Health Innovation Wessex

Patient Safety Incident Investigation (PSII):

Wessex cross-system thematic review

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Emmanuel Defever
Rachel Bailey
Jo Murray
Catherine Henderson

Part of the Health Innovation Network

The review team

Acknowledgements

We would like to thank Wessex Patient Safety Collaborative for this unique opportunity to deliver a cross-system Patient Safety Incident Investigation (PSII) thematic review. We would also like to thank the patients and families involved, Patient Safety Leads and Information Governance teams from the participating organisations (see Appendix A for the list of organisations) who all contributed their time and energy to share the anonymised reports.

We would also like to thank Health Innovation Wessex colleagues for their support designing and completing this review: Philippa Darnton (Director of Insight), Rachel Bailey (Senior Programme Manager, Insight), and Charlotte Forder (Associate Director, Communications).

Health Innovation Wessex data retention statement

Our policy is to retain anonymised and pseudo-anonymised data for six years after the publication of the final report. We retain identifiable data in accordance with the Data Protection Act and General Data Protection Regulation and for a period of 12 months after the publication of the final report.

Following these retention periods, the client will be given notice of imminent destruction and the opportunity to discuss any issues arising with the project manager concerned. Once a date has been confirmed the data will be destroyed and a certificate of destruction provided.

Health Innovation Wessex

The review team

Dr Emmanuel Defever, Programme Coordinator

emmanuel.defever@hiwessex.net

Rachel Bailey, Senior Programme Manager

rachel.bailey@hiwessex.net

Jo Murray, Associate Director Innovation Adoption and Patient Safety Lead

jo.murray@hiwessex.net

Catherine Henderson, Patient Safety Programme Manager

catherine.henderson@hiwessex.net

“I want to get things right for the patient”

Resident doctor

Executive summary: Background

Patient Safety Incident Investigation (PSII):

Patient safety incidents are any **unintended or unexpected incidents** which could have, or did, lead to harm for one or more patients receiving healthcare.

PSIIs are undertaken to identify new opportunities for **learning and improvement**.

The key aim of a PSII is to **provide a clear explanation** of how an organisation's systems and processes contributed to a safety incident.

Systems Engineering Initiative for Patient Safety (SEIPS) is a framework designed to improve healthcare quality and patient safety by analysing the relationships between different elements within **complex socio-technical healthcare systems** (Appendix A).

Wessex cross-system thematic review of PSII reports:

This project was commissioned by the **Health Innovation Wessex Patient Safety Collaborative** to support the delivery of the **NHS Patient Safety Strategy** improvement priorities.

The **key aim** of the project was to **thematically review** recently closed PSII cases across Wessex systems (**Dorset and Hampshire & Isle of Wight**) to explore **common and recurring factors** contributing to patient safety incidents and **help inform improvement priorities within the systems**.

A **thematic review exercise** can identify patterns across these cases to **highlight links** or **common and recurring factors** which contributed to patient safety incidents (Appendix A).

Executive summary: Thematic review findings

PSII cases included in this review:

A **total of 27 anonymised reports** from **ten organisations** were included in the review (Appendix B for more details). These reports consisted of **four in-house thematic reviews** and **23 individual PSII** cases.

Types of incidents reported were wide-ranging, including:

- Delayed escalation or transfer of care
- Misdiagnosis
- Inpatient death
- Retained swab
- Lost to follow-up
- Wrong site surgery
- Medication mistake
- Pressure ulcer
- Deviation from standard practice
- Tissue sample storage

Three overarching themes identified from the review:

'Communication that connects' - Ineffective communication between staff, patients, and across teams and organisations was a recurring factor in the review. Supporting effective communication may reduce misinterpretation, encourage discussions, support timely decisions and build safer, connected care.

'Robust systems, safe care' - Supporting staff with reliable equipment, clear procedures and interoperable systems may reduce the risk of errors caused by multi-tasking, interruptions and distractions.

