

CURRENT AWARENESS BULLETIN

PATIENT SAFETY

April 2025

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BREAKING NEWS & EVENTS

New! NICE Guideline published 29th April 2025:

[Overview](#) | [Falls: assessment and prevention in older people and in people 50 and over at higher risk](#) | [Guidance](#) | [NICE](#)

New report: Health Services Safety Investigation Body: [Investigation report: the impact of staff fatigue on patient safety](#) (PDF – published 24th April 2025).

HSJ Patient Safety watch 25th April 2025: [Patient Safety Watch: Don't let NHS capital get stuck in the Whitehall queue, Rachel](#) | [Expert Briefing](#) | [Health Service Journal](#)

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FALLS PREVENTION

Ajibade, B. O. (2025). [Falls risk assessment and prevention in older people in healthcare facilities](#). *British Journal of Nursing*, 34(7), 381–385.

Falls among older adults in healthcare facilities are a significant cause of injury and morbidity, with serious implications for patient health and healthcare costs. This article provides an in-depth review of falls risk assessment tools and prevention strategies, emphasising the multifactorial nature of falls, which include intrinsic factors such as medical conditions and extrinsic factors such as environmental hazards. The article discusses widely used risk assessment tools in the UK, including the Morse fall scale, Stratify, and the timed up and go test, and highlights the importance of a comprehensive, multidisciplinary approach to fall prevention. Evidence-based strategies such as environmental modifications, exercise programmes, medication reviews, and patient education are explored. The article concludes that ongoing assessment, staff training and the integration of technology are vital in reducing falls and improving patient safety in healthcare settings.

Chiu, J., Sarhangian, V., Tosoni, S., Pozzobon, L. D., & Chartier, L. B. (2025). [Associations of hospital unit occupancy with inpatient falls and fall-risk assessment completion: A retrospective cohort study](#). *International Journal for Quality in Health Care*, 37(2)

BACKGROUND: Inpatient fall assessment and prevention efforts are primarily performed by nursing teams. Operating at high occupancy levels may, therefore, reduce the care team's ability to deliver these efforts in a timely and effective way. We investigated the associations of unit-level hospital occupancy with the rate of inpatient fall and the completion of patient fall-risk assessment. **RESULTS:** The final cohort had 83 839 inpatient stays for the fall outcome and 83 853 inpatient stays for the fall-risk assessment outcome. Unit occupancy levels above the estimated tipping point of 95% were associated with an increased rate of falls [Hazard Ratio (HR): 2.10, 95% Confidence Interval (CI): 1.05-4.20], whereas occupancy levels above the estimated tipping point of 77% were associated with a decreased rate of completion of fall-risk assessment [HR: 0.87, 95% CI: 0.82-0.91]. **CONCLUSIONS:** Our study provides evidence for a significant increase in the rate of falls and decrease in the rate of assessment completion when occupancy levels exceed certain tipping points. The results motivate the design of safety protocols tailored for periods of high-capacity strain to support nursing teams and prioritize delivery of assessments and interventions to patients at high risk of fall.

Khalil, A., DeAngelo, B., Paulson, A., & Suico, S. (2025). [Temporal patterns of patient falls in an inpatient rehabilitation facility: A retrospective analysis](#). *American Journal of Physical Medicine & Rehabilitation*. **ABSTRACT: Falls are a significant safety concern in inpatient rehabilitation facilities, where patients often face increased risk due to functional impairments. This retrospective study examined fall trends across days post-admission and daily 2-hour intervals within a single rehabilitation hospital. Linear regression analysis revealed a significant decline in fall rates over time, suggesting a decrease in fall risk as patients acclimate and improve physically. However, two peak periods for falls were identified during early morning and evening hours, aligning with heightened patient activity and staff shift changes. These findings emphasize the need for targeted fall prevention strategies during the initial days post-admission and specific high-risk times of the day. Implementing tailored interventions for these critical periods may reduce fall incidents and enhance patient safety in rehabilitation settings. Copyright © 2025 Wolters Kluwer Health, Inc. All rights reserved.**

Kimberly, L., & Khoiriyati, A. (2025). [Utilizing fall tailoring interventions for patient safety \(TIPS\) toolkit in fall prevention: Scoping review](#). *Geriatric Nursing*, 63, 457–463.

Adult falls constitute a serious and preventable health risk. A recent approach that assists nurses in involving patients and their families in fall prevention is the Fall Tailoring Interventions for Patient Safety (TIPS) toolkit. This scoping review aims to map existing research on this topic, identify gaps, and explore

the tool kit's impact. Four databases were used for the research: Pubmed, Proquest, Science Direct, and Google Scholar. Two reviewers evaluated study eligibility and criteria, identifying nine papers with three themes: Fall TIPS toolkit impact, effectiveness, and barriers. The study highlights the effectiveness of the Fall TIPS toolkit in fall prevention strategies, emphasizing the need for further research to enhance its accessibility and effectiveness.

Maruszewska, A., Ambrozy, T., & Rydzik, L. (2025). [Risk factors and socioeconomic determinants of falls among older adults](#). *Frontiers in Public Health*, *13*, 1571312.

Background: Falls are included in this category due to their high prevalence among people over 60 years of age. The aim of this study is to analyze the relationship between the frequency of falls and selected socioeconomic factors. **Results:** A significant relationship was found between the age of the participants, their level of education ($p = 0.00015$), and the type of work previously performed ($p = 0.00039$) and the frequency of falls. The frequency of falls increased with age, and falls were more common among less educated individuals and those who previously performed physical work. A significant relationship was also found between marital status ($p = 0.00039$), material status ($p = 0.004$), and the number of people in the household ($p = 0.002$) and the frequency of falls. Falls were most frequent among widowed individuals and those with poorer financial situations. People living alone and those living in households with more than two members experienced falls more often. **Conclusions:** These findings suggest that educational background and financial constraints may contribute to fall risk, emphasizing the need for targeted fall prevention programs among vulnerable populations.

Morris, M. E. (2025). [Why hospital falls prevention remains a global healthcare priority](#). *BMJ Quality & Safety*.

Okuyucu, K. (2025). [Enhancing patient safety: Identifying fall risks during patient transfers in operating rooms](#). *BMC Health Services Research*, *25*(1), 557.

BACKGROUND: Transfers within operating rooms present significant risks to patient safety, with falls potentially leading to serious consequences for both patients and staff. The aim of this study is to explore the factors contributing to falls during transfers and strategies to enhance patient safety in operating rooms. **RESULTS:** The thematic analysis identified six key factors contributing to falls during patient transfers: human error, team coordination, patient condition, staffing challenges, equipment issues, and inadequate training. Participants recommended improving team collaboration, pre-operative patient education, better infrastructure (e.g., private elevators), hands-on training, and increased staffing. Additionally, policy changes to limit complex outpatient transfers were suggested to reduce risks. **CONCLUSIONS:** This study provides valuable insights into the risk factors and potential prevention strategies regarding falls during patient transfers in operating rooms. Future research should incorporate multidisciplinary observational studies involving human factors to provide deeper insights. It is recommended to create systems for anonymous incident reporting and implement comprehensive training programs.

Sullivan, R., Harding, K., Skinner, I. W., & Hemsley, B. (2025). [Clinical implications for management of falls in hospital patients with communication disability after stroke: A qualitative meta-synthesis](#). *Journal of Advanced Nursing*.

BACKGROUND: Falls in hospital are a common patient safety incident after stroke. Despite the prevalence of communication disability following stroke, there is little guidance for health professionals to provide effective falls prevention strategies for this population. **RESULTS:** Communication disability often lacks visibility in falls research, hospital policies, and clinical management. Whilst the relationship of communication disability as a risk factor for falls is unclear, communication disability contributes to falls and is a barrier to falls prevention and management. Suggestions for falls prevention include involving family members, tailored falls and stroke education programmes, and improved documentation of the functional impacts of communication

disability. **CONCLUSION:** In recognising the complexities of falls in patients with communication disability, health professionals could provide more targeted, patient-specific falls prevention plans. Further research, inclusive of patients with communication disability following stroke, could provide important insights into their falls and falls management. Research examining the effectiveness of falls prevention strategies for this group is indicated.

Tashiro, H., Hirosaki, S., Sato, Y., Ihira, H., Toki, M., & Kozuka, N. (2025). [Reactive stepping behavior during dual tasking is related to falls in community-dwelling older adults: A cross-sectional study.](#) *Clinical Biomechanics*, 125, 106536.

BACKGROUND: We investigated whether reactive stepping during dual tasking is associated with falls in community-dwelling older adults. **FINDINGS:** Twenty-two participants were classified as fallers. Both fallers and non-fallers exhibited a significantly increased number of steps during dual-tasking compared to the single-task condition. An interaction between group and condition was observed. The increased number of steps to balance recovery from forward balance loss during dual-tasking was significantly associated with falls after controlling for age, sex, body mass, cognitive function, and concerns about falling.

