

ROI for Human Factors and Safety Culture

Report for The Hillingdon hospital NHS Trust

Feb 2026

Background and Philosophy for change	3
Purpose	3
Aims	4
Core Components	4
Human Factors Training	4
Institute for Healthcare Improvement (IHI) Joy in Work	5
Culture Conversations using Liberating Structures	5
Impact and Evidence Base	5
Proposed plan	6
Membership and Participation	7
Measurement and Learning	8
Summary	Error! Bookmark not defined.
Human Factors & Safety Culture Investment	9
Context-	9
Modelling for implementing Culture conversations and Human Factors training	11
Purpose of this modelling	11
Key Conservative Assumptions	11
ROI Detail	12
1. Workforce Sickness Absence (Cost Avoidance)	12
2. Staff Turnover and Retention	12
3. Agency and Temporary Staffing	12
4. Patient Safety & Harm Cost Avoidance	13
5. Productivity & Efficiency Gains	13
Consolidated ROI Table (Conservative Scenario)	13
Programme Cost vs Benefit	14

Perinatal Culture and Leadership

Paper discussing Safety Culture and Human Factors Training for Maternity Neonatal MDT Staff at The Hillingdon Hospital NHS Trust

Background and Philosophy for change

The Hillingdon Hospitals NHS Foundation Trust Perinatal Culture and Leadership Learning System is grounded in the belief that safe, high-quality care is delivered when people, systems and culture are intentionally designed to work together. Sustainable improvement happens when staff are supported to understand how human factors, leadership behaviours and organisational culture influence everyday practice, decision-making and patient outcomes.

In the period April -June 2025 THHT recorded 2,062 incidents overall at a recording rate of 56.3 per 1000 bed days¹. Additionally, overall Staff absence (not stratified for Maternity) is highest for THHT compared to other NWL NHS Trusts which deliver maternity services.²

Our approach integrates Human Factors (HF) principles³, Institute for Healthcare Improvement Joy in Work⁴, and Culture Conversations⁵ using Liberating Structures to create psychologically safe, inclusive and relational spaces to enhance safety culture in Maternity Neonatal services. These approaches enable teams to reflect on how work is really done, learn from excellence and risk, and co-design improvements that are meaningful, locally owned and sustainable.

The learning system is underpinned by compassionate and inclusive leadership, psychological safety, equity, and systems thinking. It recognises that improving safety and experience requires attention to how people feel at work, how teams interact under pressure, and how leaders create the conditions for learning rather than blame. The system is deliberately adaptive and co-produced with clinical and corporate teams, rooted in lived experience and operational reality.

Purpose

To create psychologically safe, purpose driven spaces where multidisciplinary teams and leaders can reflect, learn and grow together, strengthening safety culture, staff wellbeing- and patient outcomes.

Through the integration of Human Factors training, Joy in Work principles, and structured Culture Conversations using Liberating Structures, the learning system supports teams to:

- Understand and mitigate human and system factors that contribute to harm

- Strengthen teamwork, communication and decision -making
- Improve staff engagement, morale and retention
- Embed compassionate, inclusive leadership into everyday practice
- Improve safety and reduce serious incidents

The system aligns with national patient safety and workforce ambitions and NHS England commission on Perinatal Culture and Leadership - supporting Hillingdon Hospital NHS Trust to deliver safer care by addressing both technical processes and the relational, cultural conditions in which care is delivered.

Aims

The Hillingdon Maternity Neonatal Culture, Leadership Learning System aims to:

- Create regular, psychologically safe reflective spaces for teams and leaders to explore safety, culture and performance using Human Factors and Liberating Structures.
- Build organisational capability in Human Factors, systems thinking and safety culture, enabling staff to recognise and reduce risk while enhancing reliability.
- Embed **Joy in Work** as a core driver of quality and safety, recognising the strong relationship between staff wellbeing, engagement and patient outcomes.
- Support leaders at all levels to model compassionate, inclusive and learning focused- behaviours that strengthen trust and accountability.
- Enable meaningful Culture Conversations that surface lived experience, strengthen relationships and support shared ownership of improvement.
- Ensure culture, leadership and human factors are embedded as a golden thread across quality improvement, patient safety and operational activity, rather than standalone initiatives.

