



UNIVERSITY OF WALES TRINITY SAINT DAVID

MSc Public Health and Social Care in Practice

COMPONENT 2 - SERVICE IMPROVEMENT REPORT

**From Warning Signals to Safety Action:
Improving Neonatal Governance at Countess of
Chester Hospital NHS Foundation Trust**

Student name	Priti Ashokbhai Ramoliya
Student number	2506176
Module code	LCCHS7006
Module title	Quality Assurance and Service Improvements
Lecturers	Dilhara Mampitiya and Christopher Mafuva
Assignment title	Component 2: Service Improvement Report
Submission date	14 August 2026
Word count	3260 words

Contents

1. Introduction.....	3
2. Critical Analysis of the Quality Concern.....	4
2.1 Theoretical framing: quality, systems and high reliability	4
2.2 Root-cause analysis: Fishbone Diagram and 5 Whys.....	5
2.3 Donabedian analysis of structure, process and outcome	7
2.4 Strategic analysis using SWOT	7
3. Recommendations and Implementation Strategy	8
3.1 Improvement aim and intervention design	8
3.2 PDSA implementation plan	10
4. Conclusion.....	11
Reference List	13

1. Introduction

This report is a component of the Component 1 case study of the Lucy Letby case at Countess of Chester Hospital, concentrating on a specific service quality concern identified: The lack of timely, independent and protective action in the face of repeated and ambiguous warning signals from the organisation. It relates to the robustness of the entire system of assurance, which should have incorporated unexpected neonatal deaths and collapses, professional concerns, staffing pressures, mortality reviews and family experience, and which should have been combined, checked and escalated. This system's framing does not sensationalise criminal information and maintains focus on quality management, patient safety and organisational learning (Reason, 2000; Thirlwall Inquiry, 2026a).

The severity of the case is determined by criminal convictions, and by the establishment of the statutory Thirlwall Inquiry, whose terms encompass the experiences of parents, the conduct of hospital staff and leaders, governance and culture, and the effectiveness of wider NHS management and regulation. The final report of the Inquiry, however, had not yet been published by 6 August 2026, as alluded to in its May update, which indicated that it would not be published until after the summer parliamentary recess (Iacobucci, 2024; Thirlwall Inquiry, 2026a; Thirlwall Inquiry, 2026b). This report therefore sets out to separate factual data from those conclusions drawn from the facts and to exclude any provisional evidence as conclusions of the inquiry.

The public health impact is not limited to one neonatal unit. But when the damage is rare yet devastating, the traditional approach to assurance is put to the test, as the signals are weak and controversial, or statistically unstable, and the delay can be extreme. The evidence received to the Inquiry at national level indicates that the majority of neonatal trusts already had policies, committees and review processes, but there was inconsistent practice around implementation, which depended on the staffing, data maturity, culture, leadership and capacity of the trusts to triangulate information. The structural context in which local signals need to be interpreted is shown by the fact that in the Nuffield Trust survey of 120 trusts, 99 reported nursing vacancies while 68 trusts reported non-compliance with nursing staffing standards (Nuffield Trust, 2024).

Speaking-up data confirms the difference between voice and organisational response. Numbers of recorded cases reported through Freedom to Speak Up Guardians rose significantly since the national data collection was launched, with 37,770 cases recorded in 2025/26, but only 76% of respondents reported speaking up again would, compared with 85% in 2019/20, and over 1,100 of those cases involved detriment (National Guardian's Office, 2026). An increase in the number of reports does not necessarily imply that concerns are always heard, investigated and resolved. Quality is related to intelligence leading to appropriate action and feedback.