Vaesken, C., Lelong-Boulouard, V., Fedrizzi, S., Muzard, A., Descatoire, P., Loggia, G., Meurant, A. (2025). [Drug-related falls: Proportion and impact of hospitalizations in geriatric departments on the prescription of fall-risk increasing drugs \(FRIDs\).](#) *European Journal of Clinical Pharmacology*, The proportion of hospitalizations for drug-related falls is notably high in geriatric department, and a substantial proportion can be prevented. These findings emphasize the importance of targeting high-risk patients for falls and implementing preventive measures, such as reassessing their medication as recommended in the latest international guidelines for falls prevention. Copyright © 2025. The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature.

Ventre, J. P., Manning, F., Mahmoud, A., Brough, G., Timmons, S., Hawley-Hague, H., Orton, E. (2025). [Factors influencing fall prevention programmes across three regions of the UK: The challenge of implementing and spreading the falls management exercise \(FaME\) programme in a complex landscape.](#) *Age & Ageing*, 54(4) The adoption, implementation and spread of FaME into community settings is complex and faces multiple health system challenges. For adoption and implementation to be facilitated, FaME programmes must demonstrate effectiveness and fit the local needs of those receiving the intervention. For spread to occur, influential decision-makers and funders must support wider programme rollout whilst also securing sufficient expert capacity to deliver the programme and ensure monitoring is in place to determine effectiveness of provision for older adults. Copyright © The Author(s) 2025. Published by Oxford University Press on behalf of the British Geriatrics Society.

Vincenzo, J. L., Wingood, M., Council, S. K., Scott, A. J., Moore, R., Caulley, J. M., & Curran, G. M. (2025). [Determinants of implementing an adapted version of STEADI for fall prevention of older adults attending outpatient rehabilitation in a large health care system.](#) *Journal of Geriatric Physical Therapy*. Physical therapists reported higher adoption rates and lower complexity to implement components original to STEADI or common in physical therapy practice compared to the adapted/additional components added by the health system. The study results can be used to develop and adapt strategies to support the implementation and dissemination of STEADI or adapted versions in other outpatient clinics and health systems. Copyright © 2025 APTA Geriatrics, An Academy of the American Physical Therapy Association.

Xie, R., Shao, L., Pei, J., Shi, Y., Tang, M., Sun, X., Zhao, H. (2025). [Machine learning-based prediction models for falls in hospitalized patients: A systematic review and meta-analysis](#). *Geriatric Nursing*, 63, 487–498. **CONCLUSIONS:** Although machine learning models provide an emerging and promising method for predicting hospital falls, they require broader validation to ensure practical applicability. This review highlights the potential drawbacks of current methods, including high risk of bias and low reproducibility, and provides various recommendations on how to address these challenges.

Zanotto, T., Chen, L., Fang, J. R., Tabatabaei, A., He, J., Bhattacharya, S. B., Sosnoff, J. (2025). [Strategies to minimize fall-related injuries in older adults at risk of falls: The falling safely training \(FAST\) study](#). *Journals of Gerontology Series A-Biological Sciences & Medical Sciences*. **BACKGROUND:** Falls are the leading cause of accidental injury among older adults. Current fall prevention programs are useful but do not target the key variable for injury (i.e., impact force). An approach, which has shown promise in robust older adults, is to teach safe-falling strategies to reduce impact forces. In this single-blinded, pilot randomized controlled trial, we explored the feasibility and preliminary efficacy of a safe-falling program. **CONCLUSION:** Teaching older adults at risk of falls safe-falling strategies is safe and feasible and has the potential to minimize fall-related head impacts and reduce fall morbidity.

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SAFETY CULTURE

Clark, L. (2025). [Safety huddles: Improving patient safety culture](#). *British Journal of Nursing*, 34(7), 356–357.

Dirik, H. F., Seren Intepeler, S., & Hewison, A. (2023). [Adaptation of the safety climate survey: A contribution to improving patient safety](#). *Journal of Nursing Management*, 2023, 3715960.

Aims: The aim of this study was to adapt the Safety Climate Survey and examine its validity and reliability for use in the Turkish healthcare context. **Results:** The content validity index score was 0.97 for the scale and above 0.90 for the items, confirming excellent validity. The confirmatory factor analysis showed an adequate fit, and all the factor loadings were positive and greater than 0.30. Cronbach's alpha was 0.90, and Spearman--Brown coefficient 0.83, indicating good internal consistency. The item-total correlation coefficients were between 0.33 and 0.70, exceeding the acceptable level. The intraclass correlation coefficient value obtained was 0.84, reflecting a good level for time stability. **Conclusion:** The Turkish version of the Safety Climate Survey is a valid, reliable, and practical tool which can provide essential data on safety issues for healthcare professionals and administrators. Implications for Nursing Management. The instrument can be used in hospital settings to measure the safety climate among nurses, and the results obtained can be used to inform the development of safety improvement strategies.

Hendricks, S., Naughton, M., Salmon, P. M., West, S. W., Paul, L., Jones, B., McLean, S. (2025). ['Tackling' safety through a systems thinking approach: Building safety culture within sport](#). *British Journal of Sports Medicine*.

Lee, W., & Jang, I. (2023). [Effect of nurses' professionalism, work environment, and communication with health professionals on patient safety culture \(AHRQ 2.0\): A cross-sectional multicenter study](#). *Journal of Nursing Management*, 2023, 1591128.

Aims: To identify nurses' professionalism, work environment, and communication with healthcare professionals as factors influencing clinical nurses' perception of patient safety culture. **Background:**

Patient safety is a representative indicator of the quality of nursing care. A multidisciplinary approach, including individual and organizational components, is needed to improve patient safety culture. **Conclusions:** Enhancing patient safety culture requires a systematic and organizational approach that considers individual characteristics. Nurse managers play a crucial role in promoting patient safety by employing various communication channels and leading team education and training initiatives to foster collaboration among healthcare professionals. Implications for Nursing Management. The provision of patient safety education directly influences patient safety culture, and continuous education enables nurses to grow within the institution. To ensure effective communication in healthcare settings, nurse managers should prioritize shift communication, evaluate the accuracy of information exchange, and establish diverse communication channels, including social media platforms or business messengers, for internal hospital communication.

Seo, J., & Lee, S. E. (2023). [Effects of nurses' perceptions of patient safety rules and procedures on their patient safety performance: The mediating roles of communication about errors and coworker support](#). *Journal of Nursing Management*, 2023, 2403986.

Aim: This study aimed to (a) examine the relationship between staff nurses' perceptions of patient safety rules and procedures and their patient safety performance and (b) investigate potential mediators of this relationship. **Conclusions:** The findings indicate that the implementation of effective and useful rules and procedures for improving patient safety would facilitate error communication and coworker support, enhancing nurses' patient safety performance. Implications for Nursing Management. Hospital administrators and nurse managers should consider how they can foster conditions in which nurses perceive rules and procedures regarding patient safety as useful and effective.

Voncina, V., Brborovic, H., Brborovic, O., Makovsek, A., & Pavicic Saric, J. (2025). [Effects of implementing an ICU discharge readiness checklist on patient safety culture: A quasi-experimental research study](#). *Healthcare*, 13(7) **Background: Discharging patients from intensive care units (ICUs) poses significant risks for adverse events (AEs), contributing to hospital morbidity and mortality. To mitigate premature transitioning, an ICU discharge readiness checklist (ICU-DRC) was developed. Enhanced patient safety culture (PSC) is crucial for reducing AEs and improving outcomes. Given the pressing need to enhance PSC in ICUs, this study evaluates the impact of ICU-DRC implementation on PSC, aiming to address a critical gap in quality improvement. **Conclusions:** Applying the ICU-DRC as an isolated safety intervention aimed at optimizing ICU patient throughput resulted in observable patterns of improvement in several PSC dimensions, with statistically significant changes in specific areas.**

Yilmaz, A., Yildiz Keskin, A., & Sonmez, B. (2025). [Nurses' perceptions of patient safety culture and voice behaviors: A descriptive and correlational study](#). *Journal of Evaluation in Clinical Practice*, 31(3), e70046. **INTRODUCTION: Patient safety culture and nurses' voice behavior have critical importance in healthcare settings because they influence the quality of care. Therefore, it is important to determine nurses' voice behaviors regarding patient safety **RESULTS:** A moderate and positive significant correlation was found between the positive response total mean score of the patient safety culture and the total employee voice score. In addition, it was determined that the total patient safety culture score, feedback about errors and openness in communication from the patient safety culture sub-dimensions, shift work, and education status were the variables that significantly determined the voice behaviors of nurses. **CONCLUSION:** The study empirically demonstrates that it is necessary to improve the perception of patient safety culture among nurses and hospital administrators, especially the perception of nonpunitive responses to errors, to increase nurses' voice behaviors.**

NEAR MISSES, MEDICATION ERRORS, REPORTING SYSTEMS

Baris, A., & Hacer, C. (2025). [The characteristics of rational drug use and tendency to medical errors among nurses working in children's clinics](#). *Journal of Pediatric Nursing*.

