

CURRENT AWARENESS BULLETIN

PATIENT SAFETY

JUNE 2025

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BREAKING NEWS & EVENTS

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[Nearly 200 patients harmed in major cyber attack | News | Health Service Journal](#) – 18th June 2025

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FALLS PREVENTION

Aga, R., Sogaard, A. J., Holvik, K., Hagen, T. P., Idland, G., Jeyanathan, A., . . . Meyer, H. E. (2025). [Effectiveness of a fall and fracture prevention pathway on hip fracture risk, need of permanent care and mortality: A controlled before-and-after study](#). *Age & Ageing*, 54(6)

BACKGROUND: The high rates of hip fracture in Oslo inspired a new fall prevention pathway based on well-established fall prevention strategies, but specifically focusing on care coordination, osteoporosis treatment and targeting high-risk patients. **CONCLUSIONS:** Overall, the risk of later hip fracture was not significantly reduced in all registered fallers in the intervention boroughs, only in men. There was a significant decline in risk of admission to nursing homes in the intervention boroughs. These results suggest that the prevention pathway might have slowed down functional decline in the older Oslo population.

Del Moral-Pairada, M., Laserna Jimenez, C., Fabrellas, N., & Lopez-Poyato, M. (2025). [Exploring nursing interventions for frail individuals in primary care: A systematic review](#). *International Nursing Review*, 72(2), e70048.

AIM: To report nursing interventions addressing frailty in older adults within primary care settings. **BACKGROUND:** There is a very limited literature corpus on nursing interventions in primary care directed to elderly and frail individuals. **CONCLUSION AND IMPLICATIONS FOR NURSING AND HEALTH POLICIES:** There is no consensus on the starting age for frailty screening or on a single diagnostic tool to identify frailty. Nurses use standardised nursing language related to frailty, both to diagnose it and to implement person-centred care intervention plans. Healthcare policymakers, health organisations, and primary care nurses should consider the findings of this research to evaluate the inclusion of standardised tools to assess comprehensive frailty in older adults. In addition, it is also crucial to prioritise a relationship of trust between individuals and nurses to ensure adherence to nursing care plans.

Delbaere, K., Sherrington, C., Said, C. M., & Naganathan, V. (2025). [Innovative approaches to fall prevention in community-dwelling older adults](#). *Medical Journal of Australia*.

Dolan, H., Daniels, A., & Coon, D. W. (2025). ['It's common sense': Older adults' personal strategies to prevent falls in the hospital. A qualitative descriptive study](#). *Journal of Clinical Nursing*.

AIMS: The purpose of this study was to describe the strategies older adults use to maintain their balance and prevent themselves from falling in the hospital. **CONCLUSION:** Rurally hospitalised older adults employ independent, self-efficacious balance management strategies. **IMPLICATIONS:** Older adults' personal balance management strategies must be recognised by healthcare workers. **IMPACT:** Future inpatient fall prevention interventions and policies must focus on exploring hospitalised older adults' optimal and suboptimal balance management behaviours to develop patient-centred fall prevention interventions to decrease inpatient falls among older adults.

Farrell, S., Bajdek, N., Dishaw, M., Garabedian, P., Williams, A., Hachen, N., . . . Latham, N. K. (2025). [A qualitative analysis of a digital fall prevention exercise program for older adults with increased fall risk](#). *Journal of Applied Gerontology*, 7334648251342833

Falls are a common public health problem; one-third of individuals 65-years or older fall annually. A digitally delivered home exercise program could be an effective way to deliver fall prevention interventions to at-risk older adults. The aim of this study was to explore the experiences and perceptions of at-risk older adults enrolled in a 12-week digitally delivered home-based fall prevention exercise program. Semi-structured interviews ($N = 16$) were conducted by a user-experience specialist (75% female, age 77.3 years). Participants reported that the program increased exercise intensity and introduced new exercises, such as balance training. Participants highlighted the exercise physiologist motivational coach as a fundamental element of the program to support motivation and adherence.

Recommendations for the exercise program included more variety of exercises, individualization of the exercise program, and live virtual interactions. This qualitative analysis provides insight into the acceptability of a digital fall prevention exercise intervention through participant feedback and perception.

Niznik, J. D., Small, C., Kelley, C. J., McMullen, J., Anton, G., Roberts, E., . . . Davenport, K. (2025). [A multimodal fall prevention intervention in the setting of the emergency department](#). *Journal of the American Geriatrics Society*

BACKGROUND: The emergency department (ED) is an opportune setting for fall prevention interventions. We implemented and evaluated a multimodal falls prevention intervention addressing medications, mobility, and functional risk factors among older adults presenting to the ED for fall-related injuries. **CONCLUSION:** The most prevalent risk factors for falls among older adults presenting to the ED are likely modifiable through PT and OT intervention. Further research is needed to address uptake barriers and longitudinal impact on outcomes.

Rommers, E., De Pauw, R., Petrovic, M., & Cambier, D. (2025). [Epidemiology of falls in community-dwelling older adults in europe: A systematic review and meta-analysis](#). *Age & Ageing, 54(6)*

OBJECTIVES: Falls have long been recognised as a frequent problem among older adults and have been cited in literature since the 1950s. Given extensive research on risk factors, prevention, and implementation strategies, one might expect a decline in fallers prevalence. The aim of this review is to explore the epidemiology of falls in Europe, focusing on healthy, community-dwelling individuals aged 65 years or older. **CONCLUSION:** Despite decades of evidence supporting effective fall prevention, there is no significant change in the prevalence of fallers among community-dwelling older adults in Europe. Future research should focus on systematically identifying the factors contributing to the persistent fall rates. Additionally, efforts must be made to ensure effective implementation of existing knowledge on fall prevention.

Saragih, I. D., Chen, Y., Suarilah, I., Susanto, H., & Lee, B. (2025). [Virtual reality intervention for fall prevention in older adults: A meta-analysis](#). *Journal of Nursing Scholarship*

PURPOSE: Falls among older adults are a major public health concern, often leading to serious outcomes such as fractures, head trauma, and increased mortality. Virtual reality (VR) interventions have emerged as a promising strategy for fall prevention by improving balance, reducing fear of falling, and enhancing confidence. However, the impact of VR interventions on specific outcomes such as fear of falling, balance, and postural control in older adults remains insufficiently synthesized. **CONCLUSION:** This meta-analysis highlights the effectiveness of VR interventions in reducing fear of falling and improving balance and postural control among older adults. **CLINICAL RELEVANCE:** VR represents a valuable tool in fall prevention strategies, addressing key outcomes essential for maintaining independence and mobility in this population.

Schneider, A., Leite, L. B., Teixeira, J., Forte, P., Barbosa, T. M., & Monteiro, A.

M. (2025). [Multicomponent exercise and functional fitness: Strategies for fall prevention in aging women](#). *Sports, 13(6)*

Aging is associated with physiological changes that increase the risk of falls, impacting functional independence and quality of life. Multicomponent exercise training has emerged as an effective strategy for mitigating these risks by enhancing strength, balance, flexibility, and aerobic capacity. This study aimed to evaluate the effects of a 30-week multicomponent training program on functional fitness and fall prevention in older women. A parallel, single-blind randomized controlled trial was conducted with 40 participants (aged ≥ 65 years), divided into an exercise group and a control group. The intervention combined strength, balance, coordination, and aerobic training, following international exercise guidelines for older adults. Functional fitness was assessed using validated tests, including the Timed Up and Go (TUG) test, lower limb strength, flexibility, and aerobic endurance measures. Results

demonstrated significant improvements in the intervention group, particularly in TUG performance ($p < 0.05$), indicating enhanced mobility and reduced fall risk. These findings reinforce the importance of structured, multicomponent training programs for aging populations, particularly women, who experience greater musculoskeletal decline due to menopause-related hormonal changes. Future research should explore long-term retention of benefits and optimize intervention strategies. This study highlights the critical role of tailored exercise programs in promoting active aging, improving functional capacity, and reducing healthcare burdens associated with fall-related injuries.

