



Investigation report

The impact of staff fatigue on patient safety

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Theme:

NHS staff, Patient safety themes

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A note of acknowledgement

We would like to thank the staff, NHS trusts, and organisations who engaged with the investigation for their openness and willingness to discuss and support improvements relating to staff fatigue and patient safety.

About this report

This report is intended to help healthcare organisations, healthcare regulators, policymakers, patient safety leads and the public understand the risk that healthcare staff fatigue poses to patient safety and staff safety, and to make improvements in this area. The investigation focused on staff working across services provided by acute NHS hospital trusts, which in some cases included those also providing community services. However, the learning will be relevant to providers and staff in other health and care settings.

The investigation explored staff experiences and the NHS systems and processes for identifying, and learning from, patient safety events where staff fatigue may be a contributory factor. Other systems and processes where the focus is to assign liability or cause of death, such as claims and coronial inquests, were not considered as part of the investigation.

Terms used in the report

This report notes the close similarity between the NHS definitions of ‘patient safety events’ from Learning from Patient Safety Events (LFPSE) (NHS England, n.d.a) and ‘patient safety incidents’ from the Patient Safety Incident Response Framework (PSIRF) (NHS England, 2022). For consistency, the term patient safety event is used in this report, unless specifically referring to the PSIRF.

In September 2024, the Department of Health and Social Care and the British Medical Association agreed to change the title of ‘junior doctor’ to ‘resident doctor’. To reflect this change, the term ‘resident doctor’ is used in this report.

Executive summary

Background

This investigation report follows on from the HSSIB launch report, '[Fatigue risk in healthcare and its impact on patient safety](#)', which introduced the concept of fatigue and outlined the risk posed to patient safety from staff fatigue. The International Civil Aviation Organization's definition of fatigue was adopted by this investigation, where fatigue is defined as:

"A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase [the natural daily internal body clock], and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety related operational duties."

The investigation

The investigation engaged with a wide range of healthcare staff to learn what impact fatigue had on patient safety in acute NHS hospitals. The investigation explored the NHS systems and processes in place to capture and learn from the risk posed by fatigue on patient safety and staff safety. It also considered the main factors that contribute to healthcare staff being fatigued.

The investigation shares findings from staff interviews, discussions and observational visits to several acute hospital trusts, combined with evidence from national bodies, forums and networks with insight on this topic. The report also refers to supporting surveys and literature.

While the investigation focused on staff working in acute hospitals, the findings will be relevant to providers and staff in other health and care settings.

Findings

- Staff fatigue contributes directly and indirectly to patient harm. However, there is little evidence available to help understand the size and scale of the risk, how it impacts on patient safety, and those staff groups who may be most at risk of fatigue.
- There was variation in how the concept of fatigue was understood and the impact it could have on patient safety and staff safety across the healthcare system. This inconsistent understanding prevented fatigue risks being addressed.

- The risks posed by staff fatigue are not always clear to trusts. The systems and processes needed to provide the information to assess staff fatigue risk are not always well developed or well used. However, some trusts were starting to explore these risks.
- A positive safety culture was a key enabler to support healthcare organisations to recognise and manage fatigue risk.
- Staff fatigue is not routinely captured as part of patient safety event reporting or routinely considered as part of patient safety event learning, or other governance processes.
- Fatigue was perceived by organisations and staff as an individual staff risk, with limited organisational accountability. This sometimes led to a blame culture and punitive actions when staff were fatigued, and limited actions to drive improvement.
- Fatigue arises from a number of personal and organisational factors, which can overlap. Organisational factors that contributed to staff fatigue included workload, long shifts, insufficient rest facilities and inadequate rest breaks during and between shifts. Personal factors that contributed to an increased risk of fatigue included caring responsibilities, menopause, pregnancy, religious practices and socioeconomic factors.
- Fatigue was found to have a negative impact on staff safety. A key risk related to this was staff driving home after a long shift and being involved in fatal car accidents or near misses.
- There are barriers to acknowledging the risk posed by staff fatigue. These include historical beliefs and norms around working long and additional hours, pride and 'heroism' of NHS staff.
- The demands on healthcare services, and workforce and financial constraints, limited the ability of some organisations to address fatigue risks.
- There is limited regulatory and national oversight of the risks posed to patient safety by staff fatigue in healthcare.
- There was limited consideration of the risk of staff fatigue in national initiatives addressing workforce challenges and care delays.
- The systems-based approach and supporting materials provided to trusts implementing the NHS England Patient Safety Incident Response Framework (PSIRF) helped to prompt consideration of staff fatigue in safety event learning, but this was not routine in all organisations.

HSSIB makes the following safety recommendations

Safety recommendation R/2025/061:

HSSIB recommends that NHS England/Department of Health and Social Care identifies and reviews any current processes that may capture staff fatigue related data. The output of the review should identify how information about factors impacting on staff fatigue can be collated and further enhanced to aid the understanding of fatigue risk in healthcare. This data will help inform the development of any future strategy and action to address staff fatigue risk and its impact on patient safety.

Safety recommendation R/2025/062:

HSSIB recommends that the NHS Staff Council, via the Health, Safety and Wellbeing subgroup, convenes fatigue science experts and other key stakeholders to develop and test a consensus statement defining fatigue for all healthcare staff. The group should work with existing networks to promote the definition and a shared understanding of the causes and impacts of fatigue. This will help to support a consistent understanding of fatigue among healthcare providers and improve the understanding of factors that may impact on staff fatigue and patient safety.

HSSIB makes the following safety observations**Safety observation O/2025/068:**

Research funding and commissioning bodies can improve patient safety by prioritising future research to measure and assess the impact of staff fatigue on staff and patient safety. This should include patient experience and the health economics of staff fatigue due to reduced performance and productivity.

Safety observation O/2025/069:

Healthcare organisations and professional bodies can improve patient safety by including aspects of fatigue when conducting staff surveys in order to help build an understanding of the level of fatigue and any impact on staff performance and patient safety. This will help organisations assess and understand the risks associated with staff fatigue, and to monitor and manage the risk of staff fatigue.

Safety observation O/2025/070:

Healthcare regulators and professional bodies can improve patient safety by:

- considering how they can contribute to driving improvement in the understanding and awareness of staff fatigue
- considering how they can support and share best practice on mitigations for the risk of staff fatigue
- considering organisational and individual factors that may have contributed to staff fatigue when making decisions about regulatory assessment and action.

Safety observation O/2025/071:

Government and national organisations can improve patient safety by accounting for the impact of staff fatigue on patient safety when developing national priorities for NHS services.

Safety observation O/2025/072:

Healthcare organisations can improve patient safety by considering the principles and activities for a systems approach to fatigue risk management and the roadmap to implement this as described in the [Chartered Institute of Ergonomics and Human Factors white paper](#) 'Fatigue risk management for health and social care'.

Local-level learning prompts

HSSIB investigations include local-level learning where this may help organisations and staff identify and think about how to respond to specific patient safety concerns at the local level.

- Does your organisation's senior leadership understand fatigue risks and its link to patient safety?
- Does your organisation consider fatigue risk when responding to patient safety events?
- Does your organisation have a person responsible for leading on fatigue risks?
- Does your organisation offer training and support to staff on fatigue risks and how these can be managed?
- Does your organisation consider fatigue risk from a systems perspective to account for both individual and organisation factors impacting on staff fatigue?
- Does your organisation consider how the design of work processes can help to reduce fatigue?
- Does your organisation capture data on fatigue through existing reporting and learning mechanisms?
- Does your organisation measure and monitor data relating to fatigue risks?
- Does your organisation's risk register identify fatigue risks?
- Has your organisation considered the principles and activities described in the [Chartered Institute of Ergonomics and Human Factors white paper](#) 'Fatigue risk management for health and social care'?

1. Background and context

1.1 Introduction

1.1.1 This investigation considered whether staff fatigue impacts on patient safety and staff safety. It also explored whether patient safety systems and processes identified staff fatigue as a safety issue.

1.1.2 This report follows HSSIB's launch report into '[Fatigue risk in healthcare and its impact on patient safety](#)' (Health Services Safety Investigations Body, 2024a). The launch report introduced the concept of fatigue and outlined the initial scope for this investigation.

1.1.3 There is no healthcare-specific definition of fatigue. Throughout the investigation the following definition of fatigue, from another safety-critical industry, was used to aid conversations and ensure mutual understanding:

"A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase [the natural daily internal body clock], and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety related operational duties." (International Civil Aviation Organization, 2018)

1.1.4 Fatigue arises from a number of personal and organisational factors, which can overlap. This creates complexity and challenges for managing staff fatigue at work as managing fatigue may be an individual, organisational or shared responsibility. This investigation considers the impact of staff fatigue and how it is managed regardless of how it arises.

NHS patient safety event recording and learning systems

1.1.5 Patient safety events are 'any unintended or unexpected incidents which could have, or did, lead to harm for one or more patients receiving healthcare' (NHS England, n.d.a). Patient safety event reporting systems provide insights into how and why patients were harmed or could have been harmed. They provide a way to identify safety risks, so that measures to reduce these risks can be implemented.

1.1.6 In line with the NHS Patient Safety Strategy new systems for recording and learning from safety events were implemented in trusts (NHS England and NHS Improvement, 2019a). This meant that the investigation engaged with staff with experiences of the old and new systems. An overview of the new systems is provided below.