'From roles to goals' - Unclear roles, inconsistent leadership and multifaceted pressures were commonly found to impact team dynamics and workforce wellbeing. Aligning stable leadership with a focus on workforce morale may empower staff and enhance the quality of care.

Wessex cross-system PSII thematic review

Introduction

This thematic review was commissioned by the **Health Innovation Wessex Patient Safety Collaborative**.

The review aimed to explore **common and recurring factors** contributing to patient safety incidents across the Wessex systems (**Dorset and Hampshire & Isle of Wight**). The thematic review followed a structured, deductive approach using the SEIPS framework to identify patterns across a wide range of incident types (**Figure 1**, see also Appendix A).

A total of **27 anonymised PSII reports** were reviewed, comprising **23 individual PSII** and **four in-house thematic reviews** from **ten organisations** (see Appendix B).

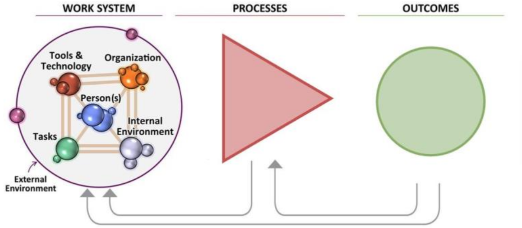


Figure 1. The SEIPS framework (NHSE 2022b)

Thematic review findings

The next slide displays the visual **overview of the common factors** identified in the review (**Figure 2**, slide 7). The following slide introduces **three overarching themes** identified from the review (slide 8). These themes reflect the **dynamic interactions** between people, work done, systems, and organisational culture described in the subsequent section (slides 9 – 13).

Note: Not all contributing factors were identified in every PSII report, nor were the contributing factors perceived to carry equal weight in each case. However, each PSII report contributed to building a broader picture of the complex and interrelated factors that have contributed to patient safety incidents.