Seppala, L. J., Frith, J., Skelton, D. A., Becker, C., Blain, H., Kenny, R., . . . van der Velde, N. (2025). [Challenges and opportunities for falls prevention: An online survey across european healthcare professionals](#). *European Geriatric Medicine*.

PURPOSE: To explore the challenges and opportunities for the implementation of falls preventive services across Europe. **CONCLUSION:** This survey highlights the need for improved undergraduate education in falls prevention across Europe. It is essential to educate and engage governmental bodies and insurers to secure their support and prioritization of falls prevention initiatives. Furthermore, enhancing education, addressing older adults' nonadherence, interdisciplinary collaboration and providing easy-to-use guidelines seem crucial for effective implementation. The falls prevention strategy should be tailored to the local context.

van der Velde, N., Seppala, L. J., Herrero, A. C., Annweiler, C., Jonsdottir, A. B., Blain, H., . . . Masud, T. (2025). [Falls prevention in community-dwelling older adults and implementation of world falls guidelines: A call for action across europe by the european geriatric medicine society special interest group on falls and fractures](#). *European Geriatric Medicine*.

Falls among older adults represent a significant public health challenge due to their consequences, including serious injuries, increased morbidity and mortality, decreased quality of life, and heightened healthcare costs. The World Falls Guidelines (WFG), published in 2022, offer a robust framework for evidence-based interventions; however, the uptake of these guidelines into clinical practice across Europe remains inconsistent. Key barriers to implementation include insufficient resources, a lack of trained healthcare professionals, and limited integration into existing healthcare systems. This position paper by the EuGMS Special Interest Group (SIG) on Falls and Fractures addresses the implementation of the WFG among community-dwelling older adults and falls prevention across Europe by providing an overview of the current status of WFG adoption in Europe and discusses the challenges and opportunities for implementation. We provide an overview of the current resources to support the clinical practice of falls prevention, implementation guides, and educational programs. Additionally, we discuss what is necessary for the future development of these resources and for advancing research. The EuGMS SIG on Falls and Fractures advocates for a commitment of healthcare providers as well as insurers, policymakers, and other stakeholders to collaborative European initiatives-such as developing a standardised falls prevention strategy, promoting evidence-based implementation plans, establishing a European-wide research agenda, and creating under- and postgraduate curricula-which are essential for advancing falls prevention efforts across Europe.

Wang, C., & Kim, S. M. (2025). [The Otago exercise program's effect on fall prevention: A systematic review and meta-analysis](#). *Frontiers in Public Health*, 13, 1522952.

Objectives: This study aims to compare the effectiveness of the Otago Exercise Program (OEP) in fall prevention between generally healthy older adults and those with compromised health conditions, assessing which group benefits more from the intervention **Conclusion:** The OEP effectively improves balance, gait, and lower limb strength, especially in older adults with compromised health. However, it does not significantly impact physical function or upper limb strength. This study has limitations, including potential bias, study heterogeneity, and variations in interventions, which may affect result reliability. A cautious interpretation is needed, and future research should focus on analyzing diverse populations and ensuring adequately sized samples to enhance the reliability of the

findings. **Systematic review registration:** PROSPERO (CRD42024549302), <https://www.crd.york.ac.uk/PROSPERO/view/CRD42024549302>.

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SAFETY CULTURE

Aires-Moreno, G. T., Marques, L. G., Ramos, S. F., de Castro Araujo-Neto, F., de Oliveira Santos Silva, R., Fernandes, B. D., . . . Lyra, D. J. (2025). [Improving patient safety culture in hospitals: A scoping review](#). *Research in Social & Administrative Pharmacy*,

CONTEXT: Patient safety culture is the product of individual and group behaviors that determine the commitment, style, and proficiency of a healthy and safe healthcare organization. To improve a hospital's patient safety culture, it is necessary to understand the strategies that exist and those that best impact health outcomes. **CONCLUSION:** It can be concluded that the strategies that brought the most relevant results to the patient safety culture in hospitals were those with greater cooperation from health professionals with a focus on teamwork, those with a duration and follow-up of over one year, those focused on optimizing the relationship between professionals and the institution's leaders, and those that optimized clinical and economic outcomes.

Brust, L., Blum, Y., & Weigl, M. (2025). [Promoting patient safety through patient engagement at the organisational level: A delphi-based needs assessment among patient and family advisory councils](#). *Health Expectations*, 28(3), e70319. <https://libkey.io/libraries/2838/10.1111/hex.70319>

BACKGROUND: Patient and family advisory councils (PFACs) are increasingly recognised as a promising approach for improving patient safety (PS) through patient engagement (PE) at the organisational level. However, PFAC stakeholders often lack the necessary knowledge and competence to engage effectively in PS-related issues with healthcare organisations. Moreover, evidence on specific needs for knowledge and competence improvement remains limited, hindering the development of future interventions. **DISCUSSION AND CONCLUSION:** This study highlights the need for targeted training and structural support to strengthen PFACs' role in PS. Competency improvement and role clarity were deemed essential for effective collaboration. Enhancing PFAC engagement in PS requires tailored educational programmes, transparent structures and institutional support. This study provides an empirical basis for interventions to improve PE in PS at the organisational level. **PATIENT OR PUBLIC CONTRIBUTION:** A patient representative was actively involved throughout the research process, contributing to the development of study materials and providing independent feedback on interview guides and questionnaires. Her input helped to shape the materials, improve their accessibility to lay audiences and ensure the inclusion of patient-relevant issues. The research team discussed her feedback in detail and revised study materials accordingly. Beyond the content presented in this manuscript, she contributed to shaping a subsequent intervention that emerged from the study's needs assessment, which was designed as a participatory approach to incorporate patient and stakeholder perspectives from the outset. In addition, she and participating stakeholders of the patient advisory councils are committed to disseminating project findings and developing recommendations to help translate research into practice from a patient perspective. **CLINICAL TRIAL REGISTRATION:** The study was pre-registered in the German Clinical Trials Register (ID: DRKS00034733).

Campbell, Y. (2025). [The ethical responsibility of psychological safety: Leadership at the intersection of safety culture](#). *Healthcare Management Forum*, 8404704251348817

Psychological safety-the belief that one can speak up or report concerns without fear of retribution or humiliation-is a foundational element of highly reliable healthcare teams. While every industry and team can benefit from psychological safety, in healthcare, it is not just a "nice-to-have"-it can be life-saving. In the high-risk, emotionally charged context of cancer care, its importance is magnified. Oncology is one of the many extra high stress and high-stakes areas of medicine and patient care. There is also benefit from establishing a psychologically safe culture in these very well-known areas of healthcare, and that is they can serve as a model and beacon for other areas in healthcare. Conversely, a bad culture in a highly visible area can encourage bad behaviour elsewhere. Yet, while often framed as a quality or cultural issue, psychological safety is also an ethical imperative. Leaders in healthcare have a moral responsibility to cultivate environments where team members feel safe to raise concerns, challenge unsafe practices, and contribute to system learning. This article explores the ethical dimensions of psychological safety, how human factors influence speaking up, and how leadership practices can advance or inhibit a culture of safety. Drawing from safety science, organizational ethics, and the author's experience in oncology safety leadership, the argument is made that fostering psychological safety is not simply best practice-it is a moral obligation grounded in justice, trust, and the prevention of harm.

