

Root-Cause Analysis and Safety Improvement Plan

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Assessment 2: Root-Cause Analysis and Safety Improvement Plan

This paper examines sentinel events, specifically analyzing a series of critical errors in Minnesota hospitals, as Olson (2023) reported. These mistakes resulted in 21 preventable deaths and 178 severe injuries. Against healthcare challenges such as staff shortages worsened by the pandemic and operational pressures, this analysis aims to identify the root causes, evaluate contributing factors, and propose evidence-based strategies to enhance patient safety in similar medical settings.

Analysis of the Root Cause

The sentinel event under review, as described by Olson (2023), involves several critical incidents in Minnesota hospitals, leading to 21 preventable deaths and 178 serious injuries. This root cause analysis seeks to understand the factors contributing to these events, which included surgical errors, medication mishandling, and insufficient responses to patient conditions. Hospital administrators and quality assurance personnel identified these issues through adverse event reporting systems and internal audits. The events primarily impacted patients who received incorrect or delayed care, resulting in severe health complications and deaths, along with emotional distress. Additionally, healthcare providers faced scrutiny, prompting procedural reevaluations and potential legal implications.

Analysis of the Event and Relevant Findings

The sentinel events detailed by Olson (2023), involving a series of critical incidents in Minnesota hospitals, underscore the importance of identifying various underlying factors. These incidents led to severe outcomes, including preventable deaths and injuries, due to a range of errors, such as surgical mistakes, medication mishandling, and lapses in patient care.

Intended Procedure

Standard healthcare protocols for various procedures were either improperly followed or overlooked in these cases. This includes protocols for medication administration, surgical procedures, and general patient care guidelines.

Environmental Factors

As Olson (2023) noted, the healthcare environment was strained by high patient volumes and staff shortages, exacerbated by the pandemic. These conditions created a challenging operational environment, increasing the risk of errors.

Equipment and Resource Influence

Xie et al. (2021) highlight the impact of resource limitations, particularly staffing shortages, on patient safety. In these Minnesota incidents, inadequate staffing likely contributed to errors across multiple areas, including surgery and patient monitoring, due to rushed procedures and lack of oversight.

Human Error Contribution

Various human errors contributed to these incidents, ranging from misinterpretation of medication labels and surgical plans to incorrect execution of medical procedures. Factors like fatigue, stress, or heavy workloads among healthcare staff could have influenced these errors.

Communication Factors

Wu and colleagues (2023) emphasize the importance of effective communication within healthcare environments. The reported adverse events in the Minnesota hospital episodes were likely caused by communication breakdowns among medical staff, including nurses, surgeons, pharmacists, and other healthcare professionals.

Root Causes Identified

Olson (2023) highlighted incidents in Minnesota hospitals where there was a pervasive failure to follow healthcare protocols, affecting various services such as medication administration, surgical procedures, and patient care. Staffing and resource shortages were key contributors to these incidents, as Olson (2023) and Xie et al. (2021) emphasized. These deficits increased risks and compromised patient care. Wu et al. (2023) identified inadequate communication within healthcare teams as a major factor. This breakdown led to errors in medication administration, surgical procedures, and care management, worsening the effects of the existing strains on the healthcare system.

Application of Evidence-Based Strategies

Implementing evidence-based strategies to address drug mismanagement, surgical errors, and patient care deficiencies is essential, especially considering the serious errors identified in Minnesota hospitals by Olson (2023). These strategies should be grounded in current research and best practices from healthcare policies, recognizing the complex nature of these issues and providing a framework for mitigation and prevention.

Factors Leading to Safety Issues

Medication Errors. As identified in the root cause analysis, interruptions during medication administration significantly influenced medication errors. Strategies such as increasing staffing levels, reducing workloads, and enhancing communication channels should be implemented to reduce these errors. This approach aligns with the findings of Wu et al. (2023) and Olson (2023), which emphasize the importance of a stable environment for medication delivery.

Patient Falls. The PRONTO trial by Bucknall et al. (2022) underscores the importance of early detection and response to clinical deterioration to prevent incidents like patient falls.

Nursing interventions are crucial in identifying at-risk patients through regular vital sign monitoring and adherence to clinical practice guidelines.

Wrong-Site Surgery. Gertz et al. (2022) highlight that issues related to workload and staffing levels contribute to wrong-site surgeries. Implementing standardized presurgical procedures and checklists can mitigate these issues. This ensures consistency and accuracy in surgical practices, reducing the likelihood of such critical errors.

Hospital-Acquired Infections. Ullah et al. (2022) emphasize the significant workload involved in monitoring patients and responding to signs of deterioration, which is crucial in preventing hospital-acquired infections. Hirschhorn et al. (2021) support that streamlining this process with electronic vital sign systems can significantly reduce infection risks.

Addressing Safety Issues through Best Practices

To reduce medication errors, creating a 'no-interruption' zone during medication preparation and utilizing electronic medication administration records (EMARs) can significantly decrease errors. Educating patients and their families about medication safety, as suggested by Wu et al. (2023), is also vital. Considine et al. (2021) recommend comprehensive Rapid Response Systems (RRS) in the Emergency Department and ongoing staff training and simulation exercises to minimize medication errors and enhance patient safety.