Core Components

Human Factors Training

Human Factors training supports staff to understand how environment, workload, communication, hierarchy, fatigue and cognitive bias influence performance and safety. At Hillingdon NHS Trust maternity and neonatal teams, HF training will be used to:

- Improve situational awareness, teamwork and communication
- Reduce avoidable harm through better system design and escalation
- Support learning from incidents through a systems based, just culture lens

Evidence from healthcare and high reliability industries demonstrates- that effective Human Factors interventions are associated with reductions in serious safety events, improved team performance, and more constructive responses to error.

Institute for Healthcare Improvement (IHI) Joy in Work

Joy in Work is positioned as a foundational enabler of safety and quality. The learning system supports teams to identify what matters to them at work, remove daily frustrations, and strengthen meaning and connection.

Research shows that organisations with higher staff engagement and wellbeing experience:

- Lower rates of patient mortality and harm
- Reduced sickness absence and turnover
- Improved patient experience and quality outcomes

By explicitly linking Joy in Work to safety culture, the Trust and Perinatal Leadership team recognises that staff who feel valued, heard and supported are better able to deliver safe, compassionate care.

Culture Conversations using Liberating Structures

Culture Conversations use Liberating Structures to enable inclusive, equitable dialogue where all voices are heard. These structured yet flexible methods support teams to:

- Explore culture, safety and leadership behaviours openly
- Surface hidden risks and strengths in a non-hierarchical way
- Build shared understanding and collective accountability

Liberating Structures help shift conversations from reporting problems to co-creating solutions, strengthening psychological safety and relational trust across teams.

Impact and Evidence Base

The learning system is informed by national and international evidence demonstrating that investment in culture, leadership and human factors delivers measurable improvements in safety and performance, including:

- Reductions in serious incidents and never events following implementation of Human Factors based- safety programmes
- Improvements in teamwork and communication scores on safety culture surveys
- Increased staff engagement and reduced burnout linked to Joy in Work interventions
- Strong associations between compassionate leadership, psychological safety and improved patient outcomes

Organisations that combine Human Factors training with strong safety culture and engaged leadership consistently demonstrate better learning from incidents, more reliable care processes and improved staff retention.

Proposed plan

- Scale up and learn from existing Culture and Safety initiatives
- Roll out a small-scale programme of Human Factors education tailored to Maternity and Neonatal MDT clinical and non-clinical roles, with a focus on practical application.
- Use trained facilitators to lead Culture Conversations using Liberating Structures across divisions and services.
- Embed Joy in Work principles into MDT – use quality improvement, leadership development and team reflection spaces.
- Create regular opportunities for cross team- learning, storytelling and sharing of exemplars.
- Use feedback and lived experience to continuously adapt and improve the learning system.
- Accelerating existing initiatives at THHT focussed on shaping safety culture.

	Jan	Feb	March	April
Culture conversations	Plan	4 sessions		
Human Factors		Plan-TTT attendees + advertise	HF session 1 and 2 n=20 TTT n=10	
Evaluation				Report

Culture conversations

Number of sessions = 4 each session =1 hour

Assuming 6-8 staff attend each convo café

N=32 for 4 hours @ £60 ph (average based on B4-consultant rate) =£7680

Total for culture conversations = £7680 for one quarter

Human Factors

Each HF session =2.5 hours of virtual teaching

TTT = trainers must attend the HF 1 and 2 and 1 TTT session

TTT costs

TTT attendance n=10- for 6 hours @ £60 ph (average based on Locum B7 and Consultant) rates = £3600

Backfill needed to cover = £1800 (assuming that not all 10 attendees will need backfill)