Fekadu, G., Muir, R., Tobiano, G., Bime, A. E., Ireland, M. J., & Marshall, A. P. (2025). [Patient safety culture in resource-limited healthcare settings: A multicentre survey](#). *PLoS ONE [Electronic Resource]*, 20(6), e0326320.

OBJECTIVE: To assess healthcare professionals' perceptions of patient safety culture and to examine variations across clinical units in Eastern Ethiopian public hospitals. **CONCLUSIONS:** Significant improvement in patient safety culture in Ethiopian public hospitals, especially in the ICU, is critically needed to mitigate healthcare risks and ensure patient safety. Addressing these issues requires targeted patient safety training, strong leadership support, and adequate resource allocation. Further exploration of ICU-specific patient safety insights and validation of the HSoPSC 2.0 tool within the Ethiopian healthcare context should be undertaken to ensure cultural and contextual relevance.

Gupta, A., Shah, P., Sohal, P., Gupta, V., Anamika, F., Bowman, C., & Jain, R. (2025). [Unveiling the complexities of patient safety in hospital settings: A holistic approach to overcoming challenges](#). *Geriatric Nursing*, 64, 103357.

Medical science and technologies have made tremendous progress in treating patients, however cases of avoidable harm done to the patients are still present. Many hurdles impede the achievement of optimal patient safety within hospital settings. There are many factors that affect overall patient care and are related to physicians, nursing staff, hospital administrators, labs, and most importantly patients themselves. Some systemic problems addressed include poor communication, understaffed teams, weak coordination, and lack of psychological safety among health practitioners. These factors intertwine and affect the quality of safety the hospital environment offers. The findings underscore the need for a holistic and proactive approach combining improved communication strategies, optimized staffing ratios, a culture of transparency, and thoughtful technology integration. Addressing these challenges foremost is crucial for fostering a safer hospital environment and ultimately enhancing patient care and safety. The aim of this article is to identify critical factors contributing to compromised patient safety.

Kim, M. J., & Woo, M. W. J. (2025). [Healthcare workers' perceptions of patient safety culture in emergency departments: A scoping review](#). *BMJ Open*, 15(6), e097086.

OBJECTIVE: This review aimed to map the concept of patient safety culture in emergency departments (EDs), describe the availability of evidence related to patient safety culture as assessed by healthcare workers, identify the key focus areas of existing studies and pinpoint gaps in the current literature. **CONCLUSIONS:** Although research on patient safety culture in emergency departments has

increased, the findings remain limited in their generalisability due to a lack of diverse methodologies. Qualitative studies are needed to deepen the understanding of patient safety culture in multifaceted contexts. This review contributes to the academic field by bringing us closer to developing tailored interventions that can foster a positive patient safety culture in emergency departments. PROTOCOL REGISTRATION: The protocol for this scoping review was registered in the Open Science Framework (<https://osf.io/9f7qc>).

Lin, Q., Zhang, D., & Or, C. K. (2025). [Assessing and comparing perceptions of patient safety culture among 4579 health care staff in 13 general and specialized hospitals: A cross-sectional study](#). *Journal of Patient Safety*,

BACKGROUND: Although general and specialized hospitals have distinct roles and characteristics that can lead to differences in patient safety culture, there is a limited number of studies examining these differences. **CONCLUSIONS:** General hospitals exhibited a more negative patient safety culture than specialized hospitals and thus require more proactive efforts to enhance their patient safety culture, especially among physicians. Both types of hospitals should urgently address issues related to "staffing" and "nonpunitive response to errors."

Nogueira, M. D., Diniz, A. M., Reis, C. T., Ramos, S., & Sousa, P. (2025). [Communication and marketing management in patient safety within healthcare organizations: A scoping review](#). *Portuguese Journal of Public Health*, 1-15
<https://libkey.io/libraries/2838/10.1159/000546355>

Introduction: Patient safety (PS) is a fundamental pillar of healthcare quality. The effective dissemination of information and knowledge management regarding PS is essential to foster safe practices. Despite significant progress in recent years, gaps remain in how knowledge and information on PS are managed and disseminated across healthcare organizations. Objective: The aim of this study was to map the scientific evidence concerning knowledge management strategies and the dissemination of information related to PS, as implemented by healthcare organizations for healthcare professionals. Discussion: Knowledge management strategies demonstrated potential to strengthen PS, with continuous training, organizational culture, and innovation standing out in knowledge acquisition. Dissemination was effective through digital platforms and marketing, while mediation relied on leaders and managers. Challenges remain, such as validating the impact and updating the content. Future research should assess the impact of these strategies on clinical practice, including the perspectives of patients and carers.

Payne, M., Roache, D., Subero, J., & Zhang, G. P. (2025). [How safety leadership styles impact safety performance: A case study](#). *Journal of Safety Research*, 93, 214–228.

INTRODUCTION: Job-related injuries continue to be a salient problem facing many organizations. Prior research has examined the role of leadership in influencing and improving workplace safety. However, studies of safety leadership have focused on the styles or behaviors of leaders without taking into account the influence of context on leader activities or practices. Therefore, there is a need for examining how leadership styles impact safety performance within a specific context. Specifically, our research setting is an Indonesian manufacturing facility of a large consumer products company with an impeccable safety performance. **PRACTICAL APPLICATIONS:** Because a multi-faceted leadership approach is most effective, leaders should not focus on one fixed leadership approach in managing safety. In addition, multiple leadership styles contribute to safety behaviors in different ways across different work situations. Future workplace safety performance interventions would be more effective if management is aware of the situation in which specific leadership styles or practices should be applied.

S, V., P, P. K., S, H., & K C, R. S. (2025). [Enhancing healthcare quality and patient safety: Exploring the impact of working environment, support and communication](#). *Journal of Health Organization & Management*.

PURPOSE: Patient safety is referred to as well-being, an acute concern in healthcare that directly impacts the quality of care delivered. This research examines the underlying factors influencing patients' well-being and healthcare quality, focusing on support, communication and follow-up (CFU) and the working environment. In addition, the moderating role of patient safety and quality issues (PSQI) was also addressed in this study. **FINDINGS:** Working environment, support and CFU positively influence quality and patient safety. It is also observed that PSQI was not moderating such relationships. **RESEARCH LIMITATIONS/IMPLICATIONS:** The results offer actionable insights for healthcare organizations, particularly in enhancing safety culture through effective management and strategic interventions. **ORIGINALITY/VALUE:** This study highlights the need for continuous improvements in leadership, communication and work environments to achieve better patient outcomes and maintain high standards of healthcare quality.

