felt that every working hour is tiring for them. In addition, a survey by the Royal College of Nursing (2017) showed that 59% of respondents did not get to take sufficient breaks on their last shift. There are also multiple road accident fatalities involving healthcare staff after their shifts.

Guidance on fatigue for healthcare staff

More information and guidance on what fatigue is, its impact, and how it can be managed, is available to healthcare staff. It should be noted that guidance is often focused on how individuals can help to reduce the risk of fatigue, when fatigue risk should also be managed by the organisations they work in (Health and Safety Executive, n.d.). Examples of guidance for managing healthcare staff fatigue includes:

- 'Fight Fatigue' resources
- 'Fighting Fatigue Together'
- ‘Fatigue and sleep deprivation’
- ‘Sleep, fatigue and the workplace’.

Fatigue in patient safety incidents

Fatigue has been identified as a contributory factor in several Healthcare Safety Investigation Branch (HSIB) reports, including:

- Covid-19 transmission in hospitals: management of the risk – a prospective safety investigation
- Harm caused by delays in transferring patients to the right place of care
- The use of an appropriate flush fluid with arterial lines
- Continuity of care: delayed diagnosis in GP practices
- Detection of retained vaginal swabs and tampons following childbirth
- Wrong patient details on blood sample
- Placement of nasogastric tubes
- Advanced airway management in patients with a known complex disease.

These investigation reports demonstrate that fatigue can impact multiple NHS care settings including primary care, acute care, and ambulance services across England.

Awareness of the impact of staff fatigue on the ability to deliver safe patient care is growing. Reports on NHS workforce resilience and burnout have identified increasing concerns about the wellbeing of NHS staff and the impact of fatigue on

patient safety (Health and Social Care Committee, 2021). However, staff fatigue is rarely reported as a contributory factor in local investigations of patient safety incidents. HSSIB held discussions with stakeholders to gather intelligence on fatigue. These discussions revealed that fatigue is often seen as a staff wellbeing issue and stakeholders were only able to share limited evidence that fatigue affected patient safety, although many anticipated that logically it would.

Summary of the HSSIB investigation

The investigation will explore healthcare staff fatigue in patient safety incidents including:

- how healthcare staff fatigue can be a contributory factor in patient safety incidents
- the factors that prevent or support fatigue being identified as a contributory factor within patient safety incident investigations.

The investigation will produce a report that may make safety recommendations, safety observations or identify learning for local healthcare organisations to inform improvements in support of patient safety and staff wellbeing.

Get involved

The investigation is keen to hear from patients, families, healthcare staff and organisations to inform this investigation, particularly if you feel healthcare staff fatigue has impacted patient safety. We are looking for examples of patient safety incidents where fatigue was a contributory factor and where organisations are considering fatigue as part of their patient safety incident investigations.

Contact us

If you would like to speak to us about these areas of investigation, would be willing to support observational visits by the investigation team, or wish to share any information with us about a specific investigation, please email: enquiries@hssib.org.uk.