Total TTT cost £4,500

Staff costs

2 HF sessions at 2.5 hours per session -estimating 20 additional staff (not TTT number) n=20 for 5 hours @ £60 per hour (average based on substantive B4 to Consultant pay scale)= £6000

Backfill needed to cover n=20 for 5 hours @£60 ph (based on locum cover rates) = £6000

Total staff cost = £12,000

Total HF programme cost in one quarter for pilot testing =£16,500

TOTAL CULTURE COVERSATIONS AND HF= £ 24,180 in one quarter

Membership and Participation

The learning system is open to multidisciplinary participation, including:

- Mat Neo Clinical and operational leaders
- Perinatal Culture and Leadership Team, Quality, Audit and Safety Leads.
- Medical, nursing, midwifery and AHP staff
- Operational, administrative and support services
- Quality, safety, education and workforce teams including PMA/PNA staff and PDMs

Active involvement of staff at all levels ensures that cultural and safety improvement is co-owned- and embedded across the services.

Measurement and Learning

Impact will be understood through a balanced approach combining quantitative and qualitative measures, including:

- Participation and reach of Human Factors training and Culture Conversations including the use of MOMENTS framework.
- Staff survey measures of safety culture for example evaluation of PULSE survey outcomes, psychological safety and Joy in Work
- Trends in patient safety incidents, harm events and learning quality
- Sickness absence, turnover and retention indicators
- Stories, case studies and staff narratives demonstrating cultural change in practice

Learning will be shared transparently to support reflection, adaptation and sustained improvement over time.

DRAFT

ROI from Human Factors & Safety Culture Work (Maternity/Neonatal)

To assess ROI we searched for articles illustrating the value of Human Factors training, the impact and ROI of Human Factors training and cost benefits of Human Factors training. Although high-quality, direct ROI studies specific to Human Factors ⁴ interventions in healthcare are limited, research consistently shows that safety and systems interventions which reduce harm lead to substantial economic benefits. Interventions targeting structured training, teamwork and reliability have demonstrated rapid payback periods and multi-fold returns in related settings. This supports the economic case that investment in Human Factors and safety culture is a strategic investment with plausible financial and operational returns, especially when integrated with broader patient safety and workforce initiatives.

Category	Expected Impact	Strategic Value
Harm Reduction	Fewer adverse safety events, better escalation	Less clinical harm + risk mitigation
Workforce Stability	Reduced absence & turnover	Lower agency costs, better continuity of care
Organisational Performance	Enhanced safety performance → better organisational performance	Lower liability + improved reputation
Reporting & Learning	More effective learning systems	Faster cycle of improvement and resilience

(These are derived from evidence that stronger safety culture improves safety performance and organisational performance ⁶) [ScienceDirect](#)