Patient Safety Incident Response Framework (PSIRF)

1.1.7 The PSIRF sets out 'the NHS's approach to developing and maintaining effective systems and processes for responding to patient safety incidents for the purpose of learning and improving patient safety' (NHS England, n.d.b). Participation in PSIRF is mandated by the NHS Standard Contract for NHS trusts

(NHS England, n.d.c). The PSIRF replaced the previous Serious Incident Framework (NHS England Patient Safety Domain, 2015) with organisations expected to have completed the transition to PSIRF by autumn 2023 (NHS England, n.d.d).

1.1.8 PSIRF was a fundamental change in the way that organisations approached and learned from patient safety incidents. This involved a ‘considered and proportionate’ response using ‘a range of system-based approaches’ (NHS England, 2024a). A systems based approach considers the work system, (that is, the external environment, organisation, internal environment, tools and technology, tasks, and people), work processes (including physical, cognitive and social/behavioural aspects) and the relationship between these and the resulting outcomes in healthcare. A patient safety incident investigation (PSII) – the mainstay of the Serious Incident Framework – was just one learning method in the PSIRF ‘to understand what happened and how’ (NHS England, 2022).

Learn from Patient Safety Events (LFPSE)

1.1.9 The LFPSE service is a national NHS system for the recording and analysis of patient safety events that occur in healthcare. LFPSE has two functions: collating details of a reported patient safety event and providing access to data about recorded patient safety events for healthcare organisations, commissioners, regulators and others to support safety improvement work (NHS England, n.d.e).

1.1.10 A number of suppliers provide digital local risk management systems (LRMS) to acute hospital trusts in England.. The LRMS, amongst other functionality, provide the connection to record patient safety events to the LFPSE service nationally and a health and safety event reporting module.

1.1.11 Patient safety event details are sent from the local LRMS to the national LFPSE service where they form part of the intelligence used by the NHS England National Patient Safety team to develop patient safety advice and guidance (NHS England, n.d.f). The LFPSE replaced the National Reporting and Learning System (NRLS), which was withdrawn on 30 June 2024 (NHS England, n.d.g).

1.1.12 The Strategic Executive Information Service (StEIS) was the system used to monitor and report serious incidents in the NHS under the Serious Incident Framework. While trusts were transitioning from StEIS to LFPSE, both systems remained in use. At the time of writing StEIS was still being used while LRMS were being updated.

2. The patient safety risk

The evidence presented in this section reflects the thoughts, experiences and views of staff involved in providing patient care and patient safety roles in acute NHS hospital trusts, including those providing community services. The report also refers to supporting surveys and literature to explore the extent and impact of fatigue on the NHS workforce.

The evidence is described in the following sections:

- the extent of fatigue in the NHS workforce
- fatigue and patient safety
- fatigue and staff safety.

2.1 The extent of fatigue in the NHS workforce

2.1.1 Results from the 2024 NHS Staff Survey in England described the experiences of over 700,000 people. Although there was no specific question about fatigue, related questions provide insight into this area. Of staff working in acute hospital settings, approximately:

- two in five staff reported 'always' or 'often' 'feeling worn out by the end of their working day/shift'
- one in five staff reported 'always' or 'often' 'feeling that every waking hour is tiring' for them (NHS England, n.d.h).

2.1.2 The unpublished results from additional questions included in the People's Pulse national survey of NHS staff in July 2023 were shared with the investigation. This survey supports employee engagement activities in the NHS and informs actions to improve the experiences of NHS staff and patients (NHS England, n.d.i). The results showed that about half of the 31,160 acute hospital staff who responded felt they had insufficient 'rest between shifts / working days' to allow them to recover sufficiently to do their job.

2.2 Fatigue and patient safety

2.2.1 The investigation found that some trusts had identified staff fatigue as a contributory factor in their patient safety incident investigations. For example, one large acute trust added a question to its digital local risk management system to find out whether the person reporting the safety event, and the person investigating, felt that 'staff tiredness/fatigue' may have contributed. This included

both patient safety events and health and safety event reports. In this trust, during a 13-month period (1 June 2023 up to and including 30 June 2024), a total of 28,629 reports were received. Details of where fatigue was reported to have contributed are shown in table 1.

Table 1 Number and severity of reports where fatigue was reported to have contributed in one trust

Reported severity*`	Reporter's view	Investigator's view
No harm	794	228
Low/minor	490	127
Moderate	37	17
Severe/major	8	1
No patient involved	22	4
Total number of reports	1,351	377
Percentage of total reports where fatigue felt to have contributed	4.7%	1.3%

* Using the definitions of severity set out by the Patient Safety Incident Response Framework (NHS England, 2024a).

2.2.2 A member of staff highlighted that the majority of staff reporting safety events and those investigating them had not received any training about the effects of fatigue on clinical performance. They believed that with education and more awareness, the proportion of reports where fatigue was felt to have contributed would be higher.

2.2.3 Another acute trust surveyed night staff in 'patient-facing' roles in 2023 and received 577 responses (Troth, 2024). Staff reported a range of fatigue-related effects from working nights (see table 2).

Table 2 Proportion of staff reporting effects of night working in one trust

Impact on staff working nights	Proportion of staff affected (to nearest whole number)
Lack of concentration due to fatigue	68%
Microsleeps (a very short period of sleep lasting between 3 and 15 seconds) while on shift	58%

Impact on staff working nights	Proportion of staff affected (to nearest whole number)
Irritation with colleagues due to fatigue	48%
Lack of sympathy/empathy with patients due to fatigue	39%
Medication error due to fatigue	4%

2.2.4 In July 2024, one large acute trust used an anonymous online survey to ask staff about their perspectives on fatigue in the preceding 3 months. The responses received from 1,347 staff were shared with the investigation. Staff reported a range of fatigue-related effects 'during or after a shift' (see table 3).

Table 3 Proportion of staff reporting fatigue-related effects during or after a shift in one trust

Impact on staff during or after a shift	Proportion of staff affected (to nearest whole number)
Lack of concentration due to fatigue	53%
Microsleeps (a very short period of sleep lasting between 3 and 15 seconds) while on shift	23%
Lack of sympathy/empathy with patients due to fatigue	16%
Medication error due to fatigue	1%

2.2.5 A survey of doctors who were members of the Medical Defence Union in 2025 (481 respondents) found that 22% of respondents felt sleep deprived on a daily basis and a further 19% on a weekly basis (Medical Defence Union, 2025). Specifically, 35% said tiredness had impaired their ability to treat patients and 34% said tiredness may have played a part. This is higher than the rates reported from the same survey in 2022. . Patient safety events had risen to 17 cases where a patient was harmed and 69 near misses, compared with 7 cases of harm and 40 near misses in 2022. The investigation also found further surveys and national data which suggest that staff are fatigued at work (NHS England, n.d.h; Troth, 2024; General Medical Council, 2024).

2.2.6 The investigation noted that the evidence of patient harm described in this report is largely based on how people feel, and is therefore subjective. The investigation learned that fatigue is not well reported or captured as staff are not good at being aware of how fatigued they are (see 3.1 and 3.3). Therefore, the extent of fatigue may be more widespread than described.

2.2.7 The investigation was told that the most common consequences of fatigue described by staff were:

- medication errors
- impaired decision making
- reduced attention and vigilance
- incivility (rude and disrespectful behaviour).

2.2.8 The investigation heard of examples where patients had come to serious harm where fatigue was a contributory factor to a patient safety event. A staff member described how they felt their fatigue had not been well managed by their organisation. The staff member believed their fatigue had impacted on the accuracy of a pregnancy scan which they felt had contributed to significant safety issues for the mother and child at birth. The staff member explained to the investigation how personal factors impacted on their level of fatigue at work, such as a health condition and poor sleep. However, they explained that this was compounded by inadequate staffing levels, high workload levels and poor management of workload within the department, and not being provided with equipment that met their physical health needs. The staff member said that fatigue was not considered as part of the safety event learning and that they were not involved in the investigation.

2.2.9 Another trust gave a specific example of how staff fatigue had contributed to a patient safety event. A young person received the incorrect chemotherapy infusion. The two staff who checked the chemotherapy were 8 hours and 40 minutes into a 12.5-hour day shift. The staff reported having limited sleep (5 to 6 hours) between shifts, having woken early for the morning shift, and limited short breaks due to not having the right mix of skilled staff when needed and high workload. The safety event occurred in the mid-afternoon at a time where there is a natural dip in performance associated with the internal body clock (International Civil Aviation Organization, 2016). The trust investigation concluded that fatigue was 'likely to have been a factor' influencing the safety event.

2.2.10 Staff told the investigation that fatigue affected both their judgement and performance. When staff were tired, they struggled to concentrate, took longer to perform routine tasks and were less able to control their emotions. Staff said that communication, compassion and teamwork suffered, impacting on interactions with patients and other staff.

“[When you’re] alert and on the ball, you can spot that something could be wrong, but not when you’re tired.”

Clinical member of staff

“When it gets to that third day of doing these 12-hour nights, 12.5-hour nights, it’s dangerous from 2:00am onwards ... do I have the energy or the brain space or the mental space to even make a life changing decision for a patient at this point?”