OBJECTIVE: The aim of this study was to investigate the relationship between rational drug use and medical error tendency characteristics of pediatric nurses working in pediatric clinics within public and private hospitals in Mardin province and its districts. **RESULTS:** In this study, the mean score of rational drug use of pediatric nurses was 38.21 +/- 4.21; the mean score of Medical Error Tendency was 231.55 +/- 16.54. According to these findings, it was determined that the pediatric nurses participating in the study had knowledge about rational drug use and had a low tendency to make medical errors. It was determined that pediatric nurses who graduated from high school, worked as responsible nurses, preferred to work in pediatric clinics, and cared for the least number of patients in the clinic had low tendency toward medical errors. **CONCLUSION:** It was found that pediatric nurses had knowledge of rational drug use and had a low tendency to make medical errors. In line with this result, it was recommended that in-clinic training should be provided on these issues and the issue should be investigated with a larger sample in order to increase the reporting of problems related to rational drug use and medical errors by pediatric nurses.

Cui, Y., Wang, Y., Liu, H., Xu, S., & Zhang, X. (2025). [Exploring the correlation between patient safety culture and adverse medical events using failure mode and effect analysis \(FMEA\)](#). *Risk Management & Healthcare Policy*, 18, 1367–1376.

Objective: This study aimed to explore the correlation between medical safety adverse events and patient safety culture through the lens of Failure Mode and Effect Analysis (FMEA). **Conclusion:** Utilizing FMEA to analyze the correlation between medical safety adverse events and patient safety culture is effective in identifying specific dimensions of these events related to safety culture. This enables the development of targeted interventions to mitigate adverse events and enhance patient safety.

Despott, R. A., Vella Bonanno, P., & Gauci, C. (2025). [Risk management of medication errors: Improving the quality of pharmacotherapeutic practice](#). *Pharmacology Research & Perspectives*, 13(3), e70093.

A key challenge when identifying opportunities and prioritizing strategies for quality improvement of healthcare services is an accurate design specification against which clinical performance can be assessed. This study aimed to explore evidence-based methods as a more effective framework for quality improvement in pharmacotherapeutic practices. A stakeholder management matrix was adapted to differentiate the dimensions of the theoretical construct for quality of care and establish a design specification for healthcare practice. A review of drug-related problems (DRPs) associated with preventable medication errors was carried out on individual cases of adverse drug events (ADRs) reported in the EudraVigilance database system. The potential impact of strategies aimed at preventing the underlying root cause medication error (RCME) was evaluated according to the relative frequency and severity of patient harm identified with DRPs. Out of 1750 medication errors reported in the EudraVigilance database, 1300 cases of preventable DRPs were identified, of which 531 (41%) were classified as prescribing errors, 260 (20%) as dispensing errors, and 509 (39%) as errors encountered in drug administration. The highest risk scores were associated with case-based prescribing errors and rule-based drug administration errors. The research builds on a quality risk management approach to assess how targeted interventions may reduce the risk of medication errors. The theoretical model provided a basis for establishing the strategic domains of quality in health care and comparing quality improvement strategies in drug therapy. The measures required to mitigate the highest risk of error include medication review of prescribing practices, unit dose dispensing systems and in-line quality control to avoid treatment administration errors, and patient education in dispensing practice. This framework is independent of the healthcare or institutional setting and may be applied on a broad scale

for sharing best practices, harmonization of standards, and elimination of disparities in treatment outcomes.

Dogan, M. B., & Kebapci, A. (2025). [Understanding ICU nurses' attitudes toward medical errors and error reporting: A cross-sectional study](#). *American Journal of Nursing*, 125(5), 24–31.

BACKGROUND: Patient care in the ICU setting is notoriously complex, leading to a higher frequency of medical errors. Despite extensive research on the causes, much remains unclear regarding nurses' attitudes toward medical errors and the barriers to reporting. The need for effective preventive solutions is urgent. **RESULTS:** Although participants' attitudes toward medical errors and error reporting were positive overall, about half of nurses acknowledged that they had made a medical error and a large percentage of those had not reported it. Several variables were found to be significantly related to nurses' attitudes, including age, clinical position, willingness to be a nurse, willingness to continue working as an ICU nurse, job satisfaction, and attendance at relevant training or educational programs. Other factors also affected nurses' attitudes, including having made an error but not informing the charge nurse and the various reasons for this. **CONCLUSIONS:** The study findings indicate that although nurses generally have a good awareness of the importance of recognizing and reporting medical errors, more must be done. To prevent medical errors, we recommend prioritizing this topic in undergraduate education and training and in in-service workshops and improving the use of health care technologies. Policies that encourage error reporting without punishment, legal support for nurses, and the proactive engagement of nursing leadership are vital to fostering a culture of continuous improvement and patient safety.

Guntschnig, S., Barbosa, R., Jenzer, H., Greening, M., Hayde, J., Heery, H., Mulac, A. (2025). [Tackling medication errors: How a systems approach improves patient safety](#). *European Journal of Hospital Pharmacy Science & Practice*.

OBJECTIVES: Medication errors are a leading source of preventable harm in healthcare, affecting approximately 1 in 30 patients, with a substantial proportion resulting in severe outcomes. In response, the European Association of Hospital Pharmacists convened a Special Interest Group (SIG) to propose comprehensive and sustainable strategies for reducing these errors across Europe, employing a systems approach. **CONCLUSIONS:** Findings highlight the critical need for robust governance, comprehensive policy frameworks and enhanced safety cultures to prevent medication errors. Automation and improved human-machine interfaces are recommended to mitigate active failures and enhance system reliability. This systems-thinking approach, supported by strengthening legislation and better resource allocation, is essential for reducing medication errors and improving patient safety.

Johns, E., Guendouz, A., Dal Mas, L., Beck, M., Alkanj, A., Gourieux, B., . . . Michel, B. (2025). [Using machine learning to predict pharmaceutical interventions during medication prescription review in a hospital setting](#). *American Journal of Health-System Pharmacy*.

OBJECTIVE: Medication errors are a worldwide public health issue. Reducing inappropriate medication use is a daily challenge for clinical pharmacists. Computerization of the medication process and the rise of artificial intelligence make it possible to develop tools to detect inappropriate prescriptions. Our main goal was to compare the performance of two machine learning models capable of predicting the probability of a prescription requiring pharmaceutical intervention (PI) using hospital data. **CONCLUSION:** The LGBM model showed superior performance in detecting inappropriate prescriptions, potentially improving the thoroughness and efficiency of prescription review. While further studies are needed to confirm these findings, the model holds significant promise for advancing hospital clinical pharmacy and enhancing patient care through optimized prescription management.

Khosravi, A., Mahat, S., Syyrila, T., & Harkanen, M. (2025). [Negative emotions experienced on the occurrence of medication errors by nurses: A mixed-method systematic review](#). *Journal of Clinical Nursing*, AIM: This study aims to explore the negative emotions experienced by nurses following medication errors. **CONCLUSIONS: The negative emotions that nurses experience as second victims can persist long after the error occurs. It underscores the need for structured psychological support systems to foster a culture of 'responsibility without blame'.**

Orkaby, B., Kerner, E., Saban, M., & Levin, C. (2025). [Bridging generational gaps in medication safety: Insights from nurses, students, and generative AI models](#). *BMC Nursing*, 24(1), 382.

BACKGROUND: This study investigated medication dose calculation accuracy among nurses, nursing students, and Generative AI (GenAI) models, examining error prevention strategies across generational cohorts. **METHODS:** A cross-sectional study was conducted from June to August 2024, involving 101 pediatric/neonatal nurses, 91 nursing students, and four GenAI models. Participants completed a questionnaire on calculation proficiency and provided recommendations for error prevention. Qualitative responses were analyzed to describe attitudes and perceptions. **RESULTS:** 70% of nurses reported previous medication errors compared to 19.5% of students. Thematic analysis identified six key areas for error prevention: double-checking, calculation methods, work environment, training, drug configuration, and technology use. Only students recommended GenAI integration, while nurses emphasized double-checking. **CONCLUSIONS:** The study highlights generational differences in medication safety approaches and suggests potential benefits of incorporating GenAI as an additional verification layer. These findings contribute to improving nursing education and practice through technological advancements while addressing persistent medication calculation challenges.

Sim, W. H. (2025). [Development and evaluation of a multifaceted intervention program for preventing medication administration errors by nurses](#). *Journal of Patient Safety*.