Tsuei, J., Bandini, J. I., Thomas, A. D., James, K. F., Etchegaray, J. M., & Schulson, L. (2025). [A systems-based framework for integrating health equity and patient safety](#). *Joint Commission Journal on Quality & Patient Safety*, <https://libkey.io/libraries/2838/10.1016/j.jcjq.2025.04.005>

Research is needed to better understand inequities in patient safety, to develop interventions to improve safety and equity together, and to measure the efficacy of such interventions. Although measures of disparities in health outcomes, health care access, and quality of care are common, patient safety equity measurement remains underdeveloped. For example, disparities have often been documented in chronic diseases or access to preventive care but are less frequently studied for adverse drug events or postoperative complications. Patients of minority backgrounds experience higher rates of preventable harm-Black patients face increased risk of hospital-acquired infections and medication errors compared to white patients, yet most health systems lack specific tools to systematically measure and address these safety disparities. Based on a literature review and expert panel conducted between January 2023 and December 2023, the authors identified health system-level measures of equity in patient safety and present a preliminary maturity framework for health systems working toward equity in patient safety. This review found several tools for measuring health disparities and health equity more broadly, but few are specifically designed to evaluate equity in patient safety events and processes. To address this critical gap, the authors leveraged feedback from a panel of eight subject matter experts to develop a preliminary framework designed to support health systems in assessing their maturity levels and integrating equity in patient safety in a stepwise manner. The framework consists of three maturity levels (fundamental, intermediate, advanced) and six domains: (1) data collection and training, (2) data validation, (3) data stratification and analysis, (4) communicating findings, (5) addressing and resolving equity gaps in patient safety, and (6) organizational infrastructure and culture.

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NEAR MISSES, MEDICATION ERRORS, REPORTING SYSTEMS

Alfayez, A., Althumairi, A., Aljuwair, M., Althukair, D., & Aljabri, D. (2025). [Factors affecting patient safety near miss reporting: A systematic review](#). *Journal of Advanced Nursing*,

AIM: To explore individual and organisational factors affecting near-miss reporting in healthcare settings. **DESIGN:** Systematic review following the PRISMA 2020 guidelines. **CONCLUSION:** Promoting a structured and supportive reporting culture, educational initiatives, and simplified reporting mechanisms can improve near-miss reporting practices. **IMPLICATIONS FOR THE PROFESSION AND/OR PATIENT CARE:** Improving near-miss reporting practices by addressing identified barriers can lead to safer healthcare environments and better patient outcomes. **IMPACT:** This paper addresses a gap in the literature regarding near-miss underreporting. The findings will have an impact on healthcare administrators, healthcare professionals, and ultimately, patients. Implementing strategies such as peer mentoring and constructive feedback, targeted training and simplified reporting systems can encourage consistent near-miss reporting. These efforts will ultimately lead to safer healthcare environments and improved patient outcomes.

Alqaraleh, M., Almagharbeh, W. T., & Ahmad, M. W. (2025). [Exploring the impact of artificial intelligence integration on medication error reduction: A nursing perspective](#). *Nurse Education in Practice*, 86, 104438.

AIM: To systematically evaluate the impact of artificial intelligence (AI) technologies on reducing medication errors in nursing practice, focusing on tools such as clinical decision support systems (CDSS), smart infusion pumps, barcode scanning and automated prescription validation. **CONCLUSIONS:** AI technologies significantly improve medication safety in nursing. However, successful implementation depends on nurse training, system integration, ethical safeguards and workflow alignment. Further experimental studies are needed to validate efficacy and address barriers such as alert fatigue, algorithm transparency and adoption resistance.

Ashgar, D. A., Alotaibi, N. M., Al-Shahrani, S. M., Almanea, S., Almulhim, A. S., Alharbi, A., . . . Aljabri, D. (2025). [Effectiveness of six sigma in managing medical errors in the electronic drug administration record \(EDAR\) system](#). *Cureus*, 17(5), e84864.

INTRODUCTION: Medication errors can occur at any stage of the medication process, including prescribing, preparing, dispensing, or administering the medication by nurses. Any of these medication errors will impact patient safety and healthcare quality. **CONCLUSION:** The study demonstrates that Six Sigma methodology effectively reduces medication errors and enhances patient safety within healthcare settings. Continued investment in optimizing pharmacy systems and fostering a culture of safety is crucial for sustaining these improvements and advancing the quality of patient care.

Dursun Engin, M., & Seren Intepeler, S. (2025). [Patient participation in patient safety practices scale: Development and psychometric evaluation of a scale](#). *Healthcare*, 13(12)

Introduction: Patient participation is a critical element in enhancing patient safety. Involving patients in safety practices improves communication, reduces errors, and optimizes treatment outcomes. However, there is no standardized instrument that measures patient participation in safety practices.

Conclusions: The Patient Participation in Patient Safety Practices Scale is a valid and reliable tool for assessing patient participation in safety practices. It is recommended for use in clinical settings and further testing in different patient populations and healthcare systems.

Ford, E. H., & Michalek, C. (2025). [Medication safety officers: A pillar of patient safety in hospital pharmacy](#). *Farmacia Hospitalaria*,

The role of a Medication Safety Officer has emerged as a critical element in hospital pharmacy, addressing the persistent issue of medication errors. These errors, which can cause significant patient harm, have been documented for decades, prompting the establishment of formal roles dedicated to

medication safety. Organizations such as the Institute for Safe Medication Practices (ISMP), the American Society of Health System Pharmacists (ASHP) as well as the United Kingdom's Medicines and Healthcare products Regulatory Agency (MHRA) and National Health Service (NHS) have been instrumental in supporting the Medication Safety Officer role. Medication errors can result in severe consequences, including patient harm and death. Landmark publications like the Institute of Medicine's "To Err is Human" and "Crossing the Quality Chasm" have highlighted the prevalence and impact of these errors, advocating for system improvements and the necessity of dedicated safety roles. Medication Safety Officers lead strategies and processes related to medication safety, develop strategic plans, and implement error prevention strategies. They analyze medication error reports, collaborate with healthcare staff, and optimize medication safety technologies. Medication Safety Officers play a key role in fostering a culture of safety within organizations, influencing practices to minimize harm and support second victim programs. Studies have shown that employing a Medication Safety Officer can significantly improve hospital safety scores, demonstrating the effectiveness of this role in enhancing patient safety. The daily responsibilities of a Medication Safety Officer include reviewing medication errors, assessing harm, attending meetings, and collaborating with healthcare practitioners. Overall, the role of a Medication Safety Officer is essential in identifying and mitigating medication risks, making hospitals safer, and ensuring the delivery of high-quality patient care.

Harrison, J., Ting, C. Y., Leech, M., Molloy, E., & Bearman, M. (2025). [Preparing medical students and physicians to cope with their medical errors: A scoping review](#). *Academic Medicine*,

PURPOSE: Many clinicians will experience feeling responsible for inadvertently harming a patient through medical error. These situations can be distressing, difficult to navigate, and career altering. In addition to aftermath support, there is a recognized need for preemptive education to better prepare clinicians to cope after such events. Little published guidance exists about how best to do this. This scoping review explores the current knowledge about educational programs and strategies to prepare medical students and physicians to cope effectively with their own medical errors. **CONCLUSIONS:** A constellation of pedagogical strategies synthesized from the literature provides program design ideas for education that targets the development of learners' capacity to cope with involvement in patient harm from medical error.

Hohl, C. M., Okpani, A. I., & Kuziemy, C. (2025). [Developing and implementing a new health information technology innovation to improve patient safety in the canadian context](#). *Healthcare Management Forum*, 8404704251346951

Adverse Drug Events (ADEs) are unintended and harmful events related to medication use. Many ADEs recur because patients are unintentionally re-exposed to medications that previously caused harm. To help address this, we designed ActionADE, an interoperable Health Information Technology (HIT) that allows clinicians to communicate ADEs across health sectors. We completed ethnographic workplace observations and a systematic review to inform design. After piloting, we integrated ActionADE with the provincial medication dispensing database to alert pharmacists when patients seek to fill a prescription for the same or a same-class drug as one that previously caused harm. Co-design, application of clinically meaningful field labels and data standards, and integration with other health information systems were critical to ActionADE's functionality and use. However, health system decision-makers need to proactively plan for how to spread and scale pilot project in the HIT ecosystem to ensure public benefit from successful innovation.