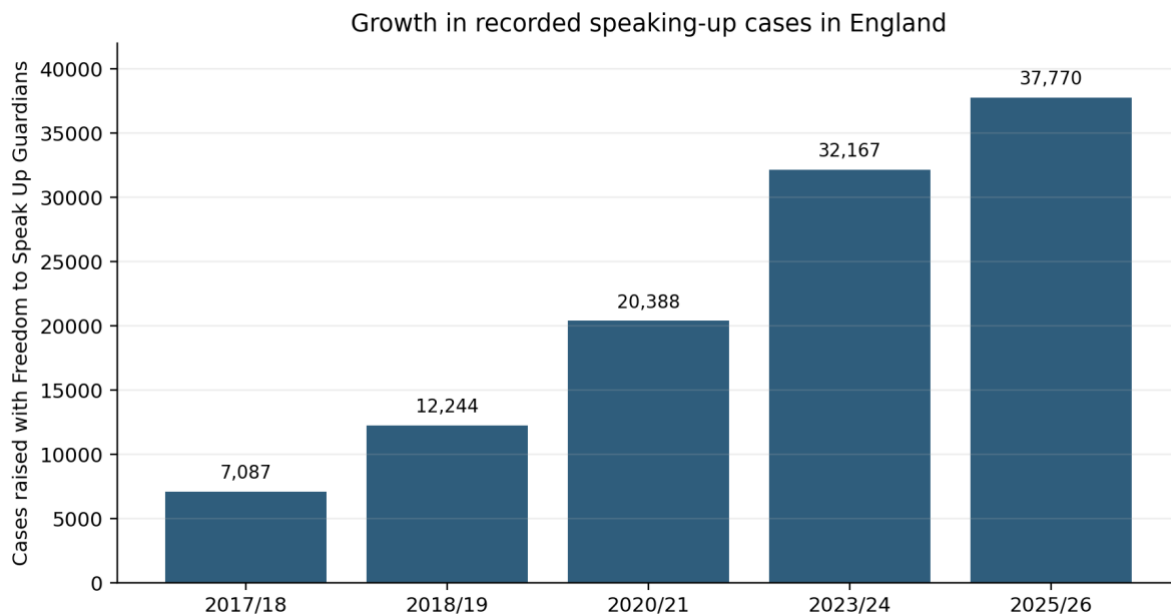


Figure 1. Selected national Freedom to Speak Up case volumes, illustrating increased use of reporting routes rather than, by itself, improved organisational responsiveness. Source: author's chart using National Guardian's Office annual speaking-up data (National Guardian's Office, 2026).

This report is structured as a Fishbone Diagram to illustrate the interactions among causal domains, and the 5 Whys to explore the focal signal-to-action failure in this domain. Donabedian then collates these causes into segments of structure, process and outcome weaknesses and SWOT tests the feasibility of the ensuing proposal for the NHS context. The tools are thus complementary – no one tool can establish causation in a multi-faceted and contested case. The analysis suggests that an integrated signal-to-action pathway, based on PDSA, and selective Lean and statistical process-control approaches should be taken. The main thesis is the need for independent authority, clear triggers, a safe culture to speak up, caring family involvement and impactful board ending (Donabedian, 1988; Ishikawa, 1986; Liberati et al., 2021; NHS England, 2026a).

2. Critical Analysis of the Quality Concern

2.1 Theoretical framing: quality, systems and high reliability

Donabedian's model is still applicable because it distinguishes between the conditions of care (structure), the work performed (process) and the results created (outcome). In this instance, structure refers to assurance provided by the Board, staffing, digital information systems, independent review capacity, and arrangements for Freedom to Speak Up; process relates to reviewing mortality, data triangulation and escalation, family communication and action tracking; outcomes include avoidable harm, trauma, moral injury, loss of trust and delayed learning. The model highlights the need to have a positive policy inventory to demonstrate quality, but if the structures are not activated through routine processes, quality will not be seen. It has one constraint: the categories can suggest a linear path and can

downplay the roles of power, adaptation and feedback; it is a good structuring heuristic and shouldn't be a full causal explanation (Donabedian, 1988; Carayon et al., 2006).

These models add explanatory richness by considering harm as the interaction between people, tasks, technologies, environment and organisation: Reason's systems approach and the SEIPS human-factors approach. They shift attention from recrimination to the design of defences through work in practice. Another key aspect of high reliability scholarship is its focus on failure, its sensitivity to operations, its reluctance to simplify or to defer to expertise. But, Rotteau et al. (2022) argue that the idea of these principles is not understood equally and can be implemented differently among professional groups (Reason, 2000; Chassin and Loeb, 2013; Holden et al., 2021; Rotteau et al., 2022). It is also possible to have a 'soft' systems language, which minimises accountability to a generic reference to culture. In order to have a defensible analysis, learning-oriented inquiry needs to be done in addition to named ownership, clear decisions and consequences for deliberate suppression or neglect.

Psychological safety is a necessary but not sufficient condition. Edmondson describes it as an acceptance of risk in interpersonal interactions with each other that is safe; healthcare research includes association with voice, learning, and teamwork. Speaking up, however, depends on personal, relationship and organisational factors and can be a distraction and another layer of fatigue to the decision makers if there are too many concerns raised. However, the unwillingness to speak here was not the problem; concerns were present, but there was no effective path from voice to independent review and protection action. An organisation can thus seem open, while issues are postponed or closed without external scrutiny. There is a need to 'follow up' and 'listen up' as well as 'speaking up' (Edmondson, 1999; O'Donovan and McAuliffe, 2020; Grailey et al., 2021; Delpino, Lees-Deutsch and Solanki, 2023; Kane et al., 2023; van Dongen et al., 2024).

