

Review Article

Medical Errors and Patient Safety: A Narrative Review of Prevention Strategies

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Abstract: The burden of medical errors is one of the biggest threats to patient safety and is a significant cause of morbidity, mortality and healthcare costs globally. It is crucial to have a clear understanding of the reasons for these errors and what can be done to prevent them from occurring to ensure that healthcare delivery is of high quality and safe. This narrative review synthesizes current evidence on medical errors and patient safety while specifically concentrating on the dimension of error across various health care settings and what interventions are employed to minimise preventable harm. Literature from PubMed, Semantic Scholar, Scopus, and Web of Science was retrieved from 2021 to 2026. Eligible peer-reviewed studies were identified by predefined inclusion and exclusion criteria and were synthesized in a narrative way. The review found that medication, diagnostic, surgical, communication, and documentation errors remain the most common forms of medical errors. They are driven by a combination of human, organisational and system related factors. The evidence suggests that a systems-based approach, with robust leadership, collaboration between multiple disciplines, ongoing professional learning and development, incident reporting frameworks, positive patient safety cultures, and digital health technologies are key elements of effective prevention. New innovations such as artificial intelligence, big data and large language models, and clinical decision support systems have the potential to enhance the accuracy of diagnosis, medication safety, and clinical decision making, but there are implementation, governance, ethical, and workforce readiness challenges to consider. In summary, efforts to prevent medical errors will need ongoing commitment from organisational leaders, evidence-based safety measures, and thoughtful implementation of technology. These strategies can be strengthened to help make healthcare systems safer and improve patient outcomes in a variety of clinical settings.

Keywords: Medical Errors, Patient Safety, Medication Errors, Diagnostic Errors, Healthcare Quality, Patient Safety Culture, Artificial Intelligence, Digital Health.

1. INTRODUCTION

Medical errors are still one of the main problems in health care systems globally and a major threat to the quality and safety of patient care [1, 2]. Despite the significant progress in medicine, medical diagnostics, and therapeutic options, preventable errors still occur in all levels of the health care delivery system [1-3]. Medical errors are typically considered failures that can be avoided in the planning or delivery of health care services that have the potential to, or do, cause harm to patients [2]. These failures could be due to a single action, a lack of communication, a lack of organisational capacity, or lack of a healthcare system [4]. Medical errors are increasingly seen as complex events that are caused by various interacting human and system-related factors, rather than the result of negligent actions by a single individual [5]. The goal of patient safety, which is "the absence of avoidable harm in the care that is provided", has emerged as a key measure of healthcare quality and organization performance [1]. Patient safety not only means preventing adverse events, but also means developing healthcare systems that consistently provide safe, effective, timely, patient-centred, equitable and efficient care [2]. It is now known that patient safety is of great importance to healthcare organisations, as it can lead to better clinical outcomes, better public confidence, lower cost of preventable complications and a culture of continuous quality improvement [3]. Patient safety has therefore become a strategic focus for healthcare providers, the government and international health organisations to make healthcare better and reduce preventable harm [2-5]. Despite decades of

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patient safety efforts, the burden of medical errors in the world is still significant [1]. Adverse events are common occasions of patient harm that can be prevented, occurring in millions of patients each year, many of which are preventable, such as medication errors, diagnostic errors, poor communication, healthcare associated infections, and procedural errors [3, 4]. The impact is not just physical, but also in terms of longer hospital stays, disability, psychological suffering, cost of care, loss of faith in the health service and preventable death [2-4]. The consequences are especially problematic in health-care environments with inadequate resources such as inadequate infrastructure, low skilled staffing and poor reporting systems, which raise the risk of preventable adverse events occurring [5]. Progress has been made on the development of patient safety programmes, but medical errors still happen due to the complexity of healthcare delivery and the constant interactions between various healthcare systems, healthcare professionals, technology and patients [1-4]. The evidence has grown stronger that improvements towards sustainability can only be realised through a systems-based approach, which includes building organisational culture and culture of communication, effective leadership and embedding sustainable technologies into everyday clinical practice [2-6]. In this context, this narrative review explores the current evidence around medical errors and patient safety, including the type and causes of medical errors, their prevalence in various healthcare environments and evidence-based interventions for reducing patient harm. The review synthesises literature to offer a comprehensive understanding of the contemporary prevention strategies that can facilitate safer healthcare systems and enhanced patient outcomes [1-5].