Overview of common factors identified from the review

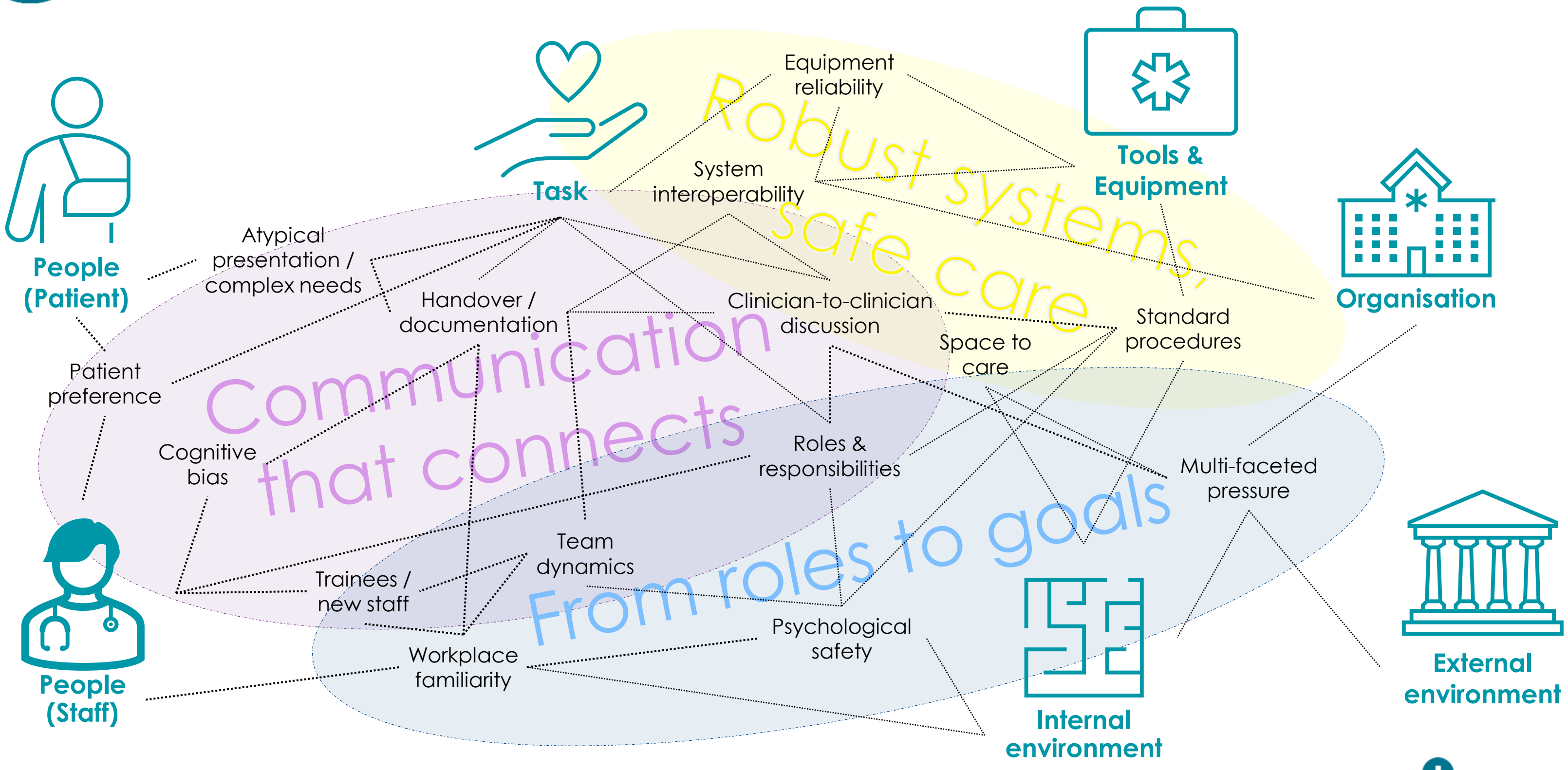


Figure 2. Overview of the common contributing factors highlighted in the thematic review. Three transparent clouds (purple - communication that connects; yellow – robust systems, safe care; blue – from roles to goals) indicate the interconnected overarching themes identified from this thematic review.

Overarching themes from the review

Three interconnected themes were developed to underpin the common contributing factors. These themes reflect the dynamic interaction between **people, work done, systems and organisational culture** within the healthcare system.

‘Communication that connects’

Recurring patterns of **communication gaps** may have contributed to misinterpretation, delayed escalation, and fragmented care. **Improving communication practices** across disciplines and organisations, and embedding structured context-specific interactions may help **reduce cognitive bias***, support timely decision-making, and **build connected** and **safer delivery of patient care**.

‘Robust systems, safe care’

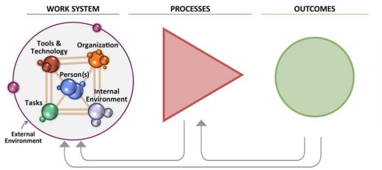
System-level factors such as unreliable equipment, inconsistent standard processes, and poor interoperability between digital systems led staff to rely on workarounds, experience delays, and have to handle an increased cognitive load. **Addressing these challenges at a systems level** may reduce unnecessary multi-tasking, interruptions, distractions, support decision-making and **enable safer, more efficient care delivery**.

‘From roles to goals’

The review highlighted that unclear roles, variable leadership presence, and multifaceted pressures contributed to disjointed teams, reduced psychological safety and workforce strain. **Aligning leadership structures with team needs**, clarifying responsibilities, and fostering a culture of support may **enhance staff wellbeing** and **improve patient outcomes**.

***Cognitive bias** – A mental heuristics, or cognitive “short-cut” to problem solving, which can affect one’s ability to gather evidence, interpret evidence, take action and evaluate their decisions.