2.2 Root-cause analysis: Fishbone Diagram and 5 Whys

The Fishbone Diagram shown in Figure 2 captures six domains that are interacting. Weaknesses in governance impacted the independence and authority of assurance; no precautionary trigger for escalation of clinical issues; opportunity for data being reviewed in separate streams; increase in hierarchy and defensiveness when to challenge, staffing and acuity creating noise in which abnormal patterns could be normalised, external scrutiny depending on local implementation and timing. The diagram does not mean that all factors are of the same "evidential weight". It is useful because it does not allow early closure around any explanation, and it helps bring to light the points of interface where warning signs may be missed (Ishikawa, 1986; Nuffield Trust, 2024; NHS England, 2026a).

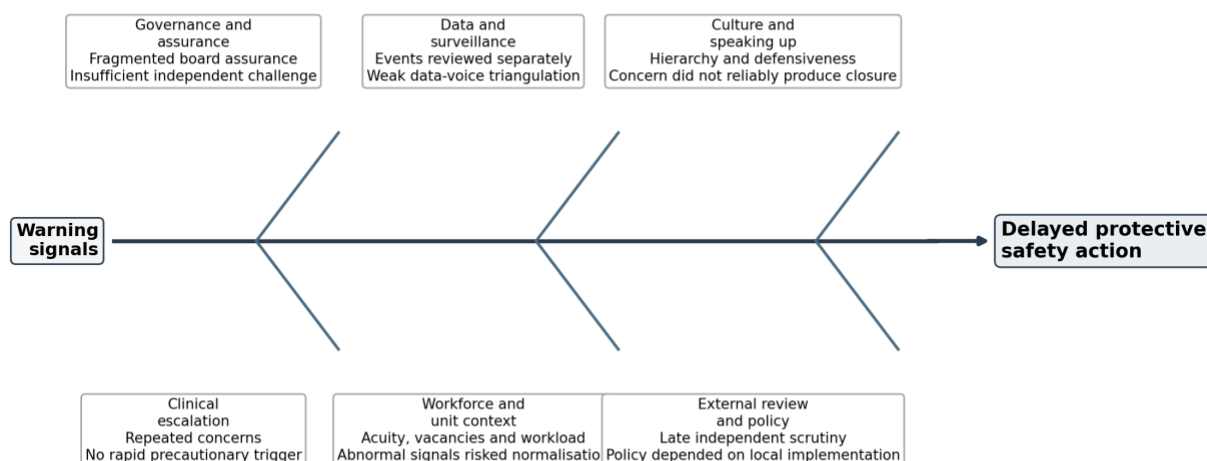


Figure 2. Fishbone analysis of why warning signals may fail to become timely safety action. Source: author's synthesis, adapted from Ishikawa (1986), Reason (2000), Nuffield Trust (2024) and NHS England (2026a).

5 Whys question	Analytical answer
1. Why was protective action delayed?	Because deaths, collapses and professional concerns did not consistently trigger a rapid, independent response.
2. Why did those signals not trigger one response?	Because intelligence travelled through separate mortality, incident, workforce, grievance and management routes, without an integrated threshold.
3. Why was integration and escalation unreliable?	Because decision-makers could demand high certainty before taking precautionary action, while the consequences of escalation were organisationally and professionally uncomfortable.
4. Why could uncertainty justify delay?	Because hierarchy, ambiguous accountability and insufficient independent challenge concentrated discretion within the same system under scrutiny.
5. Why was the assurance design vulnerable?	Because compliance structures and episodic reviews were stronger than the end-to-end capability to detect, combine, challenge and close weak safety signals.

Table 1. Five Whys analysis. Source: author's application; the method is used as a questioning aid rather than proof of a single root cause (Card, 2017).

The 5th why is the improvement hypothesis – the missing capability was a reliable signal to action architecture. But the 5 Whys approach may gloss over complicated systems and become stuck with an easy-to-organise answer based on the investigator's own hindsight. Card says it tends to make an artificial linear chain and weak recommendations. Based on this, it is surrounded by the Fishbone Diagram, Donabedian analysis and published organisational evidence (Card, 2017; Nuffield Trust, 2024). That's not a statement that one cause of crime explains all crime; it's a statement that a set of disjointed intelligence, discretionary escalation and poor independence reduced the ability of the service to deal safely with uncertainty.