OBJECTIVE: This study aimed to develop and evaluate a multifaceted intervention program based on the Systems Engineering Initiatives for Patient Safety (SEIPS) model to prevent medication administration errors (MAEs) by nurses in an adult general ward of a comprehensive hospital in Seoul, South Korea. **CONCLUSION:** The program improved patient safety awareness and medication safety compliance, validating its approach. This study highlights the importance of theoretically based interventions and suggests shifting from solely nurse education to addressing systemic issues for medication safety.

Stephan, C., Kloor, D., Wurmbach, V. S., & Mahler, C. (2025). [Instruments for measuring healthcare professionals' medication safety competence: A scoping review](#). *Journal of Multidisciplinary Healthcare*, 18, 1745–1758. Elderly patients with chronic diseases often use several drugs (polypharmacy). The more drugs a patient uses, the greater the risk of medication errors. To ensure a safe medication process, healthcare professionals must have a high level of medication safety competence (MSC). Hence, instruments are needed to measure healthcare professionals' MSC and identify areas where improvement is required. A scoping review was conducted to obtain a comprehensive overview of existing instruments. The scoping review was carried out in accordance with the JBI methodology for scoping reviews and in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). An a priori protocol was registered on Open Science Framework <https://osf.io/73dmq>. The search, performed in January 2024 in six databases, yielded 3740 results, duplicates were removed and 2499 titles and abstracts were screened. Full text screening of 28 articles resulted in the inclusion and analysis of 15 articles. A total of six instruments were identified, all instruments were designed for nurses or nursing students. However, no instrument to assess, eg physicians' or pharmacists' MSC was identified. Five of the six instruments were used in clinical setting and three in educational setting. The Medication Safety Competence Scale (MSCS) and the Medication Safety Scale cover the multidimensionality of MSC. The MSCS's psychometric properties were considered acceptable. Thus, the MSCS can be used to assess nurses MSC in clinical and educational settings.

Suen, K., Shrestha, S., Osman, S., & Paudyal, V. (2025). [Association between patient race/ethnicity, health literacy, socio-economic status, and incidence of medication errors: A systematic review](#). *Journal of Racial & Ethnic Health Disparities* **INTRODUCTION:** Medication errors represent a significant source of healthcare-related harm, leading to mortality, morbidity, and substantial costs to health systems. Existing evidence highlights dissatisfaction and perceived discrimination experienced by patients from minority ethnic and disadvantaged backgrounds within healthcare settings. **CONCLUSION:** Minority ethnic background, low socio-economic status, and low health literacy can risk a higher likelihood of patients experiencing medication errors. Increasing awareness of these disparities among healthcare staff is essential for developing targeted interventions to mitigate inequalities in patient experiences and care outcomes in relation to medication use and safety. Future research should investigate the importance of intersectionality, such as multiple social disadvantages in this context.

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SEPSIS

Cagino, L. M., Walzl, E., McSparron, J. I., Heath, M., Swaminathan, L., White, D. B., Prescott, H. C. (2025). [Goals of care assessment during hospitalization for sepsis](#). *Annals of the American Thoracic Society*

INTRODUCTION: Sepsis is a common cause of hospital mortality, as well as new morbidity among survivors. Clinical practice guidelines recommend assessing goals of care (GoC) during sepsis hospitalization to ensure goal-concordant care is provided. **CONCLUSION:** GoC assessment did not occur consistently during sepsis hospitalization in this multi-hospital cohort, even among higher-risk patients, and there was marked variation in practice across hospitals. Future work is needed to better understand what drives high performance in assessing GoC.

Garg, D., Gupta, P., Sharma, J. C., & Singh, M. (2025). [Evaluation of early-onset sepsis calculator among clinically well late-preterm and term neonates: A prospective cohort study](#). *Pediatric Infectious Disease Journal*, **BACKGROUND:** Kaiser Permanente Northern California Sepsis Risk Calculator (KPNC SRC) is a widely recognized tool for assessing early-onset sepsis (EOS) risk in neonates, reducing diagnostic testing and empirical antibiotic use. This study evaluated its potential utility in a low-middle-income country setting with limited group B Streptococcus screening facilities. **CONCLUSION:** With only 1 culture-proven EOS case among 1157 neonates, the sample size was a limitation to draw conclusions on the safety of implementing the SRC. However, the study provided valuable insights, and in our setting, the KPNC SRC could offer an alternative approach in predicting the risk of EOS among term and near-term neonates clinically well at birth, potentially reducing the use of empirical antibiotics, though with a slight increase in laboratory evaluations. No risk assessment tool is flawless, emphasizing the importance of educating parents on warning signs of EOS.

Klompas, M., & Rhee, C. (2025). [Revising sepsis definitions to better target and tailor sepsis care](#). *Clinical Infectious Diseases* How we define sepsis has significant implications for clinical care, quality improvement, and regulatory policies. Current sepsis criteria identify heterogeneous patients that vary widely in their clinical syndromes, triggering pathogens, and prognoses; one-third have viral or non-infectious processes and crude mortality rates vary 30-fold. Nonetheless, clinicians have been trained to treat all patients with possible sepsis immediately, aggressively, and uniformly with broad-spectrum antibiotics. Evidence continues to mount, however, that immediate antibiotics are critical for patients with septic shock or multiorgan dysfunction but short delays can safely be tolerated by patients with single organ dysfunction without shock. This allows time to clarify whether these patients are infected or not. We suggest modifying sepsis operational definitions to flag just those patients in whom short antibiotic delays are associated with worse outcomes. This will help focus sepsis care where it is needed, aid antibiotic stewardship, and increase the validity of sepsis quality measures.

Liebzeit, D., Kumar, A., Hein, M., Perkhounkova, Y., & Krupp, A. (2025). [Sepsis survivors' functional recovery and symptom experience following intensive care unit hospitalization](#). *Professional Case Management*. **PURPOSE OF STUDY:** The purpose is to describe sepsis survivors' functional recovery and symptom experience following Intensive Care Unit (ICU) hospitalization. **IMPLICATIONS FOR CASE MANAGEMENT PRACTICE:** Findings reveal trends in mobility recovery and symptom experience post-hospitalization, which are important considerations post-ICU sepsis hospitalization. This study reinforces the need to promote early mobilization of patients during hospitalization and work with patients to develop strategies for mobility recovery post-hospitalization, as part of a comprehensive plan which integrates a client's medical, behavioral, social, psychological, functional, and other needs. The authors encourage assessment of common symptoms, including pain, fatigue, anxiety, and sleep disturbance, experienced by sepsis survivors during and post-hospitalization. As a result, case managers will be better positioned to implement evidence-based interventions to promote recovery and reduce symptom burden and improve outcomes. Evidence-based interventions should include those that are centered on client's functional and symptom-related needs, preferences, safe mobility, and facilitate awareness of and connections with community supports and resources.

Lounsbury, O., O'Hara, J., Brent, A. J., & Higham, H. (2025). [Designing better systems to navigate the sepsis-antimicrobial stewardship tension](#). *The Lancet Infectious Diseases*. Sepsis is a leading cause of preventable death and requires timely antimicrobial treatment to reduce mortality. Despite extensive sepsis management guidelines, high-income countries continue to have considerable rates of sepsis mortality, indicating a gap between guideline quality, usability, and practical application. Simultaneously, the rise of antimicrobial resistance threatens the efficacy of antimicrobial therapies for infection control, underscoring the tension between sepsis management and antimicrobial stewardship. This Personal View explores how system factors, such as people, environments, tools, technologies, and tasks, influence the sepsis-antimicrobial stewardship tension. With the Systems Engineering Initiative for Patient Safety, we use a case study to highlight how organisational pressures, inadequate diagnostic tools, and sociocultural factors drive the gap between work-as-imagined and work-as-done. These latent safety risks that impede guideline adherence and contribute to unintended antimicrobial use highlight the need to design better systems, not blame individuals for non-compliance. We argue that addressing sepsis and antimicrobial resistance requires a holistic systems approach and that every discipline, including policy makers, clinicians, researchers, and drug developers, should adopt systems thinking in the design of interventions intended to address this problem. This shift is essential to ensuring effective care for patients today while safeguarding the effectiveness of antimicrobials tomorrow.

You, S. B., Hirschman, K. B., Stawnychy, M. A., Song, J., Sang, E., Pitcher, K., . . . Bowles, K. H. (2025). [Qualitative study of the context of health information technology in sepsis care transitions: Facilitators, barriers, and strategies for improvement](#). *Journal of the American Medical Directors Association*. **OBJECTIVE:** To examine how health information technology (HIT) supports timely post-acute home health and outpatient care for sepsis survivors by identifying facilitators, barriers, and proposed strategies. **CONCLUSIONS AND IMPLICATIONS:** HIT plays a central role in care transitions, improving information sharing, communication, and coordination, ultimately enhancing patient outcomes and safety. Administrators can improve data integration and quality monitoring with interoperable systems, and policymakers can promote adoption through financial incentives. The advancement of technologies, including HIT tools, may offer opportunities to further optimize sepsis identification, communication, and care coordination, promoting seamless care transitions.

