

Exploring the application of systems-based tools in mental health safety investigations

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SUMMARY

This study examines the application of the Patient Safety Incident Response Framework (PSIRF) Learning Response Toolkit within mental health settings. Through a survey, discussion forums, and cognitive walkthroughs, the research identifies usability gaps and the need for tailored guidance to address the unique complexities of mental health care, particularly in cases involving suicide or homicide. Findings emphasise that effective learning from safety events requires not just tools, but also foundational human factors knowledge, cultural support, and stakeholder engagement.

KEYWORDS

PSIRF, systems-approach, safety investigation, mental health

Introduction

Responding to safety events for the purpose of learning and improvement is central to safety management activity in healthcare. Historically, the NHS has relied on linear, cause-and-effect models to respond to patient safety incidents, often focusing narrowly on care and service delivery problems. The introduction of the Patient Safety Incident Response Framework (PSIRF, NHS England, 2022) marked a significant shift toward a systems-based approach to learning and improvement. To support this transition, a Learning Response Toolkit was developed using a human factors approach, incorporating prototyping and formative testing to refine tool design (Herlihey, Carthey, Mosley, & Fogarty, 2024).

While early feedback from NHS staff has been broadly positive (HSSIB, 2025a), applying systems-based tools in practice has proven challenging—particularly in mental health contexts. The Health Services Safety Investigations Body (HSSIB) have found that investigations into patient safety incidents in mental health contexts do not always take a system-wide perspective (HSSIB, 2025b). Similarly, Deshpande et al. (2025) found limited use of systems theory or human factors in their review of 162 mental health homicide inquiries.

In addition, investigations involving patient deaths, such as suicide or homicide, can be especially emotive and complex, in turn having a significant impact on both families and staff. Research by O'Hara, et al. (2025) found a general view that suicide as a 'safety event' is perceived to be different to other types of safety events such as wrong site surgery and may benefit from a different approach to investigation. Similarly, Fröding et al. (2025) noted that safety investigations involving a patient suicide often limit analysis to including only the last contacts within healthcare rather than an analysis of the process of care over time. They contend that taking a 'microsystem' level perspective is not sufficient to learn how healthcare can better support patients with suicidal tendencies.

This study explored the application of PSIRF's Learning Response Toolkit in the context of mental health. The aim was to gain a deeper understanding of the challenges experienced in using the tools in the Learning Response Toolkit and determine what design changes might be necessary to support their application in mental health.

Methods

Survey: An initial survey was widely distributed to identify which tools from the Learning Response Toolkit were most used across all healthcare sectors and to gather feedback on their usability and limitations.

HSSIB local safety investigations: In September 2025, HSSIB announced they were launching three mental health investigations under PSIRF to demonstrate use of the tools in Learning Response Toolkit (HSSIB, 2025c)

Tool selection: Based on survey findings, discussion feedback and HSSIB experience of applying the Learning Response Toolkit, three tools were shortlisted for deeper analysis and redesign.

Cognitive walkthroughs: The shortlisted tools were tested using cognitive walkthroughs to simulate how end users would interact with them in real-world investigations. Those recruited had different levels of knowledge and experience of using a system-based approach to investigation. Those with no prior use of the tools were deliberately included to take part in the walkthroughs.

Iterative redesign: Insights from the walkthroughs informed refinements to the tools, which were then redistributed for further testing and iteration.

Findings

Observations and discussions with staff using the PSIRF Learning Response Toolkit revealed gaps in current guidance and opportunities to refine tool design for greater usability. While these challenges are relevant across healthcare settings, the unique demands of mental health care required additional examples and tailored guidance to support effective implementation.

Key takeaways

- A systems-based approach to learning and improvement is widely relevant across healthcare settings. However, context is critical: applying a systems-based tools within mental health safety requires tailored guidance that reflects the distinct challenges and scenarios unique to mental health care.
- Without foundational knowledge of human factors, or access to expertise, applying systems-based tools effectively becomes a significant challenge.
- Learning from safety events is itself a socio-technical system; tools are just one component. Organisational culture, external influences, training and stakeholder engagement are equally critical.

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