Resident doctor

Wider evidence that staff fatigue impacts on patient safety

2.2.11 The investigation attended a Patient Safety Management Network (PSMN) meeting to explore its members’ perception of staff fatigue. The PSMN is a network for patient safety managers, including staff from independent providers, and others working in patient safety. Of 68 attendees at the meeting, 67 thought staff fatigue was a risk to patient safety. However, only 18 thought their organisation recognised fatigue as a risk to staff and patient safety. When asked how concerned attendees were about staff fatigue, 31 of the attendees responded. Of these, 29 were very concerned or somewhat concerned.

2.2.12 The National Guardian’s Office surveyed its Freedom to Speak Up Guardians (FTSU) working in acute hospitals in December 2024. FTSU Guardians support staff to speak up when they feel they are unable to in other ways. The results from the 49 FTSU Guardians who responded showed 40 were very concerned or somewhat concerned about staff fatigue. Results from the survey are shown in table 4.

Table 4 Results from a survey of acute hospital FTSU Guardians on staff fatigue

Question	Number of replies (out of 49) where 'yes' selected
Do you think staff fatigue is a risk to patient safety?	48
Do you think your organisation recognises that staff fatigue can be a risk to patient safety?	30
Has staff fatigue been raised as an issue with you in your role as a Freedom to Speak Up Guardian?	29
Are you aware of any patient safety events that have happened in your organisation where staff fatigue was a potential contributory factor?	16

2.2.13 The findings from the engagement with the PSMN and FTSU Guardians' evidence show that professionals in patient safety and speaking up roles felt that staff fatigue was a patient safety risk. However, they did not always feel confident that their organisations recognised that staff fatigue could be a patient safety risk.

2.3 Fatigue and staff safety

2.3.1 Patient and staff safety are closely connected. NHS Employers (2024) highlighted that 'if staff are not looked after, they cannot look after patients'. The World Health Organization's health worker charter called for staff and patient safety to be aligned (World Health Organization, 2020). Research shows that optimal staff wellbeing is important for patient experience and safe care (Maben et al, 2012), and that poor staff wellbeing can lead to patient harm (Hall et al, 2016).

2.3.2 A previous investigation by the Healthcare Safety Investigation Branch (2023a), ['Interim bulletin 3. Harm caused by delays in transferring patients to the right place of care'](#):

- reported that 'wellbeing is prioritised by healthcare organisations only when there is time to do so'
- found that NHS England's staff and wellbeing work (delivered via the NHS People Plan (NHS England, n.d.j) was not linked to the NHS Patient Safety Strategy (NHS England and NHS Improvement, 2019a)
- recommended that staff health and wellbeing form a 'critical component of its NHS Patient Safety Strategy going forward'.

2.3.3 The investigation identified research (Dent et al., 2024) and was told that fatigue impacted on staff's wellbeing, especially leading to, or worsening, stress, anxiety and burnout. Staff said this was reflected in staff mood and behaviour such as poor morale, incivility and being more emotional. Additionally, the investigation was told that fatigue contributed to staff sickness and poor recruitment and retention at a time when the NHS had a workforce crisis:

"We are not only risking patient safety, but staff retention, we risk good people leaving because they're exhausted."

Departmental manager

2.3.4 Staff also described to the investigation how the consequences of their colleagues' fatigue also affected them. This included having fewer staff on shift, poorer skill-mix and higher workload. One staff member described a particularly challenging night shift, where fatigue contributed, as:

"... probably one of the most traumatic experiences of my life."

Consultant

2.3.5 The investigation heard that the impact fatigue had on staffs' performance extended into their life outside work, specifically commuting and relationships with others. This was mirrored in the findings from the two acute trusts that surveyed their staff about the impact of fatigue (see 2.2.3 and 2.2.4).

2.3.6 Of night shift workers surveyed, 42% reported microsleeps while driving home and 48% reported knowing that they were too tired to drive but driving anyway (Troth, 2024). A number of staff described incidents they had been involved in, while others shared near misses.

"Travelling home from work after a shift. There have been times when I can't remember how I got home."

Clinical member of staff

2.3.7 Staff told the investigation about their experiences of losing colleagues in fatal road traffic accidents where fatigue was reported to be a contributory factor. The impact of fatigue on driving was a recurrent theme with staff describing concerns about wider impact on society when driving home after work. A study of English nurses and midwives reported that following a night shift, 49% had ‘nodded off’ at the wheel and 44% experienced a near miss car accident (Westwell et al, 2021). The investigation heard that it was often the death of a colleague while commuting that had prompted staff to take action to reduce the risk of staff fatigue, such as the [Fight Fatigue campaign](#) (Association of Anaesthetists, n.d.).

2.3.8 The Royal Society for the Prevention of Accidents (n.d.) states that ‘research shows that driver fatigue may be a contributory factor in up to 20 per cent of road collisions, and up to one quarter of fatal and serious collisions’. The dangers of driving after working a night shift were identified more than a decade ago in hospital workers (Morrison et al, 2012) and reconfirmed in a recent report on the impacts of night working in night-time workers (Moore and Ballardie, 2024).

2.3.9 The investigation heard that staff fatigue was usually understood to be a staff wellbeing issue rather than a staff safety and/or patient safety issue. The Healthcare Safety Investigation Branch has previously made a safety recommendation ‘that NHS England includes staff health and wellbeing as a critical component of patient safety in the NHS Patient Safety Strategy’ (Healthcare Safety Investigation Branch, 2022).

2.3.10 NHS England told the investigation that a refresh of the NHS Patient Safety Strategy was exploring how a focus on staff safety can support patient safety, including considering staff fatigue (Healthcare Safety Investigation Branch, 2022). The investigation spoke with NHS England to get an update on this. The investigation was told that due to competing demands and pressures there had been no further specific progress in considering staff fatigue as part of this work.

2.3.11 Recently published NHS planning guidance (NHS England, 2025) has removed previous objectives designed to improve “the working lives of all staff and [increase] staff retention and attendance” and it is unclear how this may impact on further work to consider staff fatigue.

2.4 Collating fatigue data

2.4.1 The findings outlined in this section show that staff fatigue directly and indirectly impacts on both patient safety and staff safety.

2.4.2 The investigation was told by healthcare organisations that there was a need for better evidence to understand how staff fatigue impacted on patient care, and this would need to be balanced against competing priorities and financial challenges within the healthcare sector. Current research demonstrating the impact of fatigue on human performance from other safety-critical industries has not been sufficient to allow healthcare to take action to consider the impact of staff fatigue on safety.

2.4.3 CATNAPS NIHR131776 is a national study on staff fatigue and patient safety that NIHR has already funded, which has data on how fatigue is currently reported, whether it is on the risk register, what needs to change to improve fatigue reporting, and how a systems approach to fatigue management can be implemented including across different staff groups. The investigation was told more studies like this need funding. Greater access to data on staff fatigue may also help to support further work in this area and help identify the scale of the risk and those staff groups at particular risk (University of East Anglia, n.d.).

2.4.4 The investigation met with the NHS England staff experience and engagement team to explore whether staff fatigue could be included in the NHS Staff Survey. The investigation learned that without a standardised agreed definition for fatigue it could not be included. This meant that staff fatigue cannot currently be captured via the NHS Staff Survey, but it could be in the future once the safety recommendation to define healthcare staff fatigue was actioned.

2.4.5 In the meantime, NHS England explained that information that could be relevant to considering fatigue may already be available within some data sets (for example, information on staff taking rest breaks) that could be reviewed to bring together any existing data on fatigue. In addition, trusts could consider other opportunities to explore staff experiences of fatigue in a more flexible and responsive way (see section 3.3).

HSSIB makes the following safety recommendation

Safety recommendation R/2025/061:

HSSIB recommends that NHS England/Department of Health and Social Care identifies and reviews any current processes that may capture staff fatigue related data. The output of the review should identify how information about factors impacting on staff fatigue can be collated and further enhanced to aid

the understanding of fatigue risk in healthcare. This data will help inform the development of any future strategy and action to address staff fatigue risk and its impact on patient safety.

HSSIB makes the following safety observations

Safety observation O/2025/068:

Research funding and commissioning bodies can improve patient safety by prioritising future research to measure and assess the impact of staff fatigue on staff and patient safety. This should include patient experience and the health economics of staff fatigue due to reduced performance and productivity.

Safety observation O/2025/069:

Healthcare organisations and professional bodies can improve patient safety by including aspects of fatigue when conducting staff surveys in order to help build an understanding of the level of fatigue and any impact on staff performance and patient safety. This will help organisations assess and understand the risks associated with staff fatigue, and to monitor and manage the risk of staff fatigue.

3. Responding to the patient safety risk

This section of the report focuses on how staff fatigue is captured within NHS patient safety event reporting and learning processes. Through the analysis of the evidence gathered, the investigation explored the following areas:

- how fatigue risk is reported and captured, at a trust and national level
- how staff fatigue is considered in patient safety learning at a trust level
- factors that support or prevent fatigue being considered in patient safety learning.

3.1 How fatigue risk is reported and captured

3.1.1 The investigation found that the term fatigue was not commonly used in healthcare to describe staff fatigue (see 1.1.3). Terms such as exhaustion, tired and burnout were more likely to be used. Some staff felt that talking about fatigue could be negative:

“... the one definite thing that will make people fatigued and it’s talking about fatigue.”