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SIMULATION, AI, TECHNOLOGY, GAMIFICATION

Aldardeir, N., Abdullah, Q. K., & Jones, L. (2025). [Patient safety education in undergraduate medical education through a global lens: A scoping review](#). *BMC Medical Education*, 25(1), 544.

BACKGROUND: Patient safety, an organizing framework to minimize risks and harm to patients in healthcare delivery, is broadly accepted as a crucial component of global undergraduate curricula. The incorporation of Patient Safety Education (PSE) into medical curricula, as suggested by the World Health Organization (WHO) can be challenging and has been partially and inconsistently applied. Factors such as densely packed curricula, gaps in the evidence-base, under-prepared faculty, and low levels of organizational support have influenced implementation. This review highlights teaching and learning evidence relevant for such integration of PSE into undergraduate medical education and considers variations in educational advancement across different regions referred to as WEIRD (Western, Educated, Industrialized, Rich and Democratic) and Non-WEIRD countries. **CONCLUSIONS:** Most publications and discourses emerged from WEIRD countries. Whilst outlining a range of pedagogical methods and curricular design, few explicitly referenced educational theories or addressed faculty development needs. Greater attention to cultural perspectives, local adaptation, efficacy of implementation strategies is needed globally. Research into longitudinal studies and impact on educational institutions will aid our understanding of how to promote, create and evaluate PSE across diverse countries.

Alfstad, E., Lockertsen, V., Johannessen, A., & Werner, A. (2025). [The applicability of a structured learning programme focusing on improving observational competencies to strengthen patient safety: A qualitative study with professionals in primary healthcare services](#). *BMC Health Services Research*, 25(1), 547.

BACKGROUND: Primary healthcare in many Western countries faces increased patient care needs due to shorter hospital stays and an ageing population suffering from complex conditions. A shortage of qualified professionals jeopardises the quality of care in primary healthcare settings. Literature indicates that the quality of care and the occurrence of adverse events are linked to the observational competencies of healthcare professionals. In Norway, patient safety competence programmes, such as ClinObsMunicipality, have been developed to improve healthcare professionals' observational competencies in recognising and responding to clinical deterioration, thereby ensuring safety in primary healthcare. In this study, we aimed to explore and describe how healthcare professionals experienced and perceived learning and training in this competence-building programme. Specifically, we focused on their reflections on its applicability in clinical practice. **CONCLUSION:** This study highlights that healthcare professionals experienced learning and training in the competence programme as applicable to their clinical practice. Group-learning activities fostered a supportive environment where participants could engage with cases and scoring tools relevant to their clinical settings. This approach enhanced their observational competencies, deepened their understanding of team roles and strengthened interprofessional communication and collaboration, which may positively impact patient care and safety in primary healthcare settings. While the programme empowered healthcare professionals through increased autonomy, it also uncovered hesitance in critical situations among some participants, suggesting complex awareness and the urgency of timely interventions.

Baris, M., Schaper, N. v., Weis, H. S., Frohlich, K., Rustenbach, C., Herrmann-Werner, A., Salewski, C. (2025). [Surgical simulation in emergency management and communication improves performance, confidence, and patient safety in medical students](#). *Medical Education Online*, 30(1),

2486976.

INTRODUCTION: This study aims to enhance the confidence and operational safety of 5th-year medical students in the operating room (OR), addressing their corona pandemic gap in surgical training. **RESULTS:** Initially, the pre-test performance of the 126 participants on the phantom operation was suboptimal, ranging from poor to mediocre. Notably, the retest outcomes demonstrated significant surgical performance improvements following the targeted lessons (e.g. blood loss pre-test 906 +/- 468 mL, retest 292 +/- 173 mL, p : Initially, the pre-test performance of the 126 participants on the phantom operation was suboptimal, ranging from poor to mediocre. Notably, the retest outcomes demonstrated significant surgical performance improvements following the targeted lessons (e.g. blood loss pre-test 906 +/- 468 mL, retest 292 +/- 173 mL, p : Initially, the pre-test performance of the 126 participants on the phantom operation was suboptimal, ranging from poor to mediocre. Notably, the retest outcomes demonstrated significant surgical performance improvements following the targeted lessons (e.g. blood loss pre-test 906 +/- 468 mL, retest 292 +/- 173 mL, p **DISCUSSION:** This approach appears to foster a justified increase in confidence and surgical performance, potentially elevating patient safety among students and residents in training.

Faridi, S., Farsi, Z., Rajai, N., Kalyani, M. N., & Fournier, A. J. (2025). [Effectiveness of multimedia electronic training on the nurses' adherence to patient safety principles: A randomized controlled trial. Health Science Reports, 8\(4\), e70621.](#)

Background and Aims: Ensuring patient safety is a fundamental responsibility of nurses. Training methods that enhance nurses' adherence to patient safety principles are essential, especially in critical situations where face-to-face training may not be feasible. This study aimed to investigate the effectiveness of multimedia electronic training in improving nurses' adherence to patient safety principles. **Methods:** This randomized controlled trial was conducted in 2021 and 2022 with 60 nurses from a hospital in Tehran, Iran. Participants were randomly assigned to the intervention (n = 30) and control (n = 30) groups. Both groups attended an initial face-to-face session to introduce the study objectives. The intervention group then received a multimedia electronic training program on patient safety principles over 6 weeks (six 2-h sessions) and had access to a web-based question-and-answer platform. The control group received no intervention. Data were collected using an individual characteristics questionnaire and a patient safety adherence scale (with reverse scoring) before and 14 days after training. Statistical analyses, including independent t-tests, paired t-tests, chi² tests, and Fisher's exact tests, were conducted using SPSS software (p tests, and Fisher's exact tests, were conducted using SPSS software (p **Results:** Before the intervention, no significant difference was observed between the intervention and control groups in adherence scores (144.17 +/- 17.43 vs. 143.13 +/- 18.22, p = 0.823). However, after training, the intervention group had significantly higher scores than the control group (166 +/- 0.439 vs. 144.50 +/- 17.71, p : Before the intervention, no significant difference was observed between the intervention and control groups in adherence scores (144.17 +/- 17.43 vs. 143.13 +/- 18.22, p = 0.823). However, after training, the intervention group had significantly higher scores than the control group (166 +/- 0.439 vs. 144.50 +/- 17.71, p : Before the intervention, no significant difference was observed between the intervention and control groups in adherence scores (144.17 +/- 17.43 vs. 143.13 +/- 18.22, p = 0.823). However, after training, the intervention group had significantly higher scores than the control group (166 +/- 0.439 vs. 144.50 +/- 17.71, p **Conclusion:** Multimedia electronic training is an effective approach to enhancing nurses' adherence to patient safety principles. This method is particularly beneficial in situations where traditional face-to-face training is unavailable. Integrating multimedia e-learning into nursing education programs is recommended to improve patient safety outcomes.

Hosseinpour, A., & Keshmiri, F. (2025). [The effect of interprofessional game-based learning on perceived cognitive load and self-efficacy in interprofessional communication and collaboration in patient safety incidents. PLoS ONE \[Electronic Resource\], 20\(4\), e0321346.](#)

BACKGROUND: This study aims to investigate the effect of the interprofessional game-based learning

method on students' perceived cognitive load and self-efficacy in interprofessional communication and collaboration during patient safety incidents, in comparison to traditional instructional methods. **CONCLUSION:** The IP-GBL enhanced germane cognitive load and decreased the intrinsic and extrinsic cognitive load, which facilitated students' learning. Patient safety training using interprofessional game-based learning has a favorable educational effect on students' self-efficacy. The findings indicated that the students' self-efficacy in interprofessional collaboration and communication regarding patient safety incidents in the surgical department significantly improved. Therefore, the interprofessional game-based learning method in formal and informal education of patient safety that requires collaboration between different professions is recommended.

Jitwiriyanont, S., Rawan, R., & Narajeenron, K. (2025). [Advancing politeness and assertive communication through tone of voice in crisis team situations: Pre-post acoustic analysis study of team and strategies to enhance performance and patient safety \(TeamSTEPPS\) virtual simulation for interprofessional education in health care undergraduate students](#). *Journal of Medical Internet Research*, 27, e66988.