Lan, M. F., Weatherby, H., Chimonides, E., Chartier, L. B., & Pozzobon, L. D. (2025). [Using the hierarchy of intervention effectiveness to improve the quality of recommendations developed during critical patient safety incident reviews](#). *Healthcare Management Forum*, 8404704251343260

Our Canadian multi-site academic health sciences centre uses a standardized process to review critical patient safety incidents and develop recommendations to prevent incident reoccurrence. We recognized an opportunity to enhance recommendation development by integrating the Hierarchy of Intervention

Effectiveness (HIE), a human factors framework, into the incident review process. This project aimed to increase the proportion of system-focused recommendations from critical incident reviews from 16 to 30% over 16 months. A multi-intervention strategy included (1) standardizing the incident analysis review template; (2) earmarking time for recommendation development during reviews; (3) providing participants with just-in-time education and tools; and (4) initiating HIE-based recommendation classification during incident reviews. Statistical process control p-Chart analysis showed an increase in system-focused recommendations from 16 to 30% over 16 months. The HIE promotes system-level change to prevent critical incidents, which other organizations may benefit from incorporating in their patient safety reviews.

Osorio, D., Plana, M. N., Rubio-Valera, M., Munoz-Miguel, J., Bolibar, I., Franco, M. T., . . . Ferreira-Gonzalez, I. (2025). [Patient-reported incident measure \(PRIM\) tools for reporting patient safety incidents: Protocol for a scoping review](#). *BMJ Open*, 15(6), e096983.

INTRODUCTION: Patient safety incidents during healthcare cause a high burden and mortality, but many go unreported. Involving patients and caregivers in the identification and reporting of safety incidents would add value to the current incident reporting systems used by health professionals. Identifying and analysing patient safety incidents is essential to prevent future events, allowing organisations to apply a learning-from-error approach and to implement improvement plans. Patient-Reported Incident Measures are tools for patients and caregivers to report safety issues related to their healthcare. In accordance with WHO's patient safety taxonomy, the term patient safety incidents is used throughout this protocol to encompass events that do and do not reach the patient, including what are commonly referred to as near misses and adverse events. We aim to identify and describe the published literature about tools for patients or caregivers to report patient safety incidents in healthcare. **ETHICS AND DISSEMINATION:** We will only use published data. Approval from the human research ethics committee is not required. The results of this scoping review will be submitted for publication in an international peer-reviewed journal and scientific meetings. Findings will also be disseminated through digital science platforms and academic social media.

Rajakumar, S., Rajah, R., Thanimalai, S., Mokhtar, F. B. M., & Ramachandram, D.

S. (2025). [Intravenous medication administration errors in hospitalised patients: An updated systematic review](#). *Journal of Evaluation in Clinical Practice*, 31(4), e70167.

BACKGROUND: Administering intravenous (IV) drugs carries a high risk of adverse effects due to their direct entry into circulation. Identifying the prevalence and types of IV administration errors and the drugs involved is crucial for implementing effective interventions to reduce such errors. **AIM:** This systematic review aimed to examine and synthesise the available articles on medication errors involving IV administration in hospitalised patients. **CONCLUSION:** Our review highlights that IV medication error rates vary based on study design, setting, and population. Standardised definitions, reporting procedures, and reliable tracking methods are needed. Human factors, system issues, and environmental stressors influence medication errors. Future research must improve our understanding and address these factors to enhance patient safety and healthcare quality.

Ribed, A., Gimenez-Manzorro, A., de Lorenzo-Pinto, A., Torroba-Sanz, B., Ginel-Feito, M. D., Cabrerizo-Torrente, P., . . . Sanjurjo, M. (2025). [Improving medication safety in the perioperative setting: Development of a medication use process](#). *British Journal of Anaesthesia*,

BACKGROUND: Medication errors are highly prevalent in the perioperative setting. The objectives of this study were to re-engineer the medication use process in the perioperative setting and to draft safety recommendations to improve safe medication use in daily practice. **CONCLUSIONS:** A new process was implemented based on integrated multidisciplinary care and a strong commitment to technology that promotes safe medication use throughout the perioperative setting.

Seferian, E., Berdahl, C. T., Coleman, B., Leang, D., Cohen, T., Qureshi, N., . . . Nuckols, T. K. (2025). [The safety action feedback and engagement \(SAFE\) loop: Initial testing and refinement of a novel intervention to enhance hospital incident reporting and patient safety](#). *MedRxiv : The Preprint Server for Health Sciences*

Background: Voluntary incident reporting has improved safety in many high-risk industries, but several barriers have limited its effectiveness in hospitals. Designed to overcome these barriers, the novel Safety Action Feedback and Engagement (SAFE) Loop: (1) obtains input from nurses about patient safety problems; (2) invites nursing units to select a Target Event to focus on; (3) teaches nurses to write more informative incident reports; (4) prompts nurses to report Target Events for a designated period; (5) standardizes investigative procedures to support mitigation plans; and (6) provides feedback to nurses about contributing factors and mitigation plans. We aimed to refine the SAFE Loop through iterative testing. **Conclusions:** Nurses found the SAFE Loop to be a promising strategy for improving patient safety. Testing and refinements to the SAFE Loop laid the groundwork for efficacy testing via an ongoing pragmatic randomized controlled trial. **Trial Registration:** ClinicalTrials.gov Number NCT05381441.

Zaboli, A., Mocchi, T., Brigo, F., Brigiari, G., Massar, M., Cleaver, B., . . . Turcato, G. (2025). [Enhancing patient safety in alternative emergency pathways: A comparative study of Italian and United Kingdom systems](#). *Internal & Emergency Medicine*, <https://libkey.io/libraries/2838/10.1007/s11739-025-03997-1>

Emergency departments (EDs) worldwide face increasing crowding, largely due to non-urgent patients. Various strategies have been proposed to redirect these patients to alternative care pathways, such as Urgent Care Centers (UCCs) in the United Kingdom and "Centri di Assistenza per le Urgenze" [Centers for Urgent Care] (CAUs) in Italy. However, the safety of these models remain uncertain. This study aims to compare the criteria of UCCs and CAUs to evaluate their impact on clinical outcomes. This retrospective, single-center study analyzed ED patients at Merano Hospital from January 1 to December 31, 2023. A sample of 1772 patients was independently assessed by two trained professionals using CAU and UCC criteria. The primary outcome was hospitalization following an ED visit, while secondary outcomes included 30-day and 6-month mortality. Sensitivity, specificity, positive and negative predictive values were calculated for both systems. The CAU system identified 833 patients (47.0%) as eligible for redirection, while the UCC system identified 937 patients (52.9%). The CAU model misclassified 4.1% of patients who subsequently required hospitalization, compared to 1.8% in the UCC system. Furthermore, patients redirected using CAU criteria had higher 30-day and 6-month mortality rates. The UCC model demonstrated higher sensitivity (81.5% vs. 3.7%) and greater specificity in predicting hospitalizations. The UCC system outperforms CAU in both patient safety and clinical effectiveness. Implementing evidence-based criteria for non-urgent patients is essential to alleviating ED overcrowding while maintaining patient safety. Future research should focus on refining selection algorithms to optimize care pathway effectiveness.