Executive member of staff

In contrast, measures to improve staff health and wellbeing were seen as positive and had a “focus on its importance”. For example, staff in one trust had been asked to rename a fatigue guidance document to avoid using ‘fatigue’ and use alternative softer language.

3.1.2 Staff told the investigation that in healthcare, fatigue was broader than just physiological fatigue (see 1.1.3) and the term fatigue was used in other contexts in healthcare. Compassion fatigue is a recognised term in healthcare, used to describe what can happen when individuals are exposed to suffering and trauma on an ongoing basis. ‘Fatigue’ can also have a specific clinical meaning or context if describing a symptom of certain medical conditions or health concerns, or can be used in the context of ‘alarm fatigue’ when clinicians experience high exposure to medical device alarms, causing desensitization and leading to missed alarms or delayed response.

3.1.3 Due to these factors staff thought that healthcare differed from other safety-critical industries, and this needed consideration when proposing a definition of fatigue in healthcare. The investigation found that the lack of a consistent definition of fatigue in healthcare was a key barrier to identifying and reporting this patient and staff safety risk.

HSSIB makes the following safety recommendation

Safety recommendation R/2025/062:

HSSIB recommends that the NHS Staff Council, via the Health, Safety and Wellbeing subgroup, convenes fatigue science experts and other key stakeholders to develop and test a consensus statement defining fatigue for all healthcare staff. The group should work with existing networks to promote the definition and a shared understanding of the causes and impacts of fatigue. This will help to support a consistent understanding of fatigue among healthcare providers and improve the understanding of factors that may impact on staff fatigue and patient safety.

Reporting and capturing fatigue risk at local level

3.1.4 The investigation identified mechanisms through which fatigue may be reported and captured at a trust level. These included:

- Digital local risk management systems (LRMS, see 1.1.10).
- Local safety event learning processes, for example after action reviews and patient safety incident investigations.
- Exception reporting to the guardian of safe working hours (who provides assurance to the trust board that doctors' working hours are safe), where doctors in training would report contracted working hour breaches.
- Occupational health, where staff members may seek support for health-related fatigue matters such as during pregnancy, or menopause.
- Freedom to Speak Up, a mechanism to support healthcare staff to speak up about anything which gets in the way of providing good care. This mechanism allows staff to report issues or concerns when they feel they are unable to in other ways.
- Placing fatigue on the trust's risk register – a tool to identify, assess and manage potential risks.
- Manager's staff reviews, such as appraisal and return to work interviews following absence from work.

3.1.5 The investigation heard from healthcare organisations and staff that fatigue was not often reported through any of the mechanisms described above.

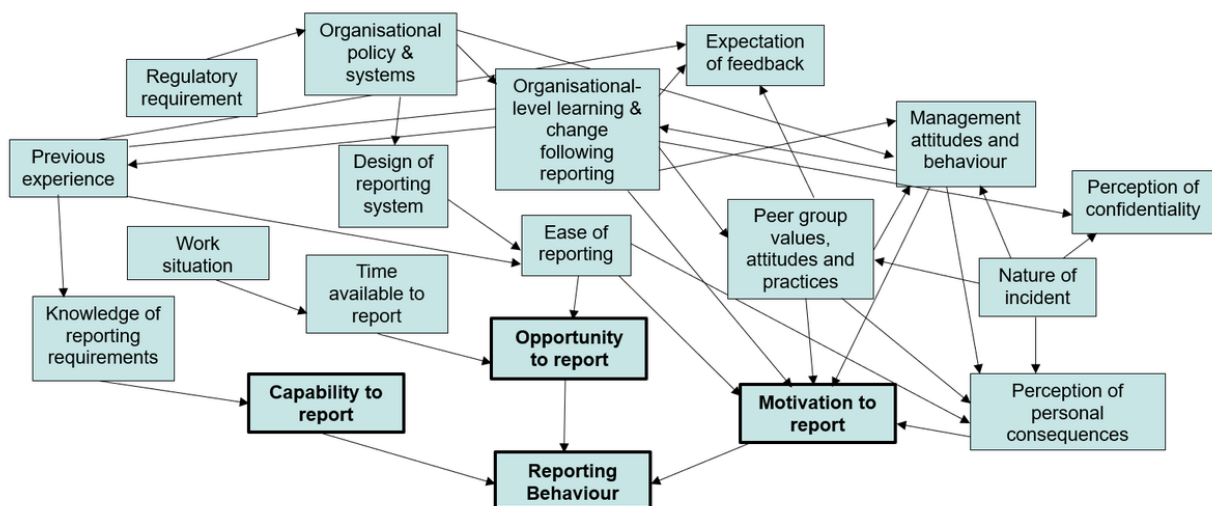
“... I think we commonly forget about the whole being fatigued aspect. And you know, we don't report it enough, which means that others aren't aware of the whole being fatigued and it's overlooked a lot.”

3.1.6 Staff told the investigation that more informal mechanisms may be used, such as managing fatigue risk personally or through informal structures such as discussing it with their line manager. While some staff stated that they would not report fatigue, others said they would feel comfortable raising fatigue concerns if they felt a colleague looked tired.

3.1.7 Factors specific to reporting mainly centred on issues of reporting through an LRMS. While trusts’ digital LRMS were reported to be easy to access across staff groups, staff said that the reporting form was long and took a long time to complete. The main time staff had available to complete a report form was immediately after their shift when they may feel “too tired to complete [it]” and would have to stay late after their contracted hours.

3.1.8 The investigation did not explore the reporting culture around fatigue in depth; however, it noted that some of the factors identified in figure 1 were discussed during staff interviews and were applicable to the reporting of fatigue.

Figure 1 Factors that influence reporting behaviour (adapted for accessibility purposes from Shorrocks, 2023)



3.1.9 The investigation found that another way in which trusts were capturing fatigue was on their trust risk register. The results of a freedom of information (FOI) request made by an individual were shared with the investigation. The FOI had been sent to 199 trusts in 2024 (all types of NHS trust) asking if ‘fatigue’ was on their trust risk register. Replies were received from 112 trusts. Forty-two trusts had

fatigue as a risk on at least one of their risk registers. In some risk registers it was clear that this included a patient safety risk, while in others the risk related to staff wellbeing and/or the workforce.

3.1.10 The investigation spoke with some trusts that had put fatigue on their risk register and found there were challenges in assessing the patient safety risk. One trust told the investigation that the patient safety implication of fatigue was assessed as low because there was limited evidence of fatigue being a contributory factor in patient safety event learning reports. The trust stated that it did not know the size of this risk and did not want to “start the alarms”. It felt it was important to gain data first so that they had something meaningful to support the risk score. The investigation noted that the absence of data does not mean the risk is in fact low and may provide false reassurance. This highlights the importance of accurately capturing data to understand the size and nature of the risk of staff fatigue.

3.1.11 At another trust, staff told the investigation that, based on the evidence they had seen relating to fatigue in their trust and survey data that fatigue should be on the risk register.

“It would seem absolutely crazy not to have it [fatigue] on the risk register.”

Executive member of staff

3.1.12 The investigation found that some trusts were either in the process of or had already added fatigue as a specific ‘tick box’ to their LRMS to gain more information and data on fatigue risk and its impact. Staff were then able to flag if they felt fatigue may have been a contributory factor when reporting a patient safety event. However, there were challenges around how fatigue was identified and considered in patient safety event learning; this is explored in section 3.3.

National safety event reporting and analysis systems

3.1.13 The investigation explored how fatigue was being reported and considered in national patient safety event data. The investigation searched the Strategic Executive Information System (see 1.1.12) on and between 1 April 2023 to 30 March 2024. The search yielded 16 relevant results where fatigue had been considered in a trust’s investigation. This indicated that, similar to the local findings highlighted in sections 3.2 and 3.3, fatigue was also not always being reported and there was limited evidence to support consideration of fatigue in patient safety event investigations and learning.

3.1.14 The investigation found there was no mechanism to capture the extent of staff fatigue as a contributory factor in reported patient safety events nationally. The investigation spoke with representatives from NHS England's Patient Safety Insights team to understand whether the national Learn from Patient Safety Events (LFPSE) service might capture if staff fatigue was reported within a patient safety event.

3.1.15 The investigation learned that LFPSE was based on free-text input by the reporter in response to a series of questions. This allowed a wide range of issues to be reported. NHS England told the investigation that it was aware that completing a safety event report could take time and was conscious of not adding additional steps within LFPSE that could further extend the process. NHS England told the investigation that if fatigue was included in the free-text fields, then this could be captured by a bespoke search at healthcare provider level. For national-level data this would need to be requested from NHS England via the LFPSE service.

3.1.16 NHS England described ongoing work to encourage collaboration and sharing of positive practices that enhanced patient safety by supporting regional patient safety groups to take appropriate actions. It was suggested that sharing learning via innovation networks and integrated care boards would be helpful at a local and regional level to help highlight fatigue risks. HSSIB has further explored how a [safety management approach](#) would support learning from safety risks and escalation where appropriate mitigation cannot be provided (Health Services Safety Investigations Body, 2024b; 2025).

3.2 How staff fatigue is considered as a contributory factor in patient safety learning at trust level

Patient safety event analysis to identify learning

3.2.1 The proportionate response to learning supported by PSIRF means that not every reported safety event will be subject to a patient safety learning response. Some staff told the investigation there was limited consideration of fatigue when patient safety events were reviewed. The investigation found that generally the staff who reviewed safety events lacked the knowledge and understanding of fatigue to be able to explore whether or not this was a contributory factor and how this may influence the learning response.