SEIPS: Person (patient and staff)



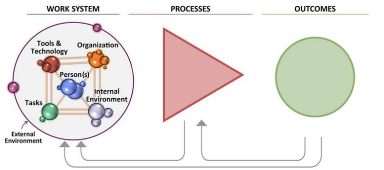
Patient factors

- Patients with **atypical symptoms** added confounding factors in the initial diagnostic processes, adding complexity to the ongoing delivery of safe and timely care.
- Similarly, the importance of addressing **patients' complex needs** (physical, psychological and social) presented the challenge of multi-agency coordination to allocate resource and provide appropriate care on time.
- Considering **patients' preference and views** (e.g. reluctance to be conveyed to the emergency department, concerns of symptoms not being adequately addressed, declining the offer of being repositioned or other care to prevent pressure ulcers, etc.) may have positively or negatively influenced the shared clinical decision-making process and the subsequent delivery of care.

Staff factors

- Presence of **cognitive biases** could have negatively influenced the clinical assessment, contributing to misinterpretation or misdiagnosis gaining momentum or shifts in focus during the clinical decision-making process.
- **Workplace familiarity** or **clinical specialism** (e.g. staff being allocated 'on arrival' to cover another ward, staff rotating to a new unfamiliar ward, insufficient induction, knowledge gap on specific clinical expertise, etc.) have been highlighted as contributing factor on delivery of clinical tasks and decision-making even if a staff member had years of clinical experience or was highly-skilled in their specialty.
- Missed opportunity or insufficient **clinician-to-clinician discussion** (e.g. 'fresh eye' or 'second opinion' review) at handover, remote assessment or cross-disciplinary meeting may have potentially contributed to misinterpretation of clinical evidence and misdiagnosis influencing the onward care to continue without being challenged.

SEIPS: Tasks and Tools and Technology



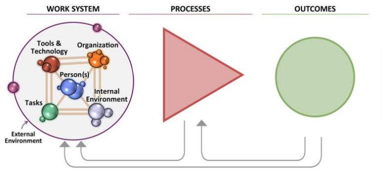
Tasks

- Inconsistent approaches to verbal and written methods of **staff handover** contributed to clinical information being diluted, missed or overlooked, thus leading to the risk of delayed escalation, misdiagnosis or misinterpretation of clinical presentation.
- The quality, timing and relevance of **clinical documentation** (e.g. old clinical photograph of patient presentation with no updated image, poor details of assessments, delayed or retrospective note entries, unclear or illegible documentation) may have contributed to miscommunication, missed opportunity and partially informed decision-making process.
- Lack of clarity and blurred lines of **staff roles and responsibility** (clinical responsibility of a patient with prolonged stay in emergency department, clinical scope of primary care staff in relation to urgent care, filling gaps in staffing without appropriate leadership oversight) contributed to delayed transfer of care and timely decision-making.

Tools and Technology

- Insufficient, lack of or gap in details on processes (e.g. **standard operating procedures**, **policies** or **protocols**) were commonly identified from the incidents. Similarly, some procedure updates were **not fully embedded** within organisations. There were also reports of **conflicting information** identified between local and national policies.
- Reliability of, and access to **equipment** (internet connectivity, poor battery life, software/app freezing, non-functioning call bell, need to gather components from different location to form a complete set, etc.) may have contributed to delay, interruption and distraction in the delivery of care.
- **System interoperability** within and across organisations (e.g. relating to prescription and imaging, patient referrals, care specific patient records, device audit database) caused restricted access, delays in information transfer, with staff resorting to manual or dual paper-digital processes as a workaround. These factors contributed to increased risks of processing error.

SEIPS: Internal environment



Physical environment

- Multiple **interruptions and distractions** were common in day-to-day work, and particularly prevalent in already busy environments (e.g. high occupancy ward, acuity and dependency of ward area, manual input of information at a reception desk, increased noise). They may have contributed to the cognitive load placed on staff, and the divided attention increasing the likelihood of task errors occurring.

- The presence of **trainees and new staff members** (providing supervision, support, double-tasking and effective learning) contributed to an additional layer of pressure and fatigue whilst staff performed their own duties.