Improving environmental safety through non-slip flooring, assistive technology, and adequate lighting is essential. Including patients and their families in fall prevention strategies and providing continuous staff training on fall prevention and risk assessment are crucial steps.

The World Health Organization advises using a systematic surgical safety checklist to reduce the incidence of wrong-site surgery significantly. Preoperative conferences and involving patients in labeling the surgical site can also enhance safety.

Adhering strictly to infection control practices, such as personal protective equipment and regular hand washing, is essential to prevent hospital-acquired infections. Maintaining environmental cleanliness and educating staff on infection control are also critical. Ullah et al. (2022) propose that transitioning from hand-written to digital tracking of vital signs could reduce nurses' workloads, allowing for more attentive patient care and lowering the incidence of hospital-acquired infections.

Improvement Plan with Evidence-Based and Best-Practice Strategies

A comprehensive improvement plan is proposed in response to the significant occurrences of medication errors, surgical errors, and patient care deficiencies in Minnesota hospitals. This plan is based on root cause analysis and is supported by recent research and best practices in healthcare.

Actions, New Processes, or Policies

We standardized Surgical Protocols and Checklists. The strategy recommends implementing standardized surgical protocols and checklists to prevent wrong-site and other surgical errors, as Gertz et al. (2022) highlighted.

Staff Training and Professional Development. The plan includes ongoing training programs for nurses and healthcare workers, focusing on early recognition of patient deterioration, adherence to clinical guidelines, and effective communication skills, in line with the recommendations of Bucknall et al. (2022).

Enhancement of Communication Protocols. Drawing from Olson (2023), the plan advocates for establishing clear and effective communication channels among healthcare professionals. This includes leveraging technology to ensure the timely sharing of critical test results and patient information.

Adoption of Technology for Patient Monitoring. Inspired by Ullah et al.'s (2022) findings, the strategy suggests integrating electronic monitoring systems for patient vital signs. This will reduce nurses' manual workload and enable more accurate and timely responses to patient needs.

Goals or Desired Outcomes

Reduction in Specific Patient Safety Events. Significantly minimize medication errors, surgical mistakes, and patient care lapses, particularly focusing on wrong-site surgeries and medication mismanagement.

It enhanced Staff Competency in Patient Safety. Improve the medical staff's ability to recognize and address patient safety issues, especially in surgery and drug administration.

It strengthened the Patient Safety Culture. In line with Wu et al. (2023), the plan aims to increase patient and family involvement in the care process, fostering a patient-centered care and safety culture.

Rough Timeline for Development and Implementation

Initial Phase (0-3 Months). Develop standardized surgical and medication protocols. Begin comprehensive staff training. Implement communication and electronic monitoring systems.

Intermediate Phase (4-6 Months). Pilot new protocols in selected departments. Continue staff training and evaluate the effectiveness of communication. Integrate electronic monitoring in key areas.

Final Phase (7-12 Months). Implement standardized protocols throughout the facility. Expand electronic monitoring to all departments. Maintain ongoing staff development and feedback mechanisms.

Evaluation and Adjustment (Post-12 Months). Regularly assess the new systems for reducing errors. Make adjustments based on feedback and outcomes.

This plan is built on scholarly evidence and practical strategies. It targets the root causes of identified patient safety issues. Its implementation is expected to enhance patient safety and quality of care in healthcare significantly.

Existing Organizational Resources

Leveraging existing organizational resources is crucial for successfully implementing the safety improvement plan addressing critical incidents in Minnesota hospitals. This ensures the efficient use of available assets and facilitates the integration of new strategies.

Human Resources

Nursing Staff. Experienced nurses play a vital role in frontline healthcare, ensuring patient safety. Their expertise is crucial in mentoring new nurses, particularly in key practices such as medication administration and patient monitoring, fostering a strong safety culture.

Patient Safety Officers. These professionals oversee safety protocols, especially in surgical settings, and coordinate strategies to address identified safety issues.

Interdisciplinary Teams. Collaboration among physicians, pharmacists, nurses, and other healthcare professionals ensures that complex care scenarios are managed with diverse expertise, essential for a comprehensive approach to patient safety.

Technological Resources

Electronic Health Records (EHR). EHRs are essential for ensuring the accuracy of surgical procedures, controlling medication errors, and monitoring patient data.

Patient Monitoring Systems. These technologies significantly reduce the likelihood of patient care errors and are crucial for the early detection of patient deterioration.

Educational and Training Materials

Online Learning Platforms. These platforms facilitate efficient staff training on new safety protocols and procedures related to medication management and surgical safety.

Simulation Training Tools. Simulation training provides hands-on experience managing patient safety scenarios, particularly in surgical settings.

Policy and Governance Frameworks

Safety Policies and Guidelines. Safety policies must be regularly updated and revised to align with the latest patient safety best practices advancements.

Quality Improvement Committees. These committees are essential for guiding the execution of the safety improvement strategy, ensuring its alignment with the organization's overarching goals.

Conclusion

This thorough analysis and improvement plan for Minnesota hospitals tackles critical incidents involving medication errors, surgical mistakes, and patient care lapses. Grounded in evidence-based strategies and utilizing existing organizational resources, the plan is set to improve patient safety and care quality, aligning with best practices and modern healthcare standards.

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