Human Factors & Safety Culture Investment

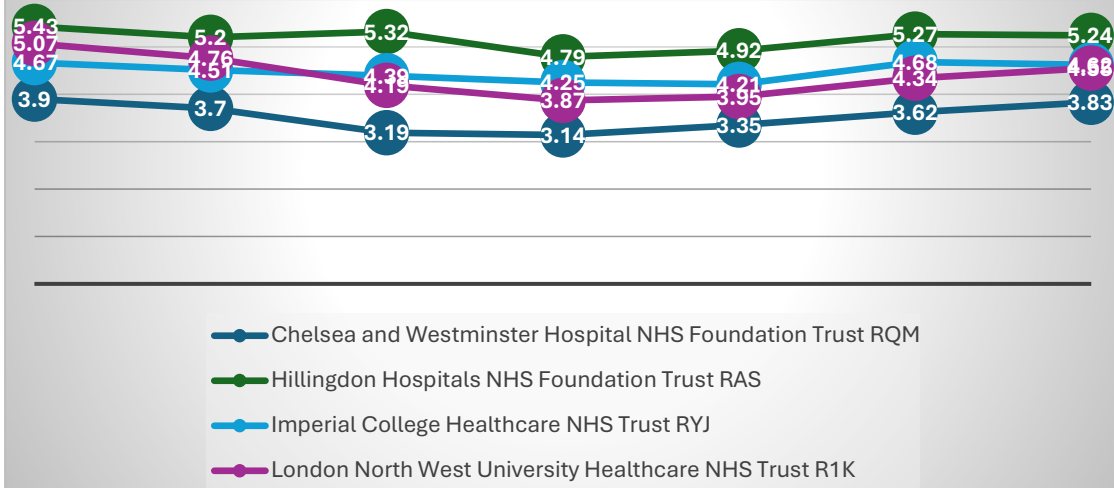
Context-

Staff absence-

Overall Staff absence (not stratified for Maternity) is highest for THHT compared to other NWL NHS Trusts which deliver maternity services.

Maternity staff in England have the third highest rate of sickness absence compared to all staff groups [NHS Sickness Absence Rates, July 2025 - NHS England Digital](#)

Sickness absence rates by Materinty Unit Jan-July 2025



Patient Safety Event Data Quarterly Publication Quarter 1 2025/26 (April, May, June 2025)

[Statistics » Quarter 1 2025/26 \(April, May, June 2025\)](#)

The LFPSE service defines a patient safety incident as: ‘something unexpected or unintended has happened, or failed to happen, that could have or did lead to patient harm for one or more person(s) receiving healthcare’.

Organisation Name	Median Day Lag	Number of Incidents	Activity Denominator	Recording Rate Type	Recording Rate
Chelsea and Westminster Hospital NHS Foundation Trust	1	1,474	71,695	Per 1,000 Bed Days	20.6
Imperial College Healthcare NHS Trust	1	6,932	93,278	Per 1,000 Bed Days	74.3
London North West University Healthcare NHS Trust	1	4,146	90,091	Per 1,000 Bed Days	46
The Hillingdon Hospitals	0	2,062	36,631	Per 1,000 Bed Days	56.3

NHS Foundation Trust					
----------------------------	--	--	--	--	--

In the period April -June 2025 THHT recorded 2,062 incidents overall at a recording rate of 56.3 per 1000 bed days. THHT has a higher rate of reporting than two peers indicating strong capture of safety events; this potentially includes staff awareness of reporting and ease of reporting. Building on this through the work outlined above in maternity neonatal services could align with the organisational direction of improved reporting and learning from incidents.

Modelling for implementing Culture conversations and Human Factors training

Purpose of this modelling

This scenario translates the published evidence on Human Factors (HF), safety culture and workforce wellbeing into plausible, conservative financial impacts relevant to maternity and neonatal services.

It does not assume direct causation or guaranteed savings. Instead, it models cost avoidance and productivity release that typically follow improvements in:

- safety performance
- staff wellbeing and retention
- reliability of high-risk processes

Key Conservative Assumptions

These assumptions err on the low end of impact to maintain credibility:

- Workforce: 500 maternity & neonatal staff
- Average NHS staff cost (including on-costs): £45,000 (this may vary for bank or locum staff)
- Baseline sickness absence rate: ~5% (NHS average)
- Annual turnover: ~12% (conservative for maternity)
- HF & culture programme cost: £150k in one year (based on quarterly cost indicated above + additional resources/increased workforce attendance over the remainder quarters)
(training, facilitation, backfill, leadership time)

Assumed improvements are modest and within ranges reported in safety culture literature:

- 0.5 – 1.0 % pt. reduction in sickness absence rates
 - 1–2% reduction in turnover
 - Small reduction in high-severity safety events
 - Improved efficiency and reduced rework
-

ROI Detail

1. Workforce Sickness Absence (Cost Avoidance)

Human Factors and psychological safety reduce cognitive overload, stress, and burnout. Even a 0.5% reduction in sickness absence across 500 staff releases meaningful capacity.