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SEPSIS

Idahor, C. O., Ogunfuwa, O., Ogbonna, N., Adigwe, A., & Ogbeide, O. A. (2025). [Beyond fluid therapy: The role of vitamin C, steroids, and thiamine in sepsis management](#). *Cureus*, *17*(5), e84666.

Sepsis remains a major contributor to mortality among critically ill patients, with sepsis-induced metabolic dysfunction significantly worsening outcomes. As metabolic dysfunction plays a key role in the pathogenesis of sepsis, recent interest has grown around metabolic resuscitation therapies as potential adjuncts to traditional fluid resuscitation strategies. This narrative review evaluates current evidence regarding the role of vitamin C, thiamine, and corticosteroids in improving sepsis outcomes. Early studies suggested that vitamin C may reduce organ dysfunction and vasopressor requirements; however, more recent randomized trials have produced inconsistent results, with some findings even indicating potential harm in certain patient groups. Similarly, the use of corticosteroids in sepsis management has shown mixed outcomes. Thiamine has demonstrated possible renal protective effects and improved lactate clearance, although its impact on mortality and vasopressor needs remains inconclusive. Combination therapy with hydrocortisone, vitamin C, and thiamine (the HAT protocol) has been associated with reduced vasopressor duration but has not consistently improved survival or other major clinical endpoints, despite its apparent safety. Overall, while vitamin C, corticosteroids, and thiamine present a theoretically attractive strategy in sepsis management, clinical results remain debated. Corticosteroids currently have the strongest supporting evidence for use in septic shock, while vitamin C and thiamine remain investigational therapies and are not recommended for routine use outside clinical trials. Future research should explore biomarker-guided, precision-medicine approaches to better identify patients who might benefit most from metabolic resuscitation, and large-scale randomized controlled trials are needed to clarify optimal timing and dosing strategies.

Jiang, L., Yu, C., Xie, C., Zheng, Y., & Xia, Z. (2025). [Enhancing early mortality prediction for sepsis-associated acute respiratory distress syndrome patients via optimized machine learning algorithm: Development and multiple databases' validation of the SAFE-mo](#). *International Journal of Surgery*,

BACKGROUND: Acute respiratory distress syndrome (ARDS) is associated with high mortality, with sepsis accounts for 31-34% of cases. Given the global burden of sepsis (508 cases per 100,000 person-years) and its association with 20% of all global deaths, early mortality prediction in patients with sepsis-associated ARDS is critical. This study developed and validated the Sepsis-associated ARDS Fatality Evaluation Model (SAFE-Mo), a machine learning model designed to predict early mortality in sepsis-associated ARDS patients, enabling earlier identification of high-risk individuals. **CONCLUSION:** This study utilized the MIMIC-IV, eICU CRD, and NWICU databases to construct and validate a machine learning model, SAFE-Mo, which predicts early mortality in patients with sepsis-associated ARDS and outperforms traditional prediction models across all metrics. SAFE-Mo can guide clinicians to focus on critical indicators such as lactate, urine output, anion gap, and others, enabling appropriate measures to improve clinical outcomes for high-risk patients.

Limb, M. (2025). [Sepsis: Diagnosis remains "urgent and persistent safety risk," safety body warns](#). *BMJ*, *389*, r1339.

Liu, Y., Liu, J., Wang, D., Xu, L., Li, Z., Bai, X., . . . Wang, Y. (2025). [Advancements, challenges, and future prospects of nanotechnology in sepsis therapy](#). *International Journal of Nanomedicine*, *20*, 7685–7714.

Sepsis is a life-threatening systemic inflammatory syndrome, typically triggered by infection, that can lead to multi-organ failure and high mortality rates. Traditional treatments for sepsis often have limited efficacy and significant side effects, necessitating the exploration of innovative therapeutic strategies. In recent years, the application of nanotechnology in sepsis therapy has garnered widespread attention due to its potential to modulate immune responses, reduce inflammation and oxidative stress, and eliminate bacterial toxins. This review aims to provide an overview of the latest advancements, challenges, and

future prospects of nanotechnology in sepsis treatment. By analyzing recent developments in anti-inflammatory, immunomodulatory, antioxidant, and detoxification applications of nanotechnology, key findings and therapeutic potential are summarized, including the use of nanocarriers, biomimetic nanoparticles, and self-assembled nanomaterials. Furthermore, this review addresses the challenges in clinical translation, such as drug targeting, long-term safety, and biocompatibility. Future research will require large-scale clinical trials and interdisciplinary collaboration to validate the efficacy of nanotechnology in sepsis treatment and facilitate its integration into clinical practice. Overall, nanotechnology presents unprecedented opportunities for sepsis management, and this review seeks to offer insights into ongoing research while promoting further advancements in this field.

Zhou, Y., & Sun, Y. (2025). [Comparative efficacy and safety of antibiotic regimens in sepsis-induced acute kidney injury: A retrospective cohort study](#). *Clinical Therapeutics*,

PURPOSE: Acute kidney injury (AKI) is a prevalent and serious complication in septic patients, potentially exacerbated by certain medications, which significantly affects morbidity and mortality rates. This study aims to evaluate the comparative efficacy and safety of different antibiotic regimens for treating sepsis-induced AKI. **FINDINGS:** A total of 552 patients were included, with no significant differences in baseline characteristics among the groups. The combination therapy group experienced a shorter duration of fever (1.33 +/- 0.57 days, P = 0.001), lower 30-day mortality, and shorter ICU stays (4.36 = 0.81 days, P = 0.001). Serum creatinine levels rose significantly across all groups (P = 0.005), with the highest levels observed in the combination therapy group. AKI incidence was 25.3% in fluoroquinolone patients, 15.7% in beta-lactam patients, and 18.9% in the combination therapy group. Renal replacement therapy was required for 11.2% of betalactam and 16.5% of fluoroquinolone patients. **IMPLICATIONS:** This study underscores significant differences in renal outcomes associated with various antibiotic regimens in septic patients with AKI. While combination therapy may improve infection control, it also poses risks to renal function. Clinicians should consider these findings when selecting antibiotic regimens for septic patients, particularly those with preexisting renal impairment.

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SIMULATION, AI, TECHNOLOGY, GAMIFICATION

Aldosari, B. (2025). [Cybersecurity in healthcare: New threat to patient safety](#). *Cureus*, 17(5), e83614. <https://libkey.io/libraries/2838/10.7759/cureus.83614>

The rapid integration of technology into healthcare systems has brought significant improvements in patient care and operational efficiency, but it has also introduced new cybersecurity challenges. This manuscript explores the evolving landscape of cybersecurity risks in healthcare, with a focus on their potential impact on patient safety and the strategies to mitigate these threats. The rise of interconnected systems, electronic health records (EHRs), and Internet of things (IoT) devices has made safeguarding patient data and healthcare processes increasingly complex. Notable cyber incidents, such as the Anthem Blue Cross breach and the WannaCry ransomware attack, highlight the real-world consequences of these vulnerabilities. The review also examines emerging technologies like AI, cloud computing, telehealth, and wearables, considering their potential benefits and security risks. Best practices for improving healthcare cybersecurity are discussed, including regulatory compliance, risk assessment, data encryption, employee training, and incident response planning. Ultimately, the manuscript emphasizes the ethical responsibility of healthcare organizations to prioritize cybersecurity, ensuring a balance between innovation and security to protect patient data, uphold regulatory

standards, and maintain the integrity of healthcare services.