2.3 Donabedian analysis of structure, process and outcome

Domain	Application to the case	Critical judgement
Structure	Board and non-executive safety oversight; staffing and skill mix; data infrastructure; Freedom to Speak Up access; access to independent neonatal expertise.	Formal structures may exist yet remain weak if independence, analytical capability or protected capacity are absent.
Process	Triangulation of mortality, collapses, staffing, complaints and staff voice; defined escalation; external review; feedback to staff and families; action closure.	The critical failure is at interfaces: information can be recorded accurately but still not be combined, challenged or acted upon.
Outcome	Patient harm; family trauma; staff moral injury; loss of trust; prolonged uncertainty; delayed organisational learning.	Outcomes signal failure but do not identify its cause; rare-event data can be unstable and must be interpreted with qualitative intelligence.

Table 2. Donabedian analysis of the identified quality concern. Source: author's application of Donabedian (1988), supported by Nuffield Trust (2024) and NHS England (2026a).

The most important point that comes from Table 2 is that the bad link is between structure and process. Having more committees, policies, or dashboards won't necessarily drive better outcomes if the escalation is still discretionary, or the same individuals are interpreting the concerns related to their own services. On the other hand, disproportionate automatic escalation can lead to false accusations, staff stress and review overload. This design requirement is therefore a step-by-step yet not compulsory process: fast triage on defined signals, precautionary controls and independent review on combination signals, and documented rationale, feedback and time-bound closure of each decision. This maintains fairness, but minimises the chances that uncertainty will be used as an excuse not to move forward (NHS England, 2025; NHS England, 2026a).

2.4 Strategic analysis using SWOT

SWOT domain	Strategic implications
Strengths	National PSIRF standards; established neonatal mortality datasets and review processes; multidisciplinary expertise; existing speaking-up guardians and board governance.
Weaknesses	Fragmented data streams; ambiguous escalation thresholds; variable staffing and analytical maturity; hierarchy; risk that internal assurance lacks sufficient independence.
Opportunities	Integrated safety-intelligence huddles; real-time dashboards and statistical process control; external reviewer panels; patient safety partners; simulation of escalation pathways.
Threats	Workforce shortages; regulatory and reporting overload; defensive blame; false-positive escalation; digital inequity; project fatigue and loss of protected improvement time.

Table 3. SWOT analysis for a neonatal signal-to-action pathway. Source: author's synthesis informed by Nuffield Trust (2024), NHS England (2026a) and National Guardian's Office (2026).

SWOT suggests that implementation should build on the existing national infrastructure, not build a parallel safety bureaucracy. The standards for PSIRF are already set to link between incident response and complaints, between PSIRF and quality improvement and wider governance; and the 2026 standards will include the ability to assess qualitative and

quantitative data from a variety of sources. The opportunity is to call these assets together by a weekly intelligence function and independent escalation rule. The primary strategic threats include overload and performative compliance: Nuffield Trust states that too many guidelines and external reviews can lead to a loss of local learning and action (Nuffield Trust, 2024; NHS England, 2026a). The risks are subjective and static and should be translated into measurable assumptions and checked in the PDSA cycles.

The issue in both frameworks was not that there was no data, meetings or professional concern, but that they were not linked via a reliable decision pathway. Fishbone and 5 Whys are tools for finding fragmented intelligence and discretionary escalation; Donabedian is a tool which finds the weakness between formal structures and enacted processes; and SWOT tests feasibility and uncovers risks of overload and performative compliance (Liberati et al., 2021; Rotteau et al., 2022; Nuffield Trust, 2024). The service-improvement goal is to be able to get a reliable movement from signal to triage; independent review; learning and verified closure.

3. Recommendations and Implementation Strategy

3.1 Improvement aim and intervention design

The local aim is to triage at least 95% of neonatal safety signals within 24 hours and to start independent review of pre-defined combinations of high-risk signals within 72 hours within 12 months. These are proposed operational benchmarks, not national standards, and they're designed to give sufficient time for taking a precautionary decision, after which, if required, limited time can be spent seeking the professional opinion of others, while additionally providing a high degree of reliability with a margin for error of 5% for special cases. Elements must be evidence-based, which include proportional response, systems learning, compassionate engagement and oversight, the precise thresholds, and a two-key pathway—this is the proposed innovation in this report and should be tested through PDSA. Named executive ownership, non-executive review, action date, and communication with staff and families should be included with each high severity concern (NHS England, 2025; NHS England, 2026a; Institute for Healthcare Improvement, 2026).