- 0.5% of 500 staff \approx 2.5 FTE
- $2.5 \times \text{£}45,000 \approx \text{£}112,500$ per year (this cost may vary dependent on bank and locum rates)

This does not require dramatic cultural change — only fewer days lost due to stress, fatigue and avoidable system friction.

2. Staff Turnover and Retention

Replacing a maternity or neonatal clinician costs approximately £8,000–£12,000 (recruitment, induction, temporary cover, productivity loss).

A 1% reduction in turnover:

- 5 fewer leavers per year
- Conservative cost per leaver: £10,000
- £50,000 per year avoided

Evidence consistently links positive safety culture and Joy in Work to improved retention.

3. Agency and Temporary Staffing

Improved teamwork, reliability and morale reduce unplanned gaps and escalation to agency staffing.

Even a modest reduction:

- £5,000 per month reduction in agency usage
- £60,000 per year savings

4. Patient Safety & Harm Cost Avoidance

The financial cost of a single serious maternity or neonatal harm event can range from:

- prolonged inpatient care
- additional interventions
- investigation and governance time
- litigation exposure

Without claiming prevention of catastrophic harm, this model assumes:

- Avoidance of 1 moderate–severe safety event per year
- Conservative cost estimate: £50,000

This aligns with international evidence that safety culture improvements reduce incident severity even when incidents still occur.

5. Productivity & Efficiency Gains

HF reduces rework, duplication, communication failures and delays — particularly in handovers, escalation and emergency response.

A 0.25% productivity gain across 500 staff:

- Equivalent to ~1.25 FTE
- ≈ £56,000 per year

This is conservative and reflects smoother work, not increased pace.

Consolidated ROI Table (Conservative Scenario)

ROI Domain	Conservative Assumption	Annual £ Impact
Reduced sickness absence	0.5% reduction	£112,500
Improved retention	1% turnover reduction	£50,000
Reduced agency use	£5k/month	£60,000
Harm cost avoidance	1 moderate/severe event	£50,000
Productivity release	0.25% efficiency gain	£56,000
Total Annual Benefit	—	£328,500

Note- this is a conservative estimate. A less conservative estimate would calculate litigation avoidance, reputational damage and improved patient experience..

Therefore, total annual benefit could range from £328,500 to £500,000

Programme Cost vs Benefit

Item	£ Estimate
HF & culture programme 2-year cost	£250–£300k
Conservative 2-year benefit	£656k
2-year net benefit	£406–£356k
Approximate Payback Period	9 - 11 months

This excludes harder-to-quantify benefits such as litigation avoidance, regulatory confidence, reputation, and improved patient experience.

Acknowledgements

Dr Tristan Bate (Consultant Neonatologist THHT), Stephen McManus (Head of Midwifery THHT), Dr Dan Borlease (Consultant Obstetrician THHT), Abdul Khai (Mat Neo Service Lead THHT), Dilan Chauhan (Quality and Audit Lead Midwife THHT)

References

1. LFPSE [Statistics » Quarter 1 2025/26 \(April, May, June 2025\)](#)
2. NHS Staff sickness absence rates [NHS Sickness Absence Rates, July 2025 - NHS England Digital](#)
3. Human Factors in Healthcare A Concordat from the National Quality Board [nqb-hum-fact-concord.pdf](#)
4. [IHI Framework for Improving Joy in Work | Institute for Healthcare Improvement](#)
5. [Conversation Café | Think Insights](#)
6. [Demonstrating the Value and Impact of Human Factors-based Projects in Healthcare - Jason J. Saleem, Kurt Ruark, Kyle Maddox, Jennifer Herout, 2024](#)
7. [performanceandimprovement.nhs.wales/functions/quality-safety-and-improvement/improvement/improvement-cymru-academy/resource-library/academy-toolkit-guides/human-factors-toolkit/](#)
8. [Safety culture, safety performance and financial performance. A longitudinal study - ScienceDirect](#)
9. [143 Explore, empower, evolve – promoting safety culture using human factors-based simulation and quality improvement strategy | BMJ Open Quality](#)