Boscardin, C. K., Abdulnour, R. E., & Gin, B. C. (2025). [Macy foundation innovation report part I: Current landscape of artificial intelligence in medical education](#). *Academic Medicine*, <https://libkey.io/libraries/2838/10.1097/ACM.00000000000006107>

ABSTRACT: The rapid emergence of artificial intelligence (AI), including generative large language models, offers transformative opportunities in medical education. This proliferation has generated numerous speculative discussions about AI's promise but has been limited in delivering a comprehensive analysis to distinguish evidence-based utility from hype while identifying context-specific limitations. In this first part of a two-part innovation report, commissioned by the Josiah Macy Jr. Foundation to inform the discussions at a conference on AI in medical education, the authors synthesize the landscape of AI in medical education, underscoring both its potential advantages and inherent challenges. To map the AI landscape, they reviewed 455 articles that targeted five medical education domains: (1) Admissions, (2) Classroom-Based Learning and Teaching, (3) Workplace-Based Learning and Teaching, (4) Assessment, Feedback, and Certification, and (5) Program Evaluation and Research. In admissions, AI-driven strategies facilitated holistic applicant reviews through predictive modeling, natural language processing, and large language model-based chatbots. Preclinical learning benefited from AI-powered virtual patients and curriculum design tools that managed expanding medical knowledge and supported robust student practice. Within clinical learning, AI aided diagnostic and interpretive processes, prompting medical education curricula to demand relevant AI competency and literacy frameworks. A few studies reported that assessment and feedback processes became more efficient through automated grading and advanced analytics, which reduced faculty workload and offered timely, targeted feedback. Program evaluation and research gained additional insights using AI on careers, diversity, and performance metrics of faculty and learners, improving resource allocations and guiding evidence-based approaches. Despite these possibilities, bias in AI algorithms, concerns about transparency, inadequate ethical guidelines, and risks of over-reliance highlighted the need for cautious, informed AI implementation. By mapping AI tasks to medical education applications, the authors provide a framework for understanding and leveraging AI's potential while addressing technical, ethical, and human-factor complexities in this evolving field.

Chaichana, J., Eley, R., Watling, C., & Ng, L. (2025). [Evaluating eye tracking technology in nursing education: A scoping review on medication administration training](#). *Nursing Reports*, 15(6)

Background: Eye tracking technology, when used in nursing, helps to reduce medication errors by analyzing eye movements. In education, it provides insights into student learning, cognitive load, and instructional design, allowing for more personalized learning. Despite challenges such as the need for technical expertise, privacy concerns, and cost, eye tracking offers real-time feedback that enhances both teaching and learning effectiveness. **Objectives:** To explore the current evidence on the application of eye tracking technology in training nursing students for drug administration. **Conclusions:** Eye tracking has strong potential in nursing education, especially for improving attention and enhancing situational awareness in medication administration. However, limitations such as small sample sizes, technical barriers, and a lack of long-term data remain. Future research should address these gaps with larger, more diverse samples and extended follow-ups.

Hauff, V., Homann, L., & Tannen, A. (2025). [Simulative learning in the room of horror - a method to enhance patient safety in undergraduate nursing education](#). *GMS Journal for Medical Education*, 42(2), Doc19.

Objective: High expectations are placed on healthcare systems concerning safety and health restoration. Simultaneously, healthcare involves risks and potential hazards that may lead to adverse events for patients and healthcare professionals alike. To raise awareness of these risks, it is essential to incorporate the topic of patient safety into healthcare education. The room of horror, a form of simulated learning, represents an effective teaching and learning approach for this purpose. **Methods:** At the end of

their first semester, undergraduate nursing students participated in a room of horror exercise designed following the Swiss manual for interactive learning. The task involved identifying 13 errors relevant to patient safety within the room. Subsequently, the students provided written evaluations of this teaching format. Results: Participants successfully identified twelve out of the thirteen safety-critical errors. All students perceived the simulation as educational and pertinent to professional practice. Heightened risk awareness and relevance to the professional context were particularly highlighted as positive outcomes. Conclusion: The room of horror provides a practical simulation training environment where students can develop observational skills, critical thinking, and situational awareness regarding patient safety risks early in their clinical education.

Tsimtsiou, Z., Pagkozidis, I., Pappa, A., Triantafyllou, C., Vasileiou, C., Stridborg, M., . . . Breda, J. (2025). [What do we know about contemporary quality improvement and patient safety training curricula in health workers? A rapid scoping review](#). *Healthcare*, 13(12)

BACKGROUND AND OBJECTIVE: Despite growing emphasis on quality and safety in healthcare, there remains a limited understanding of how Quality Improvement and Patient Safety (QI/PS) training for health workers has evolved in response to global events like the COVID-19 pandemic and the WHO Global Patient Safety Action Plan. This rapid scoping review aimed to not only identify existing curricula but also uncover trends, innovation gaps, and global inequities in QI/PS education-providing timely insights for reshaping future training strategies. **CONCLUSIONS:** This review reveals both an uneven development and fragmentation in global QI/PS training efforts, alongside emerging opportunities catalyzed by digital transformation and pandemic-era innovation. The findings highlight a critical gap: while interest in QI/PS is growing, scalable, inclusive, and evidence-based curricula remain largely concentrated in a few high-income countries. By mapping these disparities and innovations, this review provides actionable direction for advancing more equitable and modern QI/PS education worldwide, whilst showcasing the need to systematically delve into QI/PS training in underrepresented regions.

Xu, J., Chen, X., Zeng, Y., Tang, J., Long, Y., & Li, L. (2025). [Mapping patient safety competency in undergraduate nursing interns: Insights from a latent profile analysis](#). *Nurse Education Today*, 153, 106813.

BACKGROUND: High patient safety competency promotes safe clinical practice during undergraduate nursing interns' transition to professional roles and lays a strong foundation for their future careers. Identifying potential subgroups of undergraduate nursing interns based on their patient safety competency, along with the associated factors, may offer targeted insights for developing effective educational interventions. AIM: To investigate the level of patient safety competency among undergraduate nursing interns using latent profile analysis, identify potential subgroups and their key characteristics, and explore the factors influencing subgroup membership. **CONCLUSIONS:** The identification of distinct levels of patient safety competency among undergraduate nursing interns underscores the need for targeted educational interventions. The inclusion of a dedicated patient safety course in the nursing curriculum, along with active engagement in evidence-based nursing learning, case discussions, and adverse event analysis during internships, may contribute significantly to the development of high patient safety competency in this population.

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HUMAN FACTORS

Fox, J., McGrail, M., Cha, Y. J., Cho, D., Lu, R. W., Yi, R., & Martin, P. (2025). [A mixed-methods systematic review of sleep duration and quality in healthcare workers: Impacts on patient safety and quality of care](#). *Behavioral Sleep Medicine*, 1-17

OBJECTIVES: The aim of this systematic review was to synthesize evidence on the impacts of sleep duration and quality in healthcare workers on patient safety and quality of care. A secondary aim was to understand the impact of shiftwork and workload characteristics alongside sleep duration and quality. **CONCLUSIONS:** The majority of included studies revealed that patient safety and quality of care are worse where HCWs experience short duration and/or low-quality sleep or are working long and/or irregular shifts.