Recommendation 1 is a weekly huddle for neonatal safety, with the power to act. Unexpected deaths and collapses, incident reports, acuity and staffing, medication and access anomalies, complaints, themes of Freedom to Speak Up, concerns from families, and incomplete actions should all be included on a standard visual dashboard. The huddle should involve the neonatal clinical lead, senior nurse, patient-safety specialist, data analyst, representative from the pharmacy and a representative from the family/patient-safety (Freedom to Speak Up Guardian or equivalent staff voice lead). Its chair mustn't be

dependent on the line management of any service examined (Carayon et al., 2006; Holden et al., 2021; Nuffield Trust, 2024).

A protected 'two-key' escalation rule will be recommended in Recommendation 2. Each major event must be addressed clinically immediately, and safety triaged within 24 hours. Two or more of the following signals – for instance, unexpected cluster, repeated professional concern, unusual temporal pattern, family concern or medication/access anomaly – should trigger precautionary controls and independent neonatal review. Activation is not necessarily an act of guilt, but is a risk control decision made in proportion, under uncertainty, with the benefit of confidentiality, anti-retaliation protection and documented risk rationales. The rule is a compromise between false reassurance and over reaction/over escalation (Reason, 2000; NHS England, 2026a).

Recommendation 3 is Compassionate Engagement through Independent Review. A medical director and non-executive safety lead should be appointed by the medical director and safety lead to be a systems-qualified investigator and medical director from a panel of agreed-upon investigators and medical directors that are located in the same region. A named liaison should be given to families, with early explanation of what is known and unknown, opportunities for families to ask questions and to receive regular updates; staff raising concerns should be acknowledged, and feedback and protection from detriment. The reviewers should access the raw data and report the findings to the board and not to the service they are reviewing. When capacity is limited, however, it becomes hard to navigate the 72-hour time frame because of the need to escalate frequently, which can lead to anxiety, false positive calls, duplicated work, and reviewer backlog. The panel thus needs to have capacity to fund a proportionate investigation and conflict checks instead of automatic full investigations for each signal (Delpino, Lees-Deutsch and Solanki, 2023; Sutton et al., 2025; Subbe, Phillips and Jones, 2025; NHS England, 2026a).

Recommendation 4 is about visible board closure. For each high severity case, there should be one action log, and it should be kept until evidence of implementation and effect, rather than only the fact that a policy was changed or training was given, is provided. A non-executive director needs to review if actions are responding to the system conditions, if the staff and families' point of view have altered the analysis, and if any similar signals are being repeated elsewhere. The publication of aggregate measures should be done via the quality committee with confidentiality. This offers compassionate accountability – staff are supported to learn, leaders are held accountable for clear decisions and failed actions (Reason, 2000; NHS England, 2026a).

3.2 PDSA implementation plan

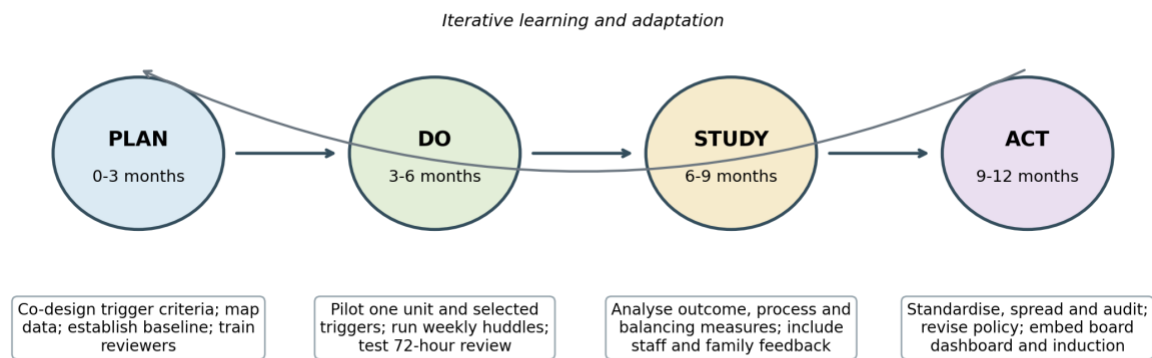


Figure 3. Twelve-month PDSA implementation roadmap for the signal-to-action pathway. Source: author's design adapted from the Model for Improvement (Institute for Healthcare Improvement, 2026) and NHS England (2026a).