2. METHODOLOGY

The study used a narrative review design to synthesize the current evidence about medical errors and patient safety. A narrative review was deemed appropriate as it allows for the incorporation of evidence from a variety of study designs to give an overall picture of the causes of medical errors and the strategies developed to enhance patient safety in a wide range of healthcare settings. The literature search was carried out by searching in the major academic databases such as PubMed, Semantic Scholar, Scopus, and Web of Science. The search terms were broken down into the following: medical errors, patient safety, medication errors, diagnostic errors, error prevention, patient safety culture, risk management, healthcare quality, and artificial intelligence in patient safety. The keywords were searched independently, and also in combination, to locate studies pertinent to the objectives of the review. The articles included in the search were peer-reviewed English-language journal publications between 2021 and 2026 that addressed causes, consequences, or prevention of medical errors and patient safety. Systematic, scoping, umbrella reviews, meta-analyses and high-quality primary studies were prioritized. Editorials and conference abstracts, duplicate records, non-English publications and those studies that did not relate to the topic of the review were not included. The retrieved studies were first screened based on their title and abstract and then suitable studies were evaluated based on the full text of the articles. Following the application of the inclusion and exclusion criteria 35 studies were selected to be reviewed. Evidence was synthesized narratively by summarizing the findings into key themes: nature and causes of medical errors, medication errors in healthcare settings, prevention strategies, and emerging technologies to enhance patient safety. This approach enabled a comprehensive interpretation of the current evidence while identifying common findings and areas requiring further research.

3. Understanding Medical Errors

Medical errors can be any of the myriad of preventable events that can happen during the provision of medical care and may result in harm to the patient. They may occur during any phase of patient treatment: diagnosis, treatment, administration of medicines, surgery, documentation, and communication between healthcare workers. Medical errors do not necessarily happen because of individual negligence, but are now understood to arise as a result of a combination of human, organisation and system-related factors [6-8]. It's therefore essential to understand the various types of medical errors and their causes to create effective patient safety interventions.

Medication errors are among the most frequently reported types of medical errors and can occur during prescribing, dispensing, preparation, administration, or monitoring of medicines [6]. These mistakes can include choosing the wrong medication, giving the right medication at the wrong dose, giving the right medication at the wrong time, failing to give the medication at all, or giving the medication to the wrong person. Medication errors are especially frequent in complex healthcare environments with multiple healthcare professionals working together to manage the patient, where there is a higher risk of communication failures and process-related errors [6].

Delayed diagnosis, missed diagnosis, or incorrect diagnosis are other significant medical error types known as diagnostic errors [8]. These errors can happen due to poor clinical assessment, lack of patient information, cognitive bias or errors in interpretation of laboratory and imaging findings. Errors in diagnosis are particularly troublesome as they can result in a delay in treatment, expose patients to unnecessary interventions and worsen preventable complications. There has been recent evidence that better diagnostic accuracy will need to be achieved through not only clinical skills but also through better multidisciplinary collaboration and decision support systems [8].

Medical mistakes can also happen when performing surgery and other clinical procedures. These include retained surgical instruments, failure to adhere to clinical protocols, wrong-site surgery and procedural complications. Many adverse events are preventable and though surgical safety has improved greatly, there are still several avoidable procedures that happen when standardised safety measures are not adhered to. Poor communication not only before the procedures but also during and after the procedures further exacerbates the risk of negative outcomes [6].

