

Staff fatigue and transfusion safety: Practical solutions

Practical solutions: How to start? Fatigue is a recognised patient safety risk that can affect performance, decision-making, and quality of care. The actions below provide practical ways for organisations to reduce fatigue-related risks, support staff, and promote safer transfusion practice.

For clinical areas:

- ★ Include 'fatigue status' in team huddles and safety briefings
- ★ Use a mix of brief pauses after 90–120 minutes of focused work and formal rest/meal breaks in line with legal requirements (e.g. every six hours). For night shifts, consider scheduling breaks to support rest before the circadian low (around 03:00).
- ★ Educate staff to recognise fatigue in themselves and colleagues. Staff should not just be able to identify fatigue but also know how to act/escalate

For laboratory areas:

- ★ Assess overnight and extended rota sustainability, trial staggered shift patterns
- ★ Implement quality checks after high-fatigue periods (e.g., shift end validations)
- ★ Provide adequate break and rest facilities, and encourage their use
- ★ End of shift check in - include safe to drive?
- ★ Include fatigue in competency review for critical tasks (blood grouping, crossmatching) Not sure this is possible?
- ★ Ensure capacity plans consider the impact of fatigue and ensure staffing is sufficient to prevent it occurring

For all teams:

- ★ **Measuring fatigue state:** Suggest using well recognised scale for measuring fatigue state (Examples include: [Development and Validation of the Fatigue State Questionnaire: Preliminary Findings - ScienceDirect](#) and [Supported Scales - FRMS's Developer Portal](#))
- ★ **Adjusting shift patterns:** Review and adjust shift patterns for staff, and flag consecutive long shifts. HSE guidance available for this [Managing shift work: Health and safety guidance - HSE](#). Assess and co-design shift patterns with staff representatives and union engagement
- ★ **Regular health assessment:** Staff who are regular night workers should have regular health assessment through occupational health (<https://www.gov.uk/night-working-hours/health-assessments>).
- ★ **Training:** Introduce mandatory fatigue awareness module covering the key Human Factors (CIEHF) and Health Services Safety Investigations Body (HSSIB) findings (see links in the references section). Staff should be able to identify fatigue and know how to act/escalate
- ★ **Incident templates:** Add fatigue screening to incident investigation forms and templates, such as SEIPS
- ★ **Governance:** Include fatigue risk in quarterly transfusion safety reviews
- ★ **Staff voice:** Survey staff on fatigue factors; use findings to inform rota, workload, and workspace changes
- ★ **Add fatigue check prompts** to bedside and lab checklists (e.g., "If ≥ 10 hours into shift or overnight: slow down—use read-back; second checker")
- ★ **Time-of-day rules:** Defer non-urgent complex tasks such as antibody investigations for non-urgent requests to alert periods, such as daytime, where feasible; for nights, introduce the requirement for second review prior to issue
- ★ **Handover discipline:** Structured documented checklist such as the SBAR template (Situation, Background, Assessment, and Recommendation) at shift changes for transfusion queues (pending samples, components reserved, special requirements)

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For all teams (continued):

- ★ **Visual management:** Whiteboard or EPR flags for urgent vs. routine requests; reduce interruptions during critical clinical or laboratory transfusion tasks
- ★ **Micro-breaks policy:** Regular short, protected breaks every 2–3 hours in lab and clinical areas during sustained workload; track compliance
- ★ **Fatigue escalation:** If fatigue indicators arise (e.g., multiple near misses, extended wakefulness), activate local escalation (additional checker, supervisor oversight, temporary task redistribution)

Integrating fatigue into incident investigations: a practical framework

When investigating and learning from transfusion safety incidents, systematically assess fatigue as a contributing factor:

Step 1: Screening questions (Ask staff involved)

- What was your work rota, shift length on the day/night
- Number of sequential shifts and shift pattern in the 72 hours prior to the event?
- How many hours' sleep did you have 72 hours before the incident?
- Were regular breaks taken in the 72 hours before the event and if so, how long, how many and were they undisturbed? Did you feel rested after your breaks?
- Were you covering additional roles, understaffed, working overtime or high intensity of workload?
- Did you experience fatigue during the shift? (Consider Karolinska Sleepiness Scale or Samn-Perelli fatigue scale – further info available [here](#))
- Were there competing demands, distractions or interruptions?

**Step 2: Context analysis**

- Review the timing of the event (early shift, mid-afternoon, night shift, end of extended shift)
- Identify organisational stressors (workload, staffing, equipment or IT, corridor care, high patient acuity, safety culture/leadership issues/fatigue culture in your team/ quality of rest facilities)
- Note personal factors mentioned (health and wellbeing, caring responsibilities, sleep disturbance, diet, work-life balance)

Step 3: Contributory factor documentation

If fatigue factors emerge, document explicitly:

- **"Fatigue likely contributory"** – Clear evidence of shift length, pattern, sleep quality or duration, workload, timing
- **"Fatigue possible contributory"** – Some evidence but cofactors unclear
- **"Fatigue not a factor"** – Incident timing, staff reports, context suggest fatigue contribution is negligible

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Step 4: Learning and action



It is important to move beyond “human error” to specific system actions: roster changes, break promotion, rest facilities, fatigue policy, second-checker policy on nights, environment changes, and targeted training. Link the findings from investigations and learning from safety incidents to organisational and personal interventions:

- Individual: Fatigue awareness education, sleep hygiene counselling, occupational health support
- Organisational: Rota review, workload assessment, rest facility improvements, staffing level review, fatigue culture
- Trend analysis: Aggregate fatigue- flagged events by time/day/service; share at Transfusion Committee and Safety Huddles; integrate into haemovigilance reports

Alignment with the SHOT Transfusion Safety Standards:

Identifying and addressing staff fatigue risk will help align with the following standards and requirements:

- **Standard 3** (Supporting staff to work safely): Ensures adequate staffing, staff wellbeing, and safe workload distribution to minimise fatigue-related risk
- **Standard 4** (Education and training): Promotes fatigue awareness, human factors education, and competency in safe transfusion processes
- **Standard 5** (Safety culture): Supports a just, restorative culture and encourages learning from fatigue-influenced events
- **Standard 7** (Haemovigilance & risk management): Enables proactive identification and trending of near misses (e.g., WBIT), delays, and lab errors, with fatigue included in analysis
- **Standard 8** (Governance): Requires board-level oversight, inclusion in risk registers, and ongoing monitoring of improvement actions

References:

Healthcare Services Safety Investigations Body (HSSIB). (2025). *The impact of staff fatigue on patient safety: Investigation report*. Accessed at <https://www.hssib.org.uk/patient-safety-investigations/the-impact-of-staff-fatigue-on-patient-safety/investigation-report/>

Chartered Institute of Ergonomics and Human Factors (CIEHF). (2024). *Fatigue risk management for health and social care*. Accessed <https://ergonomics.org.uk/resource/fatigue-risk-management-for-health-and-social-care.html>

International Civil Aviation Organization (ICAO). (2016). *Fatigue risk management in civil aviation. Technical guidance on fatigue risk management systems*. ICAO.

SHOT Transfusion Safety Standards: [SHOT Transfusion Safety Standards - Serious Hazards of Transfusion](#)

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