"I've never really dug [into it] and thought, could this have been brought about by fatigue?"

3.2.2 However, several staff members said they had considered fatigue during patient safety learning responses as it was one of the prompts included in tools supporting the PSIRF (see 1.1.7 to 1.1.8). By specifically mentioning fatigue as a factor that shaped human performance, this has raised awareness among patient safety staff of considering the impact of fatigue on staff performance.

3.2.3 Staff in dedicated patient safety response roles said that exploring whether fatigue was a contributory factor was something that they were starting to include. One trust said it was keen to do this but was unsure how to go about it. Several staff suggested it would be useful if there was a “simple tool” that could be used, where “you don’t really need to know any background to really ask the questions that can extract the [fatigue-related] information”.

3.2.4 Another trust had a set of fatigue questions that its patient safety incident investigators were using during interviews. One safety investigator said that once you explain why some of the questions about fatigue are very personal, staff are “very happy to speak about this”. Another investigator said they used the fatigue questions in every patient safety investigation, and it had helped them identify fatigue risks in a day shift worker.

3.2.5 However, staff who managed and led patient safety learning responses described challenges to considering fatigue in these processes, including:

- the time delay between the safety event being reported and the safety learning response taking place, especially for patient safety incident investigations
- investigation time constraints
- tackling fatigue at an organisational level being “too big” a project
- concerns that investigators do not adequately understand fatigue
- individual staff fatigue being perceived as a ‘person-focused approach’, rather than being understood as an important part of a systems-based investigation.

Staff awareness of fatigue

3.2.6 The investigation found variation in staff understanding of fatigue and how it can impact performance. This affected whether fatigue was perceived as a patient safety risk or a staff wellbeing issue. For example, staff recognised they were making errors when driving home after their shift but did not necessarily make the

link to the fact they had been administering medication or making serious clinical judgements where their performance could also have been impaired, moments before driving home.

3.2.7 The investigation heard that the most common misunderstanding from NHS staff was thinking that fatigue was the same as tiredness or a lack of sleep. The investigation was told of the importance of all staff having a basic awareness of staff fatigue whatever their role, including staff responsible for rostering. The investigation was told there may be a “disconnect” between clinical and non-clinical staffs’ knowledge of fatigue and its importance, which extended to healthcare regulatory bodies (see 3.4.1 to 3.4.8).

3.2.8 The investigation found limited education and training for staff about fatigue, what it is and how to minimise the risks of fatigue both at the organisational level but also at the personal level throughout healthcare professional training. Where training had been provided, this typically focused on a person’s individual responsibility for managing fatigue and/or sleeping well. An organisation’s responsibilities were not covered which helped reinforce the belief among staff that fatigue was a personal responsibility.

3.2.9 In one trust, several staff had attended a local fatigue day and spoke of the impact and how this had raised their awareness and spurred them to act on fatigue risk management in their clinical area. Many of the staff interviewed from this trust also referred to the Chartered Institute of Ergonomics and Human Factors (2024) white paper as being helpful. This contrasted with other trusts, where only staff with a personal interest in fatigue were aware of risks associated with fatigue.

3.2.10 Another trust told the investigation that fatigue was included as part of the resident doctor induction programme and that it ran workshops in “interested departments”. The investigation heard that at the trusts visited, some specialities, such as anaesthesia and the emergency department, had a more advanced understanding of fatigue risks. Anaesthetists and sleep specialists in healthcare are the professions that have championed considering fatigue risk nationally (Association of Anaesthetists, n.d.).

3.2.11 However, staff also said that education alone was inadequate, and this needed to be delivered alongside other measures to reduce fatigue such as providing adequate rest facilities (see 4.1.13 to 4.1.14) and cultural change so that fatigue is not a “taboo” topic (see 3.3.13 to 3.3.15).

3.2.12 Awareness of the risk staff fatigue poses to patient safety has started within healthcare, but the investigation found that this was variable and fragmented. For this to become sustained and embedded there would need to be a shift from interested individuals championing this to a whole NHS approach.

3.2.13 The investigation spoke with representatives of NHS England's Workforce Training and Development team to understand whether providing training material on the risk of staff fatigue would be useful. The representatives explained that this felt like "treating a symptom and not the cause". They explained how training material had been developed following a coroner's report to prevent future deaths (NHS England, 2024b). However, there was little uptake of the training material and no evidence that it led to any change.

3.2.14 NHS England is currently leading a review of statutory and mandatory training to "to reduce the unnecessary burden on staff and standardise the training" (NHS England, n.d.k). The Workforce Training and Development team representatives suggested that awareness and training would be better directed through existing NHS patient safety and staff experience arrangements.

3.3 Factors that support or prevent fatigue being considered in patient safety learning

Expectations on NHS staff

3.3.1 Staff told the investigation there was an expectation to "keep going". Because of the long hours and factors discussed in section 4, staff told the investigation that working while tired was a "normalised" part of their role.

"You might be, you know, not fit to work, you might be tired, you might be ill, but you come in because you have this worry that, you know, the patient's not going to get that procedure, my colleagues are going to pick up the slack, et cetera. So, you always come in."

Consultant

3.3.2 Staff spoke of deeply entrenched and historical beliefs where working long hours was seen as a "badge of pride", particularly among senior staff. Staff told the investigation that it was seen positively for staff to stay beyond their contract hours and that it was sometimes actively encouraged by healthcare organisations. For example, the investigation observed a poster outside an NHS hospital that openly

thanked a nurse, stating: 'Thank you for staying after your shift, to continue caring for those critically unwell patients. I think those patients were lucky to have had you as their nurse.'

3.3.3 There was some evidence of a generational divide between senior staff and the younger generation of staff who were entering the workplace. It was reported to the investigation that younger doctors were more likely to prioritise their health and wellbeing and finish their shifts on time whereas older generations recalled times when they would do extremely long hours.

3.3.4 The generational differences were noted by staff not only in attitudes to staying late after shifts but also differences in working contracts. Resident doctors' working hours were restricted and protected by the terms and conditions for NHS doctors and dentists in training (England) (NHS Employers, 2023). They were also required to 'exception report' to their guardian of safe working hours when they had worked more than their contracted hours. While the Working Time Regulation (1998) provides some restrictions on working hours, fatigue experts told the investigation that it does not effectively mitigate fatigue and, in any case, senior doctors and other healthcare staff often opted out of the directive. This meant that there were limitations in the oversight or protections around the number of hours staff were working.

3.3.5 Through interviews and in literature the investigation found there was also a strong sense of duty and pride among staff in providing the best care for patients (Dixon-Woods et al, 2014). The sense of duty and pride was another factor that motivated staff to 'keep going', not only for their patients but for their colleagues too. Staff reported feeling that they would let their colleagues and patients down if they did not carry on working or if they called in sick because they were too tired. Steven and Redfern (2024) noted that many UK nurses 'regard working while tired as simply 'part of the job' - something health care professionals must accept'.

3.3.6 The investigation found another barrier to considering fatigue was an underlying culture of healthcare staff being seen as 'superheroes' (Steege and Rainbow, 2017). The connection between healthcare and heroism came to the forefront in the English media during the COVID-19 pandemic, when overt displays were seen in the streets praising staff for their heroic efforts.

"There is a heroism attached to flogging yourself to death."

3.3.7 Organisations were reluctant to consider fatigue risk: “If we acknowledge/record it we need to do something about it.” There was a perception from staff and organisations that not much could be done to mitigate healthcare staff fatigue. The demands on healthcare services, limited staffing and limited funds available to make changes were all reported as barriers to fatigue management.

3.3.8 The investigation learned that if staff were already fatigued while at work, one way of mitigating the risk from fatigue was for the member of staff to take a ‘power nap’ (a short sleep while on a rest break). Similar arrangements are seen in other safety-critical industries as a way of counteracting work-time sleepiness and increasing alertness. It has also been recommended as a fatigue counter-measure for healthcare staff (Association of Anaesthetists n.d.; National Institute for Occupational Safety and Health, 2020a; 2020b). The investigation recognises that while napping may help to mitigate the risk once staff are already fatigued, it would be preferable to prevent staff being fatigued in the first place.

‘Napping’ at work and blame culture

3.3.9 The investigation found that there was a stigma and a negative cultural view of napping and resting at work. Staff shared that napping in rest breaks at work was “frowned upon”. Upon exploring where the cultural view stemmed from, responses included “it’s historical” and that “it comes right from the top of the trust”.

“There is a cultural expectation, you [are] at work and should not be sleeping.”

Senior nurse

3.3.10 Staff spoke of being treated punitively if caught napping and of staff not being supported by the organisation when they reported that tiredness was a potential factor in a patient safety event. The limited organisational support was reported to have resulted in staff receiving disciplinary action, being dismissed for misconduct or leaving the organisation due to the lack of organisational support. It was felt that there was a blame culture where staff were “always guilty”, which created a fear of reporting fatigue. Staff also reported that when they saw staff not being supported it stuck in their mind, further exacerbating a culture of fear.

3.3.11 There were also concerns about how a staff member's fatigue would be considered by external parties, such as patients, families and coroners as part of their inquests. The investigation was told:

“... you'd have to be very brave to stand in front of a coroner and say I didn't get any sleep.”