BACKGROUND: Effective interprofessional communication, including politeness, respect for coworkers, and self-control, is crucial in emergency care. These values are emphasized by both Thai and US cultures. Notably, nurses place greater significance on respect and self-control than physicians, underscoring the need for physicians to recognize and adopt these attributes, especially in interactions with nursing staff. To develop these competencies, interprofessional education (IPE) programs are essential, with simulation-based IPE, particularly virtual simulations, showing promise in enhancing teamwork and communication. However, research on the tone of voice in emergency communication is limited, especially in Thailand, where standardized IPE curricula are lacking. **CONCLUSIONS:** TeamSTEPPS virtual simulation IPE, using a 3D computer-based or VR approach, effectively enhances interprofessional nonverbal communication by improving key acoustic features related to politeness and assertiveness within the Thai culture context. Medical and nursing students showed the most notable gains, whereas quieter more controlled communication styles emerged among the other groups. The results demonstrate the ways in which vocal modulations can reflect role-specific responsibilities and interpersonal sensitivity in clinical interactions. These findings highlight the significance of tailored virtual simulation IPE programs for improving teamwork and patient outcomes across health care disciplines.

O'Hara, J. K., Ramsey, L., Partridge, R., Redford, C., McHugh, S., Louch, G., Langley, J. (2025). [The learn together programme \(part A\): Co-designing an approach to support patient and family involvement and engagement in patient safety incident investigations](#). *Frontiers in Health Services*, 5, 1529035.

Background: Whilst patients and families can and do support patient safety in several ways, empirical evidence for the specific impact of involvement in patient safety incident investigations and their outcomes, has been limited, with little information about how to undertake involvement meaningfully. Aim: We aimed to (i) develop a set of common principles to guide involvement of patients and families in patient safety incident investigations; (ii) develop a working programme theory for how these might be enacted; (iii) co-design guidance to support the meaningful involvement of patients and families in patient safety incident investigations. Methods: We synthesised three existing data sets (a literature review, a documentary analysis of incident investigation policies and 42 interviews with patients, families, lawyers, incident investigators, and healthcare staff) relating to patient and family involvement in incident investigations. Ten common principles and a working programme theory were drafted. Within a convened co-design community, we then developed guidance for patients, families, staff, and investigators in local NHS Trust and national investigations, via a series of workshops. Findings: We developed ten "common principles" and a working programme theory for an approach that might support meaningful patient and family involvement in incidents investigations. Based on these principles and the programme theory, we co-designed guidance to be used within NHS Trust and national

investigations of harm that follow patient safety incidents. The guidance includes information, resources and tools to enable better understanding and practice, from the perspective of patients, families, investigators and staff, on how to be meaningfully involved. Conclusions: Our ten common principles and co-designed guidance emphasise two key things. First, that organizational learning is not the only desired outcome for incident investigations, with patients, families and staff reporting the need for restoration and repair. Second, that investigations can be part of reparation, but when it fails to address the needs of stakeholders arising from investigations, it can compound the harm of the original incident. As a result, we juxtapose existing theories, and illuminate new insights, proposing a theory of "restorative learning". We see design as an ongoing phenomenon-the guidance is our current iteration, and we learnt several valuable lessons about doing co-design.

Restrepo-Tamayo, L. M., Gasca-Hurtado, G. P., Machuca-Villegas, L., & Morillo-Puente, S. (2025). [Relationship between gamification elements and social and human factors using the simple additive weighting method](#). *PLoS ONE [Electronic Resource]*, 20(4), e0320419.

Gamification is a strategy to stimulate social and human factors (SHF) that influence software development productivity. However, software development teams must improve their productivity to face the challenges of software development organizations. Traditionally, productivity analysis only includes technical factors. Literature shows the importance of SHFs in productivity. Furthermore, gamification elements can contribute to enhancing such factors to improve performance. Thus, to design strategies to enhance a specific SHF, it is essential to identify how gamification elements are related to these factors. The objective of this research is to determine the relationship between gamification elements and SHF that influence the productivity of software development teams. This research included the design of a scoring template to collect data from the experts. The importance was calculated using the Simple Additive Weighting (SAW) method as a tool framed in decision theory. Three criteria were considered: cumulative score, matches in inclusion, and values. The relationships of importance serve as a reference value in designing gamification strategies that promote improved productivity. It extends the path toward analyzing the effect of gamification on the productivity of software development. This relationship facilitates designing and implementing gamification strategies to improve productivity.

Schumacher, D. J., Hearn, J., & Kakara Anderson, H. L. (2025). [Patient safety or prejudice? challenging disability discrimination in medical training](#). *Medical Education*.

Su, J. J., Chan, M. H. S., Ghisi, G. L. d. M., Kwan, R. Y. C., Wong, A. K. C., Lin, R., . . . Batalik, L. (2025). [Real-world mobile health implementation and patient safety: Multicenter qualitative study](#). *Journal of Medical Internet Research*, 27, e71086.

BACKGROUND: Mobile health (mHealth) is increasingly being used in contemporary health care provision owing to its portability, accessibility, ability to facilitate communication, improved interprofessional collaboration, and benefits for health outcomes. However, there is limited discourse on patient safety in real-world mHealth implementation, especially as care settings extend beyond traditional center-based technology usage to home-based care. CONCLUSIONS: As health care systems increasingly adopt mHealth solutions globally to enhance both patient care and operational efficiency, it becomes crucial to understand the implications for patient safety in these new care models. Health care professionals recognized the importance of patient safety in making mHealth usage reliable and sustainable. The promotion of mHealth should be accompanied by the standardization of mHealth services with institutional, health care system, and policy-level support. This includes fostering mHealth acceptance among health care professionals to encourage appropriate referrals, accommodate changes, ensure patient comprehension, and proactively identify and address threats to information security. Copyright ©Jing Jing Su, Michelle Hui Shan Chan, Gabriela Lima de Melo Ghisi, Rick Yiu Cho Kwan, Arkers Kwan Ching Wong, Rose Lin, Jerry Wing Fai Yeung, Qijun He, Garyfallia Pepera, Ladislav Batalik.

HUMAN FACTORS

Alsobou, N., Rayan, A. H., Baqeas, M. H., ALBashtawy, M. S., Oweidat, I. A., Al-Mugheed, K., & Abdelallem, S. M. F. (2025). [The relationship between patient safety culture and attitudes toward incident reporting among registered nurses](https://libkey.io/libraries/2838/10.1186/s12913-025-12763-0). *BMC Health Services Research*, 25(1), 612. <https://libkey.io/libraries/2838/10.1186/s12913-025-12763-0>

BACKGROUND: Patient safety is a primary concern in healthcare due to errors and low incident reporting rates. A strong safety culture and positive attitudes towards reporting are crucial for improving patient safety culture (PSC). Overcoming barriers and conducting research can enhance incident reporting, foster a safety culture, and improve patient outcomes. CONCLUSION: This study discovered a positive correlation between patient safety culture and attitudes toward incident reporting among Jordanian nurses. Enhancing patient safety culture and adopting non-punitive measures can effectively improve incident reporting behavior within healthcare settings.

Awad, S., Loveday, T., Lau, R., & Baysari, M. T. (2025). [Development of a human factors-based guideline to support the design, evaluation, and continuous improvement of clinical decision support](#). *Mayo Clinic Proceedings.Digital Health*, 3(1), 100182.

Objective: To develop a vendor-agnostic, human factors (HF)-based guideline to guide the design, evaluation, and continuous improvement of clinical decision support (CDS). Participants and Methods: The study used a 2-phased iterative approach between June 2022 and June 2024. Phase 1 involved a search for relevant industry standards and literature and consultation with multidisciplinary subject matter experts. Phase 2 involved a workshop with 30 health care and academic stakeholders to evaluate face validity and perceived usefulness of the initial section of the guideline. Participants were asked if the guideline met their expectations, to report on usefulness and ease of use and to suggest areas for improvement. Results: Phase 1 resulted in a compilation of accessible, best practice, and context-appropriate HF guidance for CDS design and optimization. The guideline supports users in determining whether use of CDS is appropriate, and if yes, CDS options and design guidance. During phase 2, the guideline addressed 15 of participants' 19 expectations for a CDS guideline. Participants said the guideline was helpful, comprehensive, easy to use, and provided step-by-step guidance, boundaries, and transparency around CDS decisions. Participants recommended strengthening guidance around the need to understand system capabilities and the technical burden or complexity of CDS, and further guidance on how to approach CDS optimization using the guideline. Conclusion: The 2-phased iterative development and feedback process resulted in the development of an HF-informed guideline to provide consolidated, accessible, and current best practice guidance on the appropriateness of CDS and CDS options, as well as designing, evaluating, and continuously improving CDS. Future work will evaluate the impact and implementation of the guideline in real-world settings.

Clarke, S. P., & DePesa, C. D. (2025). [Overtime and agency nurse staffing and impacts on patient safety](#). *JAMA Network Open*, 8(4), e252880.

Cotobal Rodeles, S., Martin Sanchez, F. J., & Martinez-Selles, M. (2025). [Physician and medical student burnout, a narrative literature review: Challenges, strategies, and a call to action](#). *Journal of Clinical Medicine*, 14(7).