Hsiao, D., Tirumalai, A. A., John, J., Sheth, S., Frates, B., Ornish, D., & Aggarwal, M. (2025). [Physician mental health: Understanding physician burnout and solutions for well-being](#). *American Journal of Medicine*

Physician burnout has become increasingly prevalent in the United States, and it has significant consequences on the patient, physician, and healthcare system levels. Increasing physician burnout has led to greater physician turnover rates, medical errors, and financial burdens on our healthcare system. This review of physician mental health and burnout discusses key contributing factors, potential solutions, and investigates the benefits of love, social connection, and joy. This paper also addresses burnout specific to female physicians and compares burnout by subspecialty. Understanding the root causes of physician burnout can help us implement meaningful change to mitigate the consequences by reducing stigma, fostering resilience strategies, improving quality of life for physicians, enhancing patient care, and reducing the financial strain on healthcare systems.

Labrague, L. J., Al Sabei, S., Al Rawajfah, O., Burney, I., & AbuAlRub, R. (2025). [Linking emotional exhaustion to adverse patient events in paediatric and women's health nursing units: The mediating role of nurses' adherence to patient safety protocols](#). *International Journal of Nursing Practice*, 31(3), e70026.

BACKGROUND: Emotional exhaustion among nurses is a critical factor that significantly impacts patient safety and the overall quality of care in healthcare settings. Despite its recognized importance, the specific mechanisms by which emotional exhaustion influences adverse patient events are not fully understood. **AIM:** This study examined whether adherence to patient safety protocols could mediate the relationship between emotional exhaustion and adverse patient events **CONCLUSIONS:** Addressing emotional exhaustion through theoretically driven interventions, supportive policies and leadership can enhance adherence to safety protocols and improve patient safety outcomes. By mitigating the impact of emotional exhaustion, healthcare organizations strengthen workforce resilience and promote a culture of safety.

Lasater, K. B. (2025). [Eliminating hospital nurse understaffing is a cost-effective patient safety intervention](#). *BMJ Quality & Safety*

Nelson, T. (2025). [Bullying: A silent threat to clinician well-being and patient safety](#). *Anaesthesia*

Ong, T. S. K., Goh, C. N., Tan, E. K. Y. E., Sivanathan, K. A., Tang, A. S. P., Tan, H. K., & Ng, Q. X. (2025). [Second victim syndrome among healthcare professionals: A systematic review of interventions and outcomes](#). *Journal of Healthcare Leadership*, 17, 225–239.

Background: Second Victim Syndrome (SVS) refers to the significant emotional and psychological distress experienced by healthcare professionals following adverse patient events. While numerous interventions have been developed to support second victims, their effectiveness remains poorly understood. This systematic review aimed to synthesize the evidence on the outcomes of available

interventions targeting SVS. **Conclusion:** SVS interventions, particularly peer support, offer short-term relief but limited long-term impact. There is a critical need for longitudinal research using standardized outcome measures to better evaluate effectiveness. This review highlights the need for system-wide, evidence-based interventions and standardized evaluation metrics to support healthcare professionals effectively.

Wudarczyk, B., Krupa-Nurcek, S., Czapla, M., & Uchmanowicz, I. (2025). [Factors influencing burnout, stress levels, and coping strategies among nursing staff in intensive care units](#). *Frontiers in Public Health*, 13, 1530353.

Introduction: Professional burnout among nurses, particularly in intensive care units, is a significant issue affecting both healthcare professionals and patient care quality. It contributes to increased medical errors and diminished care standards. The objective of this study was to evaluate factors influencing professional burnout in nursing staff working in intensive care units. **Conclusion:** Professional burnout among nursing staff is a multifaceted issue closely related to stress levels, coping mechanisms, and overall life satisfaction. Addressing burnout requires comprehensive approaches that consider these interrelated factors. Practical implications: To reduce burnout among ICU nurses, healthcare institutions should integrate routine stress assessments and provide structured support systems, such as resilience training and peer support programs. These interventions can enhance nurses' ability to manage stress, decrease emotional exhaustion, and ultimately improve the quality of care delivered to patients in high-stress environments like intensive care units.

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RESEARCH AND QUALITY IMPROVEMENT

Alharbi, T. A. F., Rababa, M., Alsuwayl, H., Alsubail, A., & Alenizi, W. S. (2025). [Diagnostic challenges and patient safety: The critical role of accuracy - A systematic review](#). *Journal of Multidisciplinary Healthcare*, 18, 3051–3064.

Background: Accurate diagnosis is critical for patient safety, guiding treatment and preventing harm. Diagnostic errors remain prevalent, contributing to avoidable harm, increased healthcare costs, and morbidity. Understanding diagnostic accuracy is essential to improving clinical outcomes. Despite these benefits, variability in clinical skills and systemic barriers remain substantial obstacles. **Conclusion:** Accurate diagnosis is essential to enhancing patient safety. The results of this review indicate that using AI tools, improving clinician training, and creating standardized diagnostic procedures may help reduce diagnostic errors; however, because of the small dataset and lack of meta-analysis, the findings should be interpreted cautiously. To further evaluate the effect of diagnostic accuracy on patient safety, future research should concentrate on carrying out larger-scale studies and statistical validations.

Arnal-Velasco, D., Martinez-Nicolas, I., Fabregas, N., Bartakke, A., Calsbeek, H., Emond, Y., . . . Romero, E. (2025). [Multidisciplinary, evidence-based, patient-centred perioperative patient safety recommendations: A European consensus study](#). *British Journal of Anaesthesia*,

BACKGROUND: Surgery-related adverse events are among the most common adverse events in-hospital. However, no comprehensive, multidisciplinary perioperative guidelines exist at the European level. The aim of this study is to describe the process and results in achieving European multidisciplinary consensus on perioperative patient safety recommendations. **CONCLUSIONS:** A set of 101 comprehensive, evidence-based, patient-centred perioperative patient safety practices was developed through a European consensus process to improve the quality of care in healthcare facilities across

Europe and beyond.

Pereira, S., Santos, E. J., Fassarella, C. S., & Ribeiro, O. M. (2025). [Effectiveness of the positive nursing practice environment promotion program in improving patient safety in primary health care: Study protocol for a randomized controlled clinical trial](#). *Bjgp Open*,

BACKGROUND: In the past decade, interest in researching nursing practice environments has significantly increased. Multiple studies have highlighted that enhancing these environments offer substantial benefits. A strong association has been established between the nursing practice environment and key factors such as professional satisfaction, safety climate, staff retention, and the quality and safety of care delivered. **CONCLUSION:** We anticipate that this study will provide valuable insights into the effectiveness of a capacity-building program targeted at nurses and its impact on their perceptions regarding the safety climate and nursing practice environment.

Reyes, C., Ponce, L. M., Hannafin, C. L., Flug, J. A., Fishleder, M., & Tan, N. (2025). [Improving patient safety education for radiology residents: Using a quality improvement approach](#). *Current Problems in Diagnostic Radiology*,

BACKGROUND AND OBJECTIVE: The 2021-2022 Accreditation Council for Graduate Medical Education (ACGME) survey of radiology residents at our institution showed a level of participation in safety event investigations that was below ACGME compliance standards. We undertook a quality improvement (QI) project that aimed to increase resident participation in safety event root cause analysis (RCA) and action planning, as well as to enhance the QI training experience for radiology residents. **DISCUSSION:** Addressing the observed decline through structured QI initiatives not only restored compliance with ACGME standards but also strengthened the overall educational experience for residents. This project underscores the critical role of targeted interventions in maintaining high levels of resident engagement in patient safety activities.

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