Executive member of staff

3.3.12 The investigation learned that some trusts were taking measures to tackle the negative culture around staff napping while on a rest break. These included:

- Promoting taking rest breaks and having power naps while on break. This included working with estates teams to provide suitable rest facilities and spaces to lie down, such as sofa beds and 'sleep pods'.
- Developing policies to encourage and support staff in having a nap while on break.

Organisational culture and readiness

3.3.13 In other safety critical industries, fatigue is a recognised hazard (a source or situation that can cause harm) as it affects a staff member's ability to do their job and therefore has implications for safety. To mitigate and manage the risk of staff fatigue, other industries have fatigue risk management systems (FRMS). The International Civil Aviation Organization (2011) define a FRMS as:

'A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.'

3.3.14 Healthcare is considered by many of the stakeholders the investigation spoke with to be long way off from considering and managing the risk of staff fatigue at this level. There is also a view that while FRMS is likely to be effective, it may be challenging to implement successfully where safety cultures are not sufficiently mature and resources are limited (Sprajcer et al., 2022). However, the investigations found that there some healthcare organisations, moving forward to consider and tackle the risk of staff fatigue.

3.3.15 Organisational readiness was identified as a key component which enabled healthcare organisations to start their journey into considering and managing fatigue risk. The investigation spoke with senior leaders who highlighted that the timing of introducing new initiatives and ensuring that the organisation was in a relatively stable position was important. This allowed the organisation to have sufficient capacity and maturity to think about and discuss making improvements.

3.3.16 Senior leaders in the trusts told the investigation that there are many challenges healthcare organisations are trying to appropriately prioritise and tackle. There was concern that if the organisation was already dealing with big challenges, focusing on fatigue risk could be destructive. It was felt a sufficient organisation cultural foundation was needed first. This included creating a culture where staff felt safe to speak up and ensuring that issues such as low staffing levels were suitably addressed. One trust senior leader told the investigation how their organisation was doing small things to collect evidence on and manage fatigue risk. They were prioritising their time and focusing on achievable incremental growth, rather than attempting big “unrealistic” changes.

3.3.17 The trusts the investigation engaged with were at different levels of maturity and progress through their fatigue journey. While all suggested they were early on in their journey, the investigation noted factors that had helped them to progress. These factors have been incorporated into local learning for NHS trusts to allow other organisations to help identify and address key factors that can support in the understanding of fatigue risks:

Local-level learning prompts

HSSIB investigations include local-level learning where this may help organisations and staff identify and think about how to respond to specific patient safety concerns at the local level.

- Does your organisation’s senior leadership understand fatigue risks and its link to patient safety?
- Does your organisation consider fatigue risk when responding to patient safety events?
- Does your organisation have a person responsible for leading on fatigue risks?
- Does your organisation offer training and support to staff on fatigue risks and how these can be managed?

- Does your organisation consider fatigue risk from a systems perspective to account for both individual and organisation factors impacting on staff fatigue?
- Does your organisation consider how the design of work processes can help to reduce fatigue?
- Does your organisation capture data on fatigue through existing reporting and learning mechanisms?
- Does your organisation measure and monitor data relating to fatigue risks?
- Does your organisation's risk register identify fatigue risks?
- Has your organisation considered the principles and activities described in the [Chartered Institute of Ergonomics and Human Factors white paper](#) 'Fatigue risk management for health and social care'?

3.4 National perspective

Regulation of staff fatigue in healthcare

Healthcare providers

3.4.1 The investigation learned that healthcare is an outlier in this area, as managing staff fatigue is a regulatory requirement in other safety-critical industries (Energy Institute, 2014; International Civil Aviation Organization, 2016; Office of Rail and Road, 2024). Staff who spoke with the investigation said that as fatigue is a physiological issue in human beings, why was healthcare different? The investigation explored this with the Health and Safety Executive and the Care Quality Commission (CQC).

3.4.2 The investigation learned that staff fatigue could be considered within the remit of Regulation 12: safe care and treatment of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014. However, the investigation found that the CQC (2023a) was not currently 'signalling' this to providers. The investigation spoke with representatives of the CQC who explained that it did not "proactively ... look for fatigue or fatigue risks" from a patient safety perspective. CQC publications did include staff aspects such as exhaustion, burnout, recruitment and retention in its State of Care report (Care Quality Commission, 2023b).

3.4.3 Staff told the investigation it would be “very powerful” if the CQC included fatigue within its inspection framework. However, discussions with various stakeholders and those with expertise or interest in fatigue management in healthcare expressed concern that it was not yet time to regulate for staff fatigue in healthcare. Key reasons for this included:

- The need for a clear understanding of what fatigue is in healthcare.
- Clarity on what actions healthcare providers should be taking to manage fatigue risk.
- Training regulatory staff in understanding fatigue.
- Limitations in how healthcare may understand and manage risk across the healthcare system. This has been explored in HSSIB investigations on safety management – ‘[Safety management systems](#)’ and ‘[Safety management: accountability across organisational boundaries](#)’ (Health Services Safety Investigations Body, 2024b; 2025).
- Unintended consequences for staff and organisations if fatigue risk management measures are not implemented correctly.

3.4.4 CQC representatives explained that healthcare needed “a cultural mind shift ... in order to allow the CQC as a regulator to step into that space”. The investigation learned that anticipatory levers were more likely to have an impact than using enforcement type levers. An anticipatory lever means ‘the regulator sets quality expectations, and providers understand those expectations and seek compliance in advance of any regulatory action’ (Smithson et al, 2018). For example, the CQC could aggregate findings to identify trends and share learning to influence the wider healthcare system.

3.4.5 The investigation heard that if the CQC started to regulate before the necessary foundations had been laid, it could have a knock-on effect on patient safety by limiting how long staff could work. The CQC representative said “If you haven’t got the staff, it’s almost worse than having fatigued staff. The whole system would need to change” to facilitate managing staff fatigue as a safety risk. This mirrors the recommendations of a white paper on this topic (Chartered Institute of Ergonomics and Human Factors, 2024).

Professional bodies

3.4.6 Staff expressed concern that if they admitted that they had been fatigued when a patient safety event happened then they feared they would be disciplined by their trust or professional body or found liable. This was especially relevant to those staff who understood the consequences of fatigue on their performance and also felt that the onus was placed entirely on them to manage their fatigue.

3.4.7 The investigation met with two healthcare professional bodies to learn more about their investigation processes when a member of staff's fitness to practise is questioned. The investigation heard that the General Medical Council did receive allegations of "doctors working too many hours", "working back-to-back shifts, maybe in different places, particularly if they're locums", rather than a specific allegation of fatigue.

3.4.8 The investigation learned that staff fatigue was not routinely considered by either of the professional bodies interviewed as part of their investigation processes. If evidence of fatigue was provided by either the staff member or employer, then this could be considered in a fitness to practise hearing. However, this relied on the healthcare system understanding what fatigue was and considering it within regulatory processes.

HSSIB makes the following safety observation

Safety observation O/2025/070:

Healthcare regulators and professional bodies can improve patient safety by:

- considering how they can contribute to driving improvement in the understanding and awareness of staff fatigue
- considering how they can support and share best practice on mitigations for the risk of staff fatigue
- considering organisational and individual factors that may have contributed to staff fatigue when making decisions about regulatory assessment and action.

4. Factors that contribute to staff fatigue

This section highlights factors that may contribute to staff fatigue. These factors can be considered by organisations and healthcare staff seeking to understand and mitigate the impact of staff fatigue on patient and staff safety.

4.1 Long shift length

4.1.1 The investigation heard that staff were often scheduled to work long shifts, of 12 hours or more. The investigation found there was limited understanding of the impact of long shifts on fatigue and staff performance. Studies have shown that the longer shifts (12 hours or more) are linked with a higher risk of accidents or injuries than 8-hour shifts (British Medical Association, 2018). Nurses working 12 hours or more were more likely to describe 'lower quality of care, poorer patient safety, increasing rates of care left undone' than those working 8 hours or less (Griffiths et al, 2014). In addition, nurses working shifts of 12 hours or more were more likely to report 'job dissatisfaction, ... intention to leave their current job and to experience burnout' (Dall'Ora et al, 2015).

4.1.2 Staff told the investigation they were also working additional hours (ranging from 30 minutes up to 2 to 3 hours after their scheduled shift) or picking up additional shifts to support and maintain the running of the service. For example, a survey of 2347 midwives found that 88% rarely or never finished their shift on time and that this increased the likelihood of work-related stress and burnout (Dent et al., 2024). Shifts were reported to be prolonged by the pressures of clinical tasks, completing administrative tasks, mandatory training, clinical documentation, and staff shortages.

4.1.3 The investigation heard mixed and strong views both for and against 12-hour shift patterns. Some staff preferred this as it allowed them to compress the working week into fewer days, facilitating other commitments such as childcare or caring responsibilities, and reducing travel costs. Other staff, especially those who had worked when 8-hour shift patterns were standard in the NHS, felt that this was a backward step that impacted on their performance both in and outside work and/or their wellbeing.

4.1.4 There are also mixed views reflected in academic research. Some studies show positive outcomes for nurses, patients and organisations. Some studies demonstrate conflicting evidence and others highlight the increased risk of errors

and hazards to patients and staff (Ball et al, 2015). However, methodological limitations in the studies means that firm conclusions cannot be drawn (Ball et al, 2015; Clari et al, 2024).

