SOCIETY FOR SIMULATION IN HEALTHCARE

A Hospital Based Simulation Programs Section, Patient Safety and Simulation Collaborative Affinity Group, and In Situ and Mobile Outreach Simulation Affinity Group Collaboration

Position Statement

This position statement provides evidence-informed, practical recommendations for the detection, reporting, and mitigation of latent safety threats (LSTs) in healthcare through simulation. Through a three-tiered framework, these guidelines integrate recent and landmark research with current best practices to support simulation programs in systematically identifying and addressing LSTs. The statement aims to enhance patient safety, standardize LST processes, and empower simulation programs to effect meaningful organizational change.

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Society for Simulation in Healthcare Latent Safety Threat Workgroup Position Statement: Latent Safety Threats: Detection, Reporting, and Mitigation Recommendations

Introduction

Latent safety threats (LSTs) are system vulnerabilities that can compromise patient safety and are often not recognized until they contribute to adverse events. Simulation provides a powerful and proactive method to identify, categorize, report, and mitigate these threats before they result in harm.

This position statement offers evidence-informed, practical guidance for simulation programs and healthcare organizations, structured as a three-tiered framework, acknowledging simulation programs have unique organizational structures and are resourced differently.

This document may be supplemented by the more detailed Position Statement – Companion Document for in-depth content review and recommendations.

Guidance for Application (Three-Tier Structure)

- **Foundational Readiness** is achievable for any organization beginning LST work—these practices require minimal investment but establish the critical mindset and pathways for LST awareness. (Tier 1)
- **Operational Integration** reflects more consistent and coordinated LST management practices, including designated reporting mechanisms and regular collaboration between simulation programs and organizational leaders. (Tier 2)
- **Strategic Embedding** should be the aspirational goal: simulation becomes a driver for organizational change, with LST data influencing policy, practice, and safety culture. (Tier 3)

LST Detection

Simulation programs should implement scalable approaches for detecting LSTs.

Tier 1: LST detection begins with simple tools such as checklists, structured debrief prompts, or reporting forms, supported by centralized documentation and consistent facilitator prompts to normalize LST identification in every in-situ simulation.

Tier 2: Detection efforts are formalized through structured tools that include fields for taxonomy categorization, staff feedback, and follow-up actions, with standardized facilitator training and integration of systems-focused debriefing tools to reinforce routine LST identification.

Tier 3: Validated LST detection tools are adopted or adapted to align with organizational safety goals, data is linked to safety dashboards and improvement portfolios, and simulation design is intentionally structured to support process improvement, scholarly output, and organization engagement in proactive LST mitigation.

LST Categorization

Categorizing LSTs ensures consistent understanding and prioritization.

Tier 1: Simple yet consistent LST categorization taxonomies such as equipment, process, communication, or environment are utilized. The use of basic tools like spreadsheets or forms capture essential details including category, description, and impacted system, and ensure alignment with organizational language to support early adoption.

Tier 2: Structured taxonomies, such as Systems Engineering Initiative for Patient Safety (SEIPS), the London Protocol, Agency for Healthcare Research and Quality (AHRQ) Common Formats, or Healthcare Performance Improvement (HPI) Failure Modes, are applied to categorize LSTs with efforts made to align and link these categorizations to organizational reporting systems to enhance visibility and facilitate action.

Tier 3: Validated tools for risk ranking and prioritization, such as Failure Modes Effects Analysis (FMEA) or risk matrices, are integrated into simulation debriefs, with trained facilitators applying these tools to align LST categorization with the organization's safety event taxonomy and broader safety improvement infrastructure.

LST Reporting

Reporting ensures simulation findings are consistently communicated, acted upon, and integrated into organizational safety systems.

Tier 1: A standardized form which includes key data elements such as LST description, categorization, staff feedback, and basic metrics, is established. Reports containing key data elements are shared with local staff and leadership, who are responsible for broader dissemination and initiating follow-up communication and mitigation.

Tier 2: A formal reporting system is developed collaboratively between the simulation program, operational leaders, and quality and safety teams, which enables broader sharing with local staff and key stakeholders and allows for integration with existing safety reporting systems.

Tier 3: LST reporting is fully embedded into the organizational safety infrastructure, with risk-prioritized reporting shared across leadership and quality teams, tracked longitudinally, and used to drive process improvements, policy updates, and strategic safety initiatives.

LST Follow-Up and Mitigation

Follow-up processes ensure identified LSTs are addressed, tracked to resolution, and translated into sustained organizational safety improvements.

Tier 1: Follow-up responsibility for identified LSTs is assigned on a case-by-case basis, with the simulation program optionally included in discussions. Mitigation efforts are informal, inconsistently tracked, and often lack visibility into resolution status.

Tier 2: Defined roles within the simulation program and local leadership share responsibility for LST follow-up with input from quality and safety teams. Key elements of LST follow-up may include recommended timelines, regular updates to staff, and formal communication of mitigation actions. The simulation program actively participates in bi-directional feedback and tracking of completed mitigation steps.

Tier 3: A formal infrastructure is established to assign, prioritize, and track LST follow-up and mitigation based on risk. Organizational oversight ensures loop closure and facilitates integration into broader process improvement frameworks. Simulation teams remain engaged throughout, and mitigation outcomes are verified, communicated, and used to drive sustained safety improvements.

Simulation Validation

Simulation can serve as a tool to confirm the effectiveness of mitigation strategies.

Tier 1: Simulation may be used to validate LST mitigation by retesting interventions and assessing whether mitigation strategies are effective or require refinement. The concept of simulation is introduced as a tool for organizational safety and process improvement.

Tier 2: Simulation is occasionally used to validate mitigation efforts, particularly for high-risk or critical LSTs identified through perceived need. There is growing emphasis on strengthening simulation's role within broader safety and quality initiatives.

Tier 3: Simulation is routinely and systematically employed to validate LST mitigation, especially for prioritized risks identified through formal tools. Simulation is embedded within safety and process improvement frameworks to ensure sustained mitigation.

Conclusion

This framework provides practical, peer-reviewed, and scalable guidance to detect, report, and mitigate LSTs. By systematically embedding these practices according to simulation program and organizational readiness and resources, organizations can enhance patient safety, standardize processes, and drive improvements beyond individual simulations.

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