Background: Burnout is a state of emotional, physical, and mental exhaustion produced by excessive and prolonged professional stress. Its prevalence is unclear, and figures from 2 to 81% have been reported, although studies focused on this issue are scarce and inconsistent definitions and the absence of validated measurement tools make comparisons difficult. Conclusions: Burnout is common in physicians and medical students, negatively affecting mental health, professional/academic efficacy,

and patient outcomes. Addressing burnout requires a multifaceted approach, including individual strategies and systemic changes within institutions.

Iacobucci, G. (2025). [Fatigue among healthcare staff should be recognised as serious risk to patient safety, says watchdog](#). *BMJ*, 389, r816.

Kushniruk, A., & Kaufman, D. (2024). [Human factors and organizational issues in health informatics: Review of recent developments and advances](#). *Yearbook of Medical Informatics*, 33(1), 196–209.

OBJECTIVE: In this paper we focus on a review of key articles published in the past two years (2022 and 2023) in the areas of human factors and organizational issues in health informatics. CONCLUSION: The importance of human factors is becoming recognized as new forms of health technology appear. A multi-level perspective on human factors, that considers human factors at multiple levels, from the individual user to the complex social and organizational context, was described to consider the range and diversity of human factors approaches in healthcare. Such an approach will be needed to drive the design and evaluation of useful and usable healthcare information technologies.

Lee, S. E., & Lee, J. W. (2024). [Effects of hierarchical unit culture and power distance orientation on nurses' silence behavior: The roles of perceived futility and hospital management support for patient safety](#). *Journal of Nursing Management*, 2024, 6564570.

Background: Patient safety is paramount in healthcare, and effective communication is a cornerstone of preventing adverse patient events. Despite nurses' crucial role in improving patient safety, they often keep silent about their concerns. This study investigated links among hierarchical unit culture, nurses' power distance orientation, perception of futility, and silence behavior in healthcare environments. Moreover, we aimed to determine whether nurse-perceived hospital management support for patient safety moderated the association between nurses' perceived futility and silence behavior. Conclusion: Our findings highlight the crucial influence of organizational culture on nurses' silence behavior. The findings also underscore the importance of hospital management support with respect to patient safety. Management support may be necessary to combat nurses' perceived futility and to promote open communication.

Ma, F., Zhu, Y., Liu, L., Chen, H., Liu, Y., & Zhang, F. (2025). [Assessing the impact of burnout on nurse safety behaviors and patient safety competence: A latent profile analysis study](#). *Journal of Nursing Management*, 2025, 3793927.

Aim: This study examines the association between burnout, nurse safety behaviors, and patient safety competency among nurses working in cancer hospitals using person-centered and variable-centered methodologies. Conclusion: This study identified three heterogeneous latent profiles of burnout among cancer hospital nurses and highlighted the significant impact of excessive working hours and lack of safety training on burnout across different job titles and income levels. Additionally, it verified the mediation effect of patient safety competency between burnout profiles and nurse safety behaviors. Future treatments should focus on high-risk populations by offering improved safety training and suitable work schedules to reduce burnout. Furthermore, personalized measures to enhance nurses' safety competencies should be adopted to improve burnout and safety behaviors. This study integrates person-centered and variable-centered methods, offering new insights and underscoring the critical role of safety in mitigating burnout.

Montgomery, A., Chalili, V., Lainidi, O., Mouratidis, C., Maliousis, I., Paitaridou, K., & Leary, A. (2025). [Psychological safety and patient safety: A systematic and narrative review](#). *PLoS ONE [Electronic Resource]*, 20(4), e0322215.

OBJECTIVES: Various psychological concepts have been proposed over time as potential solutions to improving patient safety and quality of care. Psychological safety has been identified as a crucial mechanism of learning and development, and one that can facilitate optimal patient safety in

healthcare. We investigated the quantitative evidence on the relationship between psychological safety and objective patient safety outcomes. **CONCLUSIONS:** No clear conclusions can be extracted regarding the relationship between psychological safety and patient safety. For example, reporting patient safety problems in a team can be an indication of both high and low psychological safety. Patient safety may be contradictory to elements of psychological safety, as the absence of harm is not congruent with a safety environment approach.

Moreno-Leal, P., Leal-Costa, C., Diaz-Agea, J. L., Castano-Molina, M. d. L. A., Conesa-Ferrer, M. B., & De Souza-Oliveira, A. C. (2024). [Disruptive behavior and factors associated with patient safety climate: A cross-sectional study of nurses' and physicians' perceptions](#). *Journal of Nursing Management*, 2024, 5568390.

Background: Few studies have analyzed the negative outcomes of disruptive behaviors in the nurse-physician relationship in patient care and their impact on patient safety. These multicausal studies significantly relate to organizational, institutional, and professional attitudinal risk factors. **Aim:** Analyze healthcare professionals' perceptions of disruptive behavior and factors associated with patient safety climate in the nurse-physician relationship at the hospital level. **Methods:** A multicenter cross-sectional study was conducted with a sample of 370 nurses and physicians assigned to different public hospitals in the Murcia/Spain region, applying the adapted and validated Spanish version of the Nurse-Physician Relationship Scale: Impact of Disruptive Behavior on Patient Care. The analysis used proportions or means (standard deviation (SD)), univariate and multivariate linear regression models, and the chi-square test. **Results:** Disruptive behavior was more prevalent in the ICU (81.6%) and the emergency department (67.8%). Professionals indicate that fear of reprisals is the main barrier to the reporting system. Likewise, stress and frustration are more associated with disruptive behavior and influence the safety climate. **Conclusion:** Professionals indicate that disruptive behaviors can have a negative impact on clinical outcomes. Age and type of service were identified as the most relevant socio-occupational factors. Stress, frustration, and communication problems are the factors that most influence the safety climate.

O'Dea, A., Sharafkhani, M., Codd, M., Browne, M., O'Connor, P., & Ward, M. E. (2025). [Principles for the conduct of human factors/ergonomics in healthcare: A scoping study of the published evidence](#). *BMJ Open Quality*, 14(2)

BACKGROUND: There is a need for guidance to support human factors/ergonomics (HFE) practitioners to conceive and design HFE interventions that live up to the fundamental principles underpinning the discipline of HFE. The principles are that HFE has a systems focus, is design driven and focuses on both performance and well-being outcomes. **RESULTS:** A total of 13 intervention studies met the inclusion criteria, suggesting that adherence to core HFE principles is rare. All included studies self-identified as HFE intervention studies. All interventions had a clearly defined scope and most targeted at least four system elements, that is, person, tools, technology, task, process, organisation, environment. The 'people' element was the one most commonly targeted. A wide range of organisational level and patient outcomes were measured, but no employee safety or well-being outcomes were measured in the included studies. In all cases, the intervention team included healthcare providers working with HFE/systems engineering/improvement experts, who often led the project.

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RESEARCH AND QUALITY IMPROVEMENT

[Annals video summary - impacts of communication type and quality on patient safety incidents: A systematic review. \(2025\). *Annals of Internal Medicine*, e2500798S](#)

Birkeli, G., Lindahl, A. K., Hammersboen, A. M., Deilkas, E. C. T., & Ballangrud, R. (2025). [Strategies and tools to learn from work that goes well within healthcare patient safety practices: A mixed methods systematic review. *BMC Health Services Research*, 25\(1\), 538.](#)

BACKGROUND: Safety-II is a new approach to patient safety that is characterised by learning from work that goes well, including learning from success and work-as-done. Practical tools to facilitate this learning are starting to emerge within healthcare patient safety practices. In absence of a systematic review of such learning tools, the aim of the study was to provide an overview of strategies and tools for healthcare professionals to learn from work that goes well in healthcare patient safety practices. **RESULTS:** Out of 5298 records screened, 126 articles were retrieved for evaluation, and 22 articles were included, describing 16 unique tools. Five tools were not empirically evaluated. Most learning tools were aimed at healthcare professionals in hospitals units (68%), and were generally welcomed by healthcare professionals. Tools intended for learning across the organisation were second most frequent (23%), followed by tools intended for learning between hospitals (9%). Most studies focused on validating the tools' ability to provide insights into work-as-done, and their effect on staff wellbeing. Few studies focused on patient outcomes. **CONCLUSIONS:** The review shows a growing number of practical Safety-II tools, which may help understand and learn from the constant adaptations made by healthcare professionals every day to keep patients safe.