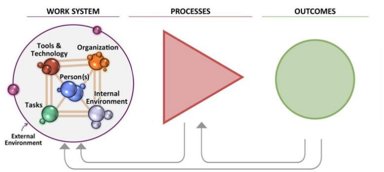
- The **physical space** to deliver patient care (e.g. paramedic attending a patient outside in cold and wet weather conditions, faulty ward facilities, temporary placement to an escalation area away from a dedicated ward space) may have contributed to infrequent, restricted or delayed care.

Organisational culture

- Incidents have reported a minority of staff demonstrating difficult or unacceptable behaviours, with some describing a history of blame culture which adversely affected **staff psychological safety** and wider **staff morale.** This impacted on staff confidence to speak up and challenge clinical decisions or practice.

- A perceived sense of **disjointed team dynamics** and **variable senior support** (e.g. team rotation on ward, changes to core teams, merger of teams across different sites, frequent staff changes at leadership level, managing a team with differing levels of experience and preference for ways of working) contributed to difficulty in building an effective, cohesive team and providing clear leadership support.

SEIPS: Organisation and external environment



Multi-faceted pressures

- Multi-faceted organisational and external environment pressures were consistently highlighted in the reports.
- At team or departmental level, **day-to-day workload pressures** (e.g. high volume of high acuity cases, lack of available beds, multiple time-sensitive priorities, staff changes or shortages) have been highlighted as impacting on staff wellbeing, cognitive overload, and the oversight of patient care.
- At organisational level, the **cumulative effect of sustained pressures** (e.g. high-bed occupancy, emergency attendance, delayed discharges, industrial action, planned change of management) has been highlighted as a contributing factor to staff wellbeing and morale. References to organisations escalating the Operational Pressures Escalation Level / Resource Escalation Action Plan at the time of reported incidents highlighted the severity of pressure experienced by the care systems.
- External and broader **pressure to improve efficiency** driven by NHS England, the ongoing, consequential effects of Covid-19 on surgical operations and waiting lists, and ongoing scrutiny on services as well as widely recognised national shortages of certain staff groups have been identified as external factors contributing to the patient safety incidents.

Conclusion and recommendations

Using the SEIPS framework as a model, this thematic review highlighted the **complex and interrelated factors** that contributed to patient safety incidents across the healthcare systems in Wessex. While each incident is unique, **recurring patterns identified** overarching themes on shared challenges in **communication, system-level support,** and **workforce support**.

The three overarching themes (***'Communication that connects'***, ***'Robust systems, safe care'*** and ***'From roles to goals'***) offered insights into these interconnected challenges and may help identify opportunities for improvement. These themes reflect the **dynamic interactions** between people, processes and environments within healthcare systems.

By recognising these patterns, shifting from isolated organisational-level learning to **system-wide insight** was demonstrated in this review. The findings from this review are intended to **support ongoing improvement work**, inform or test these overarching themes on **future patient safety incidents**, and strengthen the process of **learning and improvement** for safer, more effective care across the region.

The common factors identified in this review were not uniformly present in every PSII case. However, their recurrence across the cases highlighted the unique opportunity for **cross-system learning and improvement**.

To support safer care and stronger, resilient systems the recommendations from the review include:

- **Building on existing improvement initiatives**, including those supported by the Patient Safety Collaboratives, by aligning activities with the three overarching themes.
- **Identifying gaps** in current processes and using the themes as a region-specific framework to guide future incident reviews and improvement planning.
- **Routinely adopting a thematic review of PSIIs** as a valuable exercise for cross-system learning and improvement.
- **Exploring opportunities to replicate the review** in other geographical regions or in specific specialties.

Appendix A: SEIPS framework and thematic review process

SEIPS framework

Patient safety incidents result from multiple interactions across various components, both human and technological. The SEIPS framework helps to problem-solve a patient safety incident and guide the learning and improvement (Figure 2).