4.1.5 A recent systematic review examined the relationship between hospital nurse fatigue and nurse, patient and organisational outcomes (Cho and Steege, 2021). The review found that most of the articles reviewed had some methodological limitations, and indicated the need for research using a longitudinal design to examine the same staff to detect changes that might take place over a period of time.

Opportunity for sleep and rest between shifts

4.1.6 Ideally people need approximately 7 to 8 hours of sleep per night to be sufficiently rested (Association of Anaesthetists, n.d.; van Dongen et al, 2003). Staff told the investigation that when factoring in a 12-hour workday, commuting times (see 4.1.22 to 4.1.25), and time to eat and wash, they could have limited opportunity to gain sufficient sleep between shifts.

“I don’t get into bed until about 10:30 to 11:00pm, and then my alarm is set for 5am.”

Ward nurse

4.1.7 Some staff told the investigation they may also have limited rest days factored within their rotas. For example, some staff had worked 6 or 7 nights over consecutive days, with no consideration that they required a period of rest following the first 4 nights according to national guidance for medical staff (British Medical Association, 2018).

4.1.8 The investigation found that roster systems were in place to factor in rest time between shifts and to flag if staff were exceeding the Working Time Regulations. However, the warning flags could be overridden by a manager. For example, a staff member shared that a retrospective review of the rotas revealed that for one member of staff a total of 70 hours over a 7-day period was approved and worked. In addition, managers told the investigation that staff could book additional bank or agency shifts in other areas of the hospital, or at a different hospital, but this was not visible to them in the roster system.

4.1.9 The examples in section 2 highlight the cumulative nature of fatigue and its impact on staff performance. This demonstrates that it is not about the opportunity for one sleep, but the opportunity to sleep over a block of shifts and having adequate breaks between blocks of work.

Breaks and rest at work

4.1.10 Having breaks throughout the working day helps mitigate fatigue and its impact on performance. Breaks should not be thought of as optional or as a luxury, especially when systems are under pressure; they are fundamentally there to protect patients (Farquhar, 2017).

4.1.11 The investigation found that staff were not getting sufficient breaks at work. Unpublished national 2023 NHS Staff Survey data from 52,052 responses showed that only 51.3% of staff were able to get sufficient rest while on shift and that 39.4% had breaks that allowed them to recover sufficiently to do their job. Staff reported skipping breaks due to clinical pressures so that they could make up time and ensure they provided a timely service to patients.

4.1.12 Staff shared some inconsistencies relating to breaks. For example, some midwives had protected time for breaks, whereas doctors did not. Although a recent survey of 2347 midwives found that 75% were unable to take all of their allocated rest breaks (Dent et al., 2024). The investigation also learned that there could be variation in how many breaks staff took depending on the clinical speciality they worked in and how busy the service was.

4.1.13 The investigation heard mixed views about the rest facilities available to staff, with facilities reported to vary within a trust. Generally, rest facilities were described to be inadequate, particularly within an ageing estate. In contrast, new-build hospitals tended to have better rest facility provision. Staff reported that inadequate or difficult-to-access rest facilities meant staff were less likely to take their break or get sufficient rest, potentially impacting on fatigue. Staff shared that rest areas were sometimes used for work (such as handovers) or were located so far from the normal work area that it proved challenging to leave the clinical area for a break. Similarly, staff reported challenges in easily accessing food and drink due to limited catering facilities, especially overnight.

4.1.14 Staff reported that during the COVID-19 pandemic, wellbeing and rest facility provisions were significantly improved and that staff had felt the benefits of this. However, the investigation learned that many such provisions had since been taken away, negatively impacting staff wellbeing and feelings of fatigue (Oeppen et al, 2023).

Night shifts

4.1.15 Staff reflected that it was common practice to ask the night staff to complete some tasks in the early morning before the day shift staff arrived to help manage the workload on the day shift. In the early hours of the morning alertness levels can dip due to the body's natural circadian (biological) rhythm (Williamson and Friswell, 2011). These activities may therefore also occur at a time when alertness levels are naturally lower. Some staff questioned the wisdom of performing safety-critical tasks in the early hours of the morning and towards the end of their night shift and suggested that this be reviewed.

4.1.16 There was also evidence of tasks being delayed when staff recognised they were fatigued. For example, an anaesthetist described an occasion where a colleague had deferred placing an epidural at the end of their night shift to provide pain relief for a woman giving birth. They referred this to the incoming morning shift staff. This was because they recognised that they were fatigued and felt it was safer for the woman to wait a little longer.

Rotation between day and night shifts

4.1.17 The investigation found that some staff rotas switched from night to day shifts in a quick succession, or at short notice. For example, a survey of 2347 midwives found that 75% were scheduled to start a day shift within 24 hours of finishing a night shift (Dent et al., 2024). When work schedules shift rapidly in timing, such as from day to night and then to day again, the body's internal 'body clock' is not able to adapt immediately (International Civil Aviation Organization, 2016). Therefore, staff were unable to establish a consistent sleep pattern and felt tired and exhausted before the next shift.

4.1.18 The investigation found examples of staff working three or four night shifts, and then not being given adequate time off before doing day shifts for the rest of the week. Another staff member shared that they had completed back-to-back night shifts, and were called in the next day to cover a day shift because of staff shortages. Staff told the investigation they felt personally responsible for not being able to get sufficient rest and therefore did not discuss or raise concerns about the impact switching between shifts had on them.

On-call shifts

4.1.19 In many clinical areas where there was a need for senior clinical expertise outside of weekday working hours, staff would periodically work an 'on-call shift' outside their normal working hours. Typically, on-call shifts were 12 hours in

duration but were sometimes longer. Commonly the on-call shift was worked immediately following a daytime shift. As such, staff could work for 24 consecutive hours. An anaesthetist said, “I remember one time coming home after working 22 hours without break and operating”, over a 24-hour period in which they completed both their normal day shift and on-call responsibilities. A consultant explained their trust had “no awareness if you are actually called in” as it is not documented.

4.1.20 If staff were called in while on call, staff shared that compensatory rest was not always provided or able to be taken due to clinical commitments. For example, a survey of midwives found that just 14% had formal methods in place to ensure they had sufficient recovery time from on-call working to returning to their next duty (Dent et al., 2024). Staff shared that during on-call duties they experienced interruptions in both sleep and family or social life, and there was a level of uncertainty about if or when they would be called. There was limited recognition of the impact this had on staff and their ability to get sufficient rest and be available for work the next day.

4.1.21 This mirrors a British Medical Association report which highlighted:

‘Unplanned and unpredictable interruptions, such as being required to give advice on patient care while being on call, can lead to sleep disruption and fatigue because of the impact on rest and recovery time. This is likely to be particularly disruptive when there are repeat disturbances during a single sleep period, or when on call stretches over consecutive days.’ (British Medical Association, 2018)

Travelling for and commuting to and from work

4.1.22 The investigation found there was limited organisational consideration of the effects of long commutes on staff, particularly following long shifts or being interrupted and required to travel during the night when on call. Staff reported there was a belief that this was solely an individualised risk and the responsibility of the staff member.

4.1.23 Some staff reported that their commute could range from any time between 1 hour to 1 hour 30 minutes, each way. This meant that a workday, including both work and travel time, could be a total of 14 to 15 hours per day for staff working a 12-hour shift. When doing consecutive shifts this limited the time staff had to recover between shifts. The investigation found that commuting was rarely considered in patient safety event learning, but needed to be included for a systems-based investigation.

4.1.24 The investigation heard that staff in training programmes were at particular risk as they may commute long distances for some of their placements. A staff member told the investigation that while driving home following a long shift they “could hardly keep [their] eyes open”; another said “it’s very challenging when you have finished a night, and you are shattered”. Staff expressed concern about their ability to drive safely (see 2.3.5 to 2.3.8).

4.1.25 Similarly, staff said that travel time extended their time awake during on-call responsibilities. For instance, consultant doctors said they needed to be within 30 minutes of the hospital or to stay on site. Midwives attending a home birth could be expected to travel up to 1.5 hours to reach someone’s home to support a homebirth in services covering larger geographical areas. Staff would then travel back home, often during the night.

Workload

4.1.26 Fatigue can be caused by an excessive workload due to the need for sustained attention for long periods of time, whether acutely (in a short space of time) or cumulatively (over a number of days) (Health and Safety Executive, 2024). The investigation found that there was a link between high intensity and prolonged workloads and staff experiencing fatigue.

“It is the intensity of the work that we have to do day in, day out, sometimes against the brick wall because it doesn’t matter how hard you work, they’re [patients are] still coming. It doesn’t matter how hard you work, they’re [patients are] still not leaving.”

Emergency department member of staff

4.1.27 The investigation learned that staff fatigue was increased due to mentally demanding tasks and high workloads, which required high levels of concentration, attention and mental exertion. Task performance that requires some degree of both physical and mental effort, results in a progressive increase in fatigue and is also associated with reduced performance (Garrubba and Joseph, 2019).

“... [there is a] lot of drug calculations ... that are quite high-risk decisions we’re making with administering certain drugs. That takes quite a lot of mental effort ... as well as the physical.”