In Plan (0–3 months), the trust should co-design definitions of the triggers with neonatal staff, families and external experts; map all information flows; review the information-governance requirements; measure baseline signal-to-triage and signal-to-review times; and practice the pathway with anonymised historical scenarios. A limited number of triggers and the weekly huddle should be tested in one neonatal unit only during Do (months 3-6), to allow for thresholds and roles and communications to be changed without system-wide disruption, and to begin with small cycles. Qualitative accounts and quantitative measures should be reviewed together during Study (months 6-9), including cases that did not result in escalation. Pathway should be standardised, spread, embedded in induction and policy, and independently audited in Act (months 9-12) before full adoption (Institute for Healthcare Improvement, 2026; Taylor et al., 2014).

Measure type	Proposed measures
Outcome	Median hours from qualifying signal to independent review; high-severity actions open beyond 30 days; recurrence of similar signal patterns; family-reported communication quality.
Process	Percentage triaged within 24 hours; percentage of high-risk combinations reviewed within 72 hours; huddles held as scheduled; actions with named owner and due date; feedback provided.
Balancing	Number of false-positive escalations; staff-reported detriment or psychological harm; review workload; sickness/turnover; delayed clinical work; family distress caused by poor communication.

Table 4. Measurement framework for implementation. Source: author's application of the Model for Improvement and PSIRF oversight standards (Institute for Healthcare Improvement, 2026; NHS England, 2026a).

Lean methods should be applied specifically, such as through process mapping, standard work and visual action management, to determine how to eliminate waiting, duplication and unclear hand-offs on the escalation pathway. Rare catastrophic events can't be reduced to a simple control chart, but statistical process-control techniques from Six Sigma can help

differentiate uncommon from uncommonly rare patterns in the data of process measures. The evidence of the use of Lean in health care is variable and often weak due to poor study designs, so Lean and Six Sigma should not be used as substitutes for clinical judgement, family testimony, ethical accountability, or systems investigation. They are not a means of automating decision-making around safety, which is a point of contention (Moraros, Lemstra and Nwankwo, 2016; NHS England, 2026a).

Capacity and governance are critical aspects of sustainability. Protected analyst/reviewer time, Annual independent audit, Quarterly trigger review, Escalation simulation, induction, and board dashboard should all be funded. The 72-hour mechanism can lead to backlogs, false-positive escalations and opportunity costs due to limited reviewers; thus, pilot data should assess workload, availability, cases de-escalated after triage, and delays to other investigations. Reports should be eliminated, not the bureaucracy. This process will be successful only when frontline staff can describe the pathway, those who raise their concerns are given closure, families are communicated with on time, and board members can demonstrate how the challenge led to change in decisions. Problems should not be seen as a failure of a completed 'process' and should therefore be taken back to PDSA testing (Institute for Healthcare Improvement, 2026; Sutton et al., 2025; Nuffield Trust, 2024).

4. Conclusion

This report has examined the case of the Countess of Chester neonatal unit as a significant quality issue relating to the inability to convert ambiguous and inconclusive warning signs into timely action to protect. The Fishbone analysis revealed weaknesses interacting in governance, clinical escalation, data, culture and workforce context, and external review; the 5 Whys found weaknesses in the signal-to-action architecture; weaknesses were found between formal structures and enacted processes in Donabedian analysis, and weaknesses in national policy and existing data systems were identified in the SWOT analysis, including risks of overload, defensiveness and superficial compliance (Donabedian, 1988; Reason, 2000; Nuffield Trust, 2024). The frameworks don't interfere with each other's areas of responsibility or individual accountability, and they focus on a systemically assessed judgement.

The suggested solution is not yet another reporting channel. It's an integrated safety-intelligence huddle, a fair and non-discretionary two-key escalation rule, independent review in a proposed 72-hour benchmark, compassionate engagement, anti-retaliation protection and visible board closure. These mechanisms should be piloted at small scale using PDSA to measure workload, false positive escalation and other unintended consequences and thresholds adjusted (NHS England, 2026a; Institute for Healthcare Improvement, 2026). Lean and statistical process-control can complement flow, but are secondary to systems

thinking and professional judgement. The proposed innovation is the redundancy and independent challenge such that no single manager, dataset or committee can eradicate a serious signal.

The analysis is preliminary and subject to change post final Thirlwall Inquiry Report. However, the most critical learning for improving the service is that neonatal safety is not about finding more ways to report but is more about translating effective reporting into effective protective action, reliable, independent and auditable. Organisations must not delay taking proportionate measures when they are not sure, and not consider that because they have a policy it has been put into action. To create credible improvements, data, staff voice, family concerns and independent expertise and board accountability must all work together on one measurable pathway from signal to verified closure (Thirlwall Inquiry, 2026b; NHS England, 2026a).