The SEIPS framework forms a vital part of NHS England's patient safety learning response toolkit and can be accessed elsewhere (NHSE 2022a; 2022b).

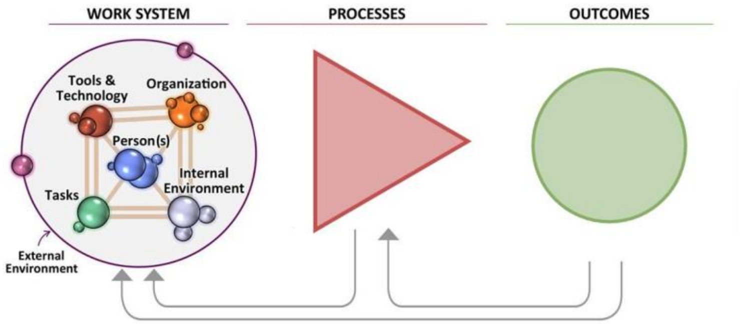


Figure A. The SEIPS framework (NHSE 2022b)

Thematic review process

The thematic review process followed the guidance laid out in the Patient Safety Learning Response Toolkit (NHSE, 2022c). In brief, the thematic analysis involved:

- The analysis of free text from the PSII reports and in-house thematic reviews supplied by each organisation.
- The theming process using a deductive approach with SEIPS as the framework.
- Qualitative analysis software (Nvivo 15) to systematically analyse the reports.

All shared documents had personally identifiable information redacted from the content (anonymisation) in accordance with the Data Sharing Agreement agreed between the evaluator (Health Innovation Wessex) and each organisation.

Each participating organisation was asked to share up to three most recent completed PSII reports or thematic reviews.

NHSE (2022a). Patient safety learning response toolkit. Accessed: May 2025. Available on: https://www.england.nhs.uk/publication/patient-safety-learning-response-toolkit
NHSE (2022b). SEIPS quick reference guide and work system explorer. Version 1, August 2022. Accessed: May 2025. Available on: B1465-SEIPS-quick-reference-and-work-system-explorer-v1-FINAL.pdf
NHSE (2022c). Thinking thematically: top tips for completing a thematic review. Version 1, August 2022. Available on: B1465-Top-tips-for-thematic-reviews-v1-FINAL.pdf

Appendix B: Details of PSII reports included in the review

Ten organisations across Dorset and Hampshire & Isle of Wight systems shared their PSII reports:

- Dorset County Hospital NHS Foundation Trust
- Hampshire and Isle of Wight Healthcare NHS Foundation Trust
- Hampshire Hospitals NHS Foundation Trust
- Isle of Wight NHS Trust
- Portsmouth Hospitals University NHS Trust
- Practice Plus Group (Southampton and Portsmouth)
- South Central Ambulance Service NHS Foundation Trust
- South Western Ambulance Service NHS Foundation Trust
- University Hospital Southampton NHS Foundation Trust
- University Hospitals Dorset NHS Foundation Trust

A total of **27 reports** (23 individual PSII reports and four in-house thematic reviews) were included in this review.

Date of reported incidents (including the cases highlighted in the in-house thematic reviews) ranged from **March 2020 to November 2024**.

Date of report approval ranged from **September 2024 to May 2025**.

The reports included a wide range of incidents. The types of incidents were broadly grouped into **ten categories**:

- Delayed transfer of care (n=7)
- Misdiagnosis (n=5)
- Inpatient death (n=3)
- Retained swab (n=3)
- Lost to follow-up (n=3)
- Wrong site surgery (n=2)
- Medication mistake (n=1)
- Pressure ulcer (n=1)
- Deviation from standard practice (n=1)
- Tissue sample storage (n=1).

Health Innovation Wessex
Innovation Centre
Southampton Science Park
2 Venture Road
Chilworth
Southampton
S016 7NP

E: enquiries@hiwessex.net
T: 023 8202 0840

healthinnovationwessex.org.uk

Part of the Health Innovation Network