Ward nurse

4.1.28 Staff reported monotonous workloads, and the dynamic nature of the peaks and troughs of service demand were also a factor that contributed towards staff fatigue. Evidence shows that 'low workload situations may lack stimulation, leading to monotony and boredom which could unmask underlying physiological sleepiness and thus degrade performance' (International Civil Aviation Organization, 2016).

"... if it gets too busy, it becomes dangerous. And if it gets too quiet, it becomes dangerous because people kind of relax a little bit too much and are having a chat and a coffee and because they're not intuitive."

Quality and safety member of staff

4.1.29 Staff workloads were compounded by the rising number of people living with multiple or complex long-term health conditions who need to draw on care and support (Barron and Tether, 2024). Other staff said that weekend work was very fast paced with limited breaks built in. Staff reported that caring for patients with complex needs was emotionally exhausting and had impacted staff fatigue and stress levels.

Personal factors

4.1.30 The investigation explored individual and work-life balance factors that may contribute to staff fatigue. Staff reported that work demands often made achieving a work-life balance challenging. In particular, the pressures of work and long shifts limited the time available to spend with family and friends and to recover mentally and physically.

4.1.31 A number of personal factors that contribute to the risk of staff fatigue are highlighted below. The investigation learned that it was important that managers and colleagues were aware of these characteristics and their link to fatigue risk so that adaptations could be made to ensure all staff are appropriately supported.

Caring responsibilities

4.1.32 Staff with personal caring responsibilities (for example, for children or other family members) said that their own “downtime” and sleep could be heavily impacted. The investigation found these factors were not considered or linked to the potential impact they may have on staff fatigue.

“... [for] some people, work-life balance is balancing caring responsibilities or other responsibilities rather than, you know, having that rest period. So, some people in reality don’t have the rest period.”

Divisional member of staff

Pregnancy

4.1.33 The investigation heard that hormonal changes and physical demands during pregnancy significantly contributed to staff fatigue. One staff member said that pregnant women are:

“... expected to function completely as if they were not pregnant ... it’s really hard on the body and the mind.”

Directorate member of staff

4.1.34 Another staff member shared how challenging it was for them to do long shifts, and said their rest time and sleep were regularly interrupted during the night during their pregnancy.

Socioeconomic factors

4.1.35 Rising living costs affect all NHS staff, with a greater impact on those with low-paid roles (NHS Providers, 2022). The investigation found that staff felt worried about and overwhelmed with the rising costs. The investigation heard that staff were working additional shifts, had a second job or relied on food banks to meet their individual basic needs and provide for their families. Some staff said they were unable to survive on their healthcare salary.

“... we’ve seen nurses not being able to afford to eat while they’re on shift and coming in obviously tired and not fully on their game because they’ve just not got the money to eat and feed the family.”

Executive member of staff

4.1.36 It is well recognised that the longer the hours staff work, the greater the risk of fatigue (Morrow et al, 2012). However, there was limited recognition of the impact of rising costs on staff, and the implications of the measures staff were adopting (that is, increasing their hours) in relation to staff fatigue and patient safety. The investigation also heard that some staff took up additional shifts and agency work for personal reasons such as financial rewards/incentives.

4.1.37 The investigation also learned there were national initiatives aimed at supporting an increase in NHS staff resource to respond to challenges in NHS care delivery (Department of Health and Social Care and NHS England, 2025; NHS England, 2023). Staff were able to opt out of the Working Time Directive and overseas workers were able to use an exemption to work more than 20 hours per week in a second job (UK Government, n.d.).

4.1.38 There was limited oversight or recognition of any adverse impacts on patient care that may arise from these initiatives that allow for increased working hours. While there may be positives to increased resource, this needs to be balanced with the risk of additional fatigue.

HSSIB makes the following safety observation

Safety observation O/2025/071:

Government and national organisations can improve patient safety by accounting for the impact of staff fatigue on patient safety when developing national priorities for NHS services.

Religious practices

4.1.39 The investigation was told that beliefs and religious practices such as observing Ramadan (a month of fasting practised by Muslims) could contribute to staff fatigue and affect their performance if adaptations were not made to support them.

4.1.40 Staff shared that during Ramadan, the fasting period began at sunrise and ended at sunset, during which time they abstained from food and drink (including water). Fasting during summer meant staff did not eat or drink for 16 to 18 hours a day. One staff member said the lack of food, the adjusted sleeping schedules (including sleep interruptions) and eating times, and low energy levels all contributed to their fatigue. The staff member added that following a night shift during Ramadan they “[fell] asleep on the wheel” and “physically and mentally I was drained”.

4.1.41 The investigation learned there was limited organisational understanding of how such religious practices could potentially impact staff performance and place staff at increased risk of experiencing fatigue. The investigation learned that it was important that managers and colleagues were aware so that adaptations could be made to support staff participating in their religious practices.

Perimenopause/menopause

4.1.42 NHS England recognises fatigue as one of the top six symptoms of menopause (NHS England and NHS Improvement, 2019b). The investigation heard that hormonal fluctuations caused by the menopause had impacted on staff fatigue, as symptoms such as hot flashes, night sweats, anxiety and low mood impaired the ability to get quality sleep.

4.1.43 Staff also discussed that the complexity of individual symptoms and significant changes to the body associated with the menopause are not well understood. Staff said there was limited recognition of how menopause symptoms such as loss of sleep and insomnia could contribute to staff fatigue.

4.1.44 Staff reported there could be limited support to manage menopause-related health issues. The investigation found evidence of some organisational support initiatives on the topic of menopause such as a dedicated menopause policy or training sessions. However, there has been limited evaluation of the impact of such initiatives (Hobson and Dennis, 2024).

Wider guidance

4.1.45 The Chartered Institute of Human Factors and Ergonomics has published a white paper that outlines suggested principles and activities for a systems approach to fatigue risk management and a roadmap to implement this (Chartered Institute of Ergonomics and Human Factors, 2024). The factors presented in the white paper were informed by discussions with representatives from health and social care

professional and regulatory bodies, as well as support from subject matter experts from other industries at a healthcare fatigue workshop hosted by the Healthcare Safety Investigation Branch (2023b).

HSSIB makes the following safety observation

Safety observation O/2025/072:

Healthcare organisations can improve patient safety by considering the principles and activities for a systems approach to fatigue risk management and the roadmap to implement this as described in the [Chartered Institute of Ergonomics and Human Factors white paper](#) 'Fatigue risk management for health and social care'.

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6. Appendix

Investigation approach

The background to this investigation was described in the launch report, '[Fatigue risk in healthcare and its impact on patient safety](#)' (Health Services Safety Investigations Body, 2023).

The investigation explored the following in the acute hospital setting:

- What impact does staff fatigue have on patient safety?
- How is fatigue reported and captured?
- How is fatigue considered in patient safety incident learning?
- What factors support or prevent fatigue being considered within patient safety incident learning responses?
- What are the main contributory factors to staff being fatigued?

Evidence gathering

The investigation was carried out between April 2024 and January 2025. The investigation used the Systems Engineering Initiative for Patient Safety (SEIPS) (Carayon et al, 2006; Holden et al, 2013). This tool was used as a guide during interviews and site visits for evidence collection and in the analysis of the data gathered. SEIPS provides a human factors framework for understanding the work system (that is, the external environment, organisation, internal environment, tools and technology, tasks, and people), work processes (including physical, cognitive and social/behavioural aspects) and the relationship between these and the resulting outcomes in healthcare.

The investigation undertook site visits at three trusts (two in person and one virtual) and engaged with a variety of staff at all levels of the trusts including executive, managerial, clinical and patient safety staff. The clinical staff were from a range of specialities including anaesthesia, critical care, obstetrics, colorectal surgery, cardiology, care of the older person, the emergency department, pharmacy, paediatrics, hospital and community midwifery, respiratory and sleep medicine. Further evidence was gathered from relevant local and national policies and guidance, and legislation and literature.

Stakeholder engagement and consultation

The investigation engaged with stakeholders and subject matter advisors to gather evidence during the course of the investigation. This also enabled checking for factual accuracy and overall sense-checking.

The stakeholders contributed to the development of the safety recommendations based on the evidence gathered and are listed below:

Comparison site organisations	Staff (some staff held multiple positions so may be counted more than once)	National organisations
Three NHS acute foundation trusts with multiple sites. Ranging in size of trust, type and size of patient catchment areas, and type of services provided from the acute hospital site	Staff from governance, risk and/or patient safety teams x 27. At different levels from administrator to associate director Health and safety leads x 2	Department of Health and Social Care
An integrated care board	Executive staff x 8	Fight Fatigue Campaign

Comparison site organisations	Staff (some staff held multiple positions so may be counted more than once)	National organisations
Eight other acute trusts where the staff member engaged directly with the investigation	Divisional/directorate staff x 10	Healthcare Fatigue Forum
	Ward/department managers and clinical leads x 10	NHS England
	Matrons x 4	Care Quality Commission
	Consultants x 16	Patient Safety Management Network
	Clinical staff/trainees x 13	National Guardian's Office
	Guardian of safe working hours x 2	General Medical Council
	Freedom to Speak Up Guardians x 2	Nursing and Midwifery Council
	Academics x 3	Association of Anaesthetists
	Fatigue subject matter advisors x 3	Royal College of Anaesthetists
		Health and Safety Executive
		Footesteps Foundation
		The Sleep Charity
		NHS Resolution
		Medical Defence Union