Reference List

- Card, A.J. (2017) 'The problem with 5 whys', *BMJ Quality & Safety*, 26(8), pp. 671-677.
Available at: <https://doi.org/10.1136/bmjqs-2016-005849> (Accessed: 6 August 2026).
- Carayon, P., Schoofs Hundt, A., Karsh, B-T., Gurses, A.P., Alvarado, C.J., Smith, M. and Flatley Brennan, P. (2006) 'Work system design for patient safety: the SEIPS model', *Quality and Safety in Health Care*, 15(Suppl 1), pp. i50-i58. Available at:
https://qualitysafety.bmj.com/content/15/suppl_1/i50 (Accessed: 6 August 2026).
- Chassin, M.R. and Loeb, J.M. (2013) 'High-reliability health care: getting there from here', *Milbank Quarterly*, 91(3), pp. 459-490. Available at: <https://doi.org/10.1111/1468-0009.12023> (Accessed: 6 August 2026).
- Delpino, R., Lees-Deutsch, L. and Solanki, B. (2023) 'Speaking Up' for patient safety and staff well-being: a qualitative study, *BMJ Open Quality*, 12(2), e002047. Available at:
<https://doi.org/10.1136/bmjog-2022-002047> (Accessed: 6 August 2026).
- Donabedian, A. (1988) 'The quality of care: how can it be assessed?', *JAMA*, 260(12), pp. 1743-1748. Available at: <https://doi.org/10.1001/jama.1988.03410120089033> (Accessed: 6 August 2026).
- Edmondson, A. (1999) 'Psychological safety and learning behaviour in work teams', *Administrative Science Quarterly*, 44(2), pp. 350-383. Available at:
<https://doi.org/10.2307/2666999> (Accessed: 6 August 2026).
- Grailey, K., Leon-Villapalos, C., Murray, E. and Brett, S. (2021) 'Exploring the factors that promote or diminish a psychologically safe environment: a qualitative interview study with critical care staff', *BMJ Open*, 11(8), e046699. Available at: <https://doi.org/10.1136/bmjopen-2020-046699> (Accessed: 6 August 2026).
- Holden, R.J., Carayon, P., Gurses, A.P., Hoonakker, P., Schoofs Hundt, A., Ozok, A.A. and Rivera-Rodriguez, A.J. (2021) 'SEIPS 101 and seven simple SEIPS tools', *BMJ Quality & Safety*, 30(11), pp. 901-910. Available at: <https://qualitysafety.bmj.com/content/30/11/901> (Accessed: 6 August 2026).
- Iacobucci, G. (2024) 'Lucy Letby is found guilty of attempting to murder premature baby after retrial', *BMJ*, 386, q1487. Available at: <https://www.bmj.com/content/386/bmj.q1487> (Accessed: 6 August 2026).
- Institute for Healthcare Improvement (2026) Model for Improvement. Available at:
<https://www.ihl.org/library/model-for-improvement> (Accessed: 6 August 2026).
- Ishikawa, K. (1986) *Guide to Quality Control*. 2nd edn. Tokyo: Asian Productivity Organisation. Catalogue record available at: <https://search.worldcat.org/title/Guide-to-quality-control/oclc/14169830> (Accessed: 6 August 2026).