Fiol-deRoque, M. A., Valderas, J. M., Serrano-Ripoll, M. J., Gens-Barbara, M., Martin-Lujan, F., Sanchez-Freire, E., . . . Ricci-Cabello, I. (2025). [Evaluating SinergiAPS, an intervention based on patient feedback to improve patient safety in primary care: A cluster randomized trial. *BMC Medicine*, 23\(1\), 202.](#)

BACKGROUND: Patient safety, defined by the WHO as the absence of preventable harm, is a critical component of healthcare quality and poses a significant challenge globally. This study aimed to evaluate the effectiveness of SinergiAPS, a patient-centred audit and feedback intervention, in improving patient safety in primary healthcare (PHC) centres. **RESULTS:** During the 12-month follow-up, 10 of the 30 centres in the intervention group held action plan team meetings and eight registered 57 safety improvement action plans. The plans aimed to improve patient activation, address treatment-related incidents, enhance communication between patients and providers, and strengthen patient safety culture. At 12 months, no significant differences were observed in MOSPSC mean score (intervention: 3.60 [95% CI 3.55 to 3.64] vs. control: 3.64 [3.60 to 3.68]). Similarly, no differences were observed in the secondary outcomes, with both groups experiencing a decline in patient-reported safety and avoidable hospital admissions. The qualitative interviews evidenced that the onset of the COVID-19 pandemic 6-9 weeks after initiating the follow-up period severely limited PHC's capacity of developing and implementing safety improvement action plans, despite high levels of acceptability and perceived utility of the SinergiAPS intervention. **CONCLUSIONS:** In the context of the health emergency caused by the COVID-19 pandemic, SinergiAPS did not improve patient safety in Spanish PHC centres.

Habtie, T. E., Feleke, S. F., Terefe, A. B., & Adisu, M. A. (2025). [Beyond compliance: Examining the completeness and determinants of WHO surgical safety checklist - a systematic review and meta-analysis. *BMC Health Services Research*, 25\(1\), 504.](#) The aim of this systematic review and meta-analysis was to assess the compliance, completeness, and key barriers to the successful initiation and implementation of checklists in surgical theaters. **Methods** This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

guidelines to ensure the accuracy and reliability of the included studies. The protocol was registered in PROSPERO (CRD42024589344). Results The review included 13 observational studies conducted globally, encompassing a total of 17,867 participants. The overall compliance rate with the World Health Organization Surgical Safety Checklist was 73% (95% CI: 62-85%). Compliance rates for individual components were 76% for "Sign In," 61% for "Time Out," and 62% for "Sign Out." The overall completeness of checklist implementation was 51%. Factors that improve compliance rate include prior Surgical Safety Checklist exposure, training, a positive work environment, management support, and regular monitoring with feedback. Conversely, barriers such as insufficient staffing, high workloads, lack of checklist ownership, resistance to change, weak audit systems, and rapid staff turnover hinder effective implementation and compliance. Conclusion Despite the importance of Surgical Safety Checklist in improving healthcare outcomes, its overall compliance rate across healthcare settings remains suboptimal, with a notably low completeness rate. This highlights the frequent omission or inconsistent application of critical checklist components. Maximizing the checklist's full potential requires continuous efforts, including sustained support, regular audit, and strong commitment from all stakeholders. Recommendation Policymakers, healthcare administrators, and surgical teams must work together to integrate the checklist into routine workflows, ensure continuous monitoring and support, and foster a culture of safety to improve patient outcomes.

Keshtkar, L., Bennett-Weston, A., Khan, A. S., Mohan, S., Jones, M., Nockels, K., Howick, J. (2025). [Impacts of communication type and quality on patient safety incidents : A systematic review](https://libkey.io/libraries/2838/10.7326/ANNALS-24-02904) *Annals of Internal Medicine*, <https://libkey.io/libraries/2838/10.7326/ANNALS-24-02904>

BACKGROUND: Poor communication in health care increases the risk for patient safety incidents. However, there is no up-to-date synthesis of these data. **CONCLUSION:** Poor communication is a major cause of patient safety incidents. Research is needed to develop effective interventions and to learn more about how poor communication leads to patient safety incidents.

Lee, H., & Kim, Y. (2024). [Nurses' experiences from patient safety incidents of hospitalized children: A qualitative study](#). *Journal of Nursing Management*, 2024, 1826514.

This qualitative study aimed at exploring nurses' experiences concerning patient safety incidents among hospitalized children in South Korea. From August 4 to 12, 2023, data were collected through in-depth individual interviews involving 14 clinical nurses. Employing thematic analysis, we identified 8 themes, which coalesced into three theme clusters: "challenges in pediatric patient safety nursing due to patient and caregiver characteristics," "emotional changes in nurses following patient safety incidents," and "sincere desire to prevent patient safety incidents in pediatric patients" The findings underscored that nurses experience significant burdens related to patient safety, emphasizing the necessity for robust support from caregivers, healthcare institutions, and national policies. Consequently, it is imperative to develop and implement programs and policies to foster a secure care environment for pediatric patients. Nurse managers and organizations must proactively design healthcare systems and related policies that prioritize safely protecting pediatric patients and nurses alike from patient safety incidents, considering the characteristics of pediatric patients and the experiences of the nurses caring for them.

Lee, N., & Kim, N. (2025). [A comprehensive analysis of patient safety research in nursing: Trends, topics, and future directions](#). *Journal of Patient Safety*.

OBJECTIVES: This study aimed to comprehensively analyze patient safety research in the field of nursing over the past 20 years to identify key research topics and emerging trends. **CONCLUSIONS:** The scope of patient safety research in the field of nursing is gradually expanding, with an evident shift in research focus. Our findings provide crucial information for setting future research directions and advancing nursing practice and policy, ultimately contributing to improvements in patient safety.

Pozzobon, L. D., Tattersall, A., Tosoni, S., Edward, A., Heesters, A., Garmaise, C., Chartier, L. B. (2025). [A balanced approach to using organizational patient safety incident data for research](#). *Healthcare Management Forum*, 8404704251331179

Reported patient safety incidents offer high-value perspectives on safety threats but can be an untapped source of learning due to their sensitive nature and the presence of potential data protected under Quality Assurance (QA) legislations. There are no published guidelines for leaders to enable ethical use of data protected under QA legislation in reported patient safety incidents within the Canadian context. Liberating this data requires understanding the appropriate purposes for use, which draws on ethical and privacy-related considerations. We describe the approach followed to balance the duty to protect relevant privacy interests with the moral obligation to conduct research, and the proactive prevention of patient harm at our Canadian multi-site academic health sciences centre. Overall, we developed guidelines and discovered leaders must commit to establishing connections between organizational governance, legal structures, and privacy experts to support research enabling learning from patient safety incidents.

Treloar, E. C., Ey, J. D., Herath, M., Edwardes, N. P. R., Edwards, S., Bruening, M. H., & Maddern, G. J. (2025). [Optimizing ward rounds: Systematic review and meta-analysis of interventions to enhance patient safety](#). *British Journal of Surgery*, 112(4)

BACKGROUND: Poor quality ward rounds contribute to a large proportion of patient complications, delayed discharge, and increased hospital cost. This systematic review investigated all interventions aiming to improve patient and process-based outcomes in ward rounds. **CONCLUSION:** This is the first systematic review with meta-analyses synthesizing the evidence of all ward round interventions targeted at improving patient and process outcomes. Results from this review should be used to inform guidelines for the 'ideal ward round'.

Plain-language-summary: When a patient is in a hospital, most communication with the doctor happens during the ward round. Patients have worse outcomes when ward rounds are poor. The aim of this study was to find the best way to improve ward rounds. The results show that using a checklist improved medical notes and reduced the number of days a patient may spend in an ICU without increasing the ward round time. A checklist is simple to use and can be introduced into ward rounds to improve patient outcomes. Language: English

Vanbelleghem, S., De Regge, M., Van Nieuwenhove, Y., & Gemmel, P. (2025). [Understanding how hospital nurses address operational failures that impact patients: An exploratory study of problem-solving behaviors](#). *Nursing Inquiry*, 32(2), e70025.

Operational failures in hospitals, such as communication breakdowns and equipment malfunctions, challenge nurses by disrupting patient care, workflow, and clinical processes. These failures are primarily addressed with short-term solutions, rather than comprehensive, long-term strategies. This study investigates the impact of operational failures on patients and examines whether nurses alter their problem-solving behavior in response to the perceived direct impact on patients. A qualitative, exploratory study was conducted in 23 wards across five Belgian hospitals. Data were collected through in-depth semi-structured interviews with 26 nurses and a group discussion with ward managers (n = 6). Findings reveal that barriers such as nurses' limited awareness regarding the broader impact of operational failures on patients, poor communication, and excessive workloads hinder problem-solving efforts. However, when operational failures result in patient harm, nurses are more likely to take corrective action to prevent recurrence. Enablers to enhance problem-solving behaviors include using narrative medicine to highlight patient safety risks, improvements to communication frameworks, the streamlining of reporting systems, and the allocation of adequate time and resources to address underlying issues. Furthermore, a proactive approach, grounded in Safety-II principles, emphasizes nurses' flexibility and adaptability, recognizing their indispensable role in learning from successful outcomes and making real-time adjustments to strengthen resilience within healthcare systems.

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