- Kane, J., Munn, L., Kane, S.F. and Srulovici, E. (2023) 'Defining Speaking Up in the Healthcare System: a systematic review', *Journal of General Internal Medicine*, 38(15), pp. 3406-3413. Available at: <https://doi.org/10.1007/s11606-023-08322-0> (Accessed: 6 August 2026).
- Liberati, E.G., Tarrant, C., Willars, J., Draycott, T., Winter, C., Kuberska, K., Paton, A., Marjanovic, S., Leach, B., Lichten, C., Hocking, L., Ball, S. and Dixon-Woods, M. (2021) 'Seven features of safety in maternity units: a framework based on multisite ethnography and stakeholder consultation', *BMJ Quality & Safety*, 30(6), pp. 444-456. Available at: <https://doi.org/10.1136/bmjqs-2020-010988> (Accessed: 6 August 2026).
- Moraros, J., Lemstra, M. and Nwankwo, C. (2016) 'Lean interventions in healthcare: do they actually work? A systematic literature review', *International Journal for Quality in Health Care*, 28(2), pp. 150-165. Available at: <https://doi.org/10.1093/intqhc/mzv123> (Accessed: 6 August 2026).
- National Guardian's Office (2026) Speaking Up Data. Available at: <https://nationalguardian.org.uk/learning-resources/speaking-up-data/> (Accessed: 6 August 2026).
- NHS England (2025) Patient Safety Incident Response Framework. Available at: <https://www.england.nhs.uk/long-read/patient-safety-incident-response-framework/> (Accessed: 6 August 2026).
- NHS England (2026a) Patient Safety Incident Response Standards, version 1.3. Available at: <https://www.england.nhs.uk/long-read/patient-safety-incident-response-standards/> (Accessed: 6 August 2026).
- NHS England (2026b) Engaging and involving patients, families and staff following a patient safety incident. Available at: <https://www.england.nhs.uk/patient-safety/patient-safety-insight/incident-response-framework/engaging-and-involving-patients-families-and-staff-following-a-patient-safety-incident/> (Accessed: 6 August 2026).
- Nuffield Trust (2024) Report for the Thirlwall Inquiry: analysis of questionnaires from 120 NHS trusts. Available at: <https://www.nuffieldtrust.org.uk/research/report-for-the-thirlwall-inquiry-analysis-of-questionnaires-from-120-nhs-trusts> (Accessed: 6 August 2026).
- O'Donovan, R. and McAuliffe, E. (2020) 'A systematic review of factors that enable psychological safety in healthcare teams', *International Journal for Quality in Health Care*, 32(4), pp. 240-250. Available at: <https://doi.org/10.1093/intqhc/mzaa025> (Accessed: 6 August 2026).
- Reason, J. (2000) 'Human error: models and management', *BMJ*, 320(7237), pp. 768-770. Available at: <https://www.bmj.com/content/320/7237/768> (Accessed: 6 August 2026).

Rotteau, L., Goldman, J., Shojania, K.G., Vogus, T.J., Christianson, M., Baker, G.R., Rowland, P. and Coffey, M. (2022) 'Striving for high reliability in healthcare: a qualitative study of the implementation of a hospital safety programme', *BMJ Quality & Safety*, 31(12), pp. 867-877. Available at: <https://doi.org/10.1136/bmjqs-2021-013938> (Accessed: 6 August 2026).

Subbe, C.P., Phillips, A.V. and Jones, L. (2025) 'Patient-activated escalation in hospital: patients and their families are ready!', *BMJ Quality & Safety*, 34(1), pp. 4-7. Available at: <https://doi.org/10.1136/bmjqs-2024-017486> (Accessed: 6 August 2026).

Sutton, E., Ibrahim, M., Plath, W., Booth, L., Sujun, M., McCulloch, P. and Mackintosh, N. (2025) 'Understanding the enablers and barriers to implementing a patient-led escalation system: a qualitative study', *BMJ Quality & Safety*, 34(1), pp. 18-27. Available at: <https://doi.org/10.1136/bmjqs-2024-017132> (Accessed: 6 August 2026).

Taylor, M.J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D. and Reed, J.E. (2014) 'Systematic review of the application of the plan-do-study-act method to improve quality in healthcare', *BMJ Quality & Safety*, 23(4), pp. 290-298. Available at: <https://doi.org/10.1136/bmjqs-2013-001862> (Accessed: 6 August 2026).

Thirlwall Inquiry (2026a) Terms of Reference. Available at: <https://thirlwall-public-inquiry.uk/about/terms-of-reference/> (Accessed: 6 August 2026).

Thirlwall Inquiry (2026b) May Update on Final Report, 12 May. Available at: <https://thirlwall-public-inquiry.uk/2026/05/12/may-update-on-final-report/> (Accessed: 6 August 2026).

University of Wales Trinity Saint David (2026) Public Health and Social Care in Practice (MSc). Available at: <https://www.uwtsd.ac.uk/programme-courses/postgraduate-pgce/health-and-social-care/public-health-and-social-care-practice-0> (Accessed: 6 August 2026).

van Dongen, D., Guldenmund, F., Grossmann, I. and Groeneweg, J. (2024) 'Classification of influencing factors of speaking-up behaviour in hospitals: a systematic review', *BMC Health Services Research*, 24(1), 1657. Available at: <https://doi.org/10.1186/s12913-024-12138-x> (Accessed: 6 August 2026).

Vexald (2024) Escutcheon of the University of Wales Trinity Saint David [image], Wikimedia Commons, CC BY-SA 4.0. Available at: https://commons.wikimedia.org/wiki/File:Escutcheon_of_the_University_of_Wales_Trinity_Saint_David.svg (Accessed: 6 August 2026).