Communication and documentation errors are strongly associated with patient safety issues and often are a source of preventable harm. Delays in treatment, errors in medication, duplicate investigations, inappropriate clinical decisions, or poor information transfer between healthcare professionals, are just a few examples of potential consequences of incomplete handovers, unclear verbal instructions, illegible documentation, inaccurate patient records, or other issues. Effective communication and accurate documentation are thus essential elements of safe health care delivery.

Medical errors are multifactorial and not solely due to individual performance. Fatigue, high workload, stress, lack of training, distractions and cognitive limitations are human factors that may result in errors and affect clinical judgement [6]. But poor staffing levels, inadequate supervision, weak leadership, poor communication systems and poor patient safety cultures within the organisation can lead to the conditions where errors are more likely to occur [7]. Poorly designed healthcare processes, fragmented care pathways, inadequate reporting mechanisms and failures in organisational learning are additional drivers of the perpetuation of medical errors in healthcare delivery [8]. Therefore, there is a need for a systems approach to medical error prevention, encompassing both individual performance and organisation systems.

4. Medical Errors across Healthcare Settings

Medical errors happen in every health care environment but their type, rate and cause depends on the complexity of care, the patient and the organisation's processes. Although the most common place for patient safety incidents to occur is in hospitals, where there are a lot of clinical activities, errors are also common in intensive care units, paediatric services, outpatient clinics and home care settings. It is important to appreciate the variability of medical error in each of these environments in order to implement effective interventions to enhance patient safety, while taking into account the characteristics of each environment [9-11].

Medical errors are still most frequently reported in hospitals because of the large number of diagnostic, therapeutic, and surgical procedures conducted on a daily basis. Common patient safety issues in healthcare settings include medication errors, prescribing errors, delayed diagnoses, healthcare-associated infections, and communication issues [9]. With high turnover rates, more complex clinical needs, high workloads, and insufficient staffing, the risk of preventable adverse events is further elevated. Inadequate communication at the handover of shifts and between multi-disciplinary teams have also been found to play a significant role in patient harm. Hospitals have implemented many patient safety programs, but it is an ongoing challenge to ensure adherence to patient safety protocols [10].

Intensive care units (ICUs) present additional patient safety risks because they care for critically ill patients who require continuous monitoring, multiple medications, invasive procedures, and life-support technologies. Patients' conditions are often acute, necessitating quick clinical decisions, which can lead to medication errors, equipment issues and procedural complications [14]. ICUs tend to prescribe and administer many high-risk drugs at the same time, which makes the prescribing and administration process more susceptible to errors. Close collaboration between physicians, nurses, pharmacists and other health care professionals is also required due to the complexity of care, where communication failures can immediately and seriously impact patient outcomes [15, 16].

The administration of medicines in paediatric healthcare settings is often through a dosing system that is not fixed like that of adults, which gives rise to a unique patient safety challenge. There can be a large difference between the actual dose and the dose prescribed as a result of small calculation mistakes which leads to a risk of adverse drug events [11]. Children, again especially infants and neonates, may not be able to express symptoms or adverse reactions, making detection of clinical deterioration more challenging. Also, communication between healthcare providers and parents/caregivers is a key factor in ensuring that treatment and medications are administered correctly. The safety of paediatric patients relies greatly on the correct calculation, a proper approach to medicines and good communication between everyone who cares for the child [12].

Other areas of common medical errors include outpatient/ambulatory care, in which healthcare providers may have limited access to post-consultation monitoring. These errors often include lack of proper medication reconciliation, diagnostic test results not followed up on in a timely fashion, inappropriate prescribing, and poor continuity of care between different healthcare providers [13]. Health literacy, following treatment instructions and having access to follow-up care are factors that influence patient safety as patients typically assume responsibility for their medications once they leave a healthcare setting. Failure to communicate between health care providers, whether it's between a primary care provider and

a specialist, between the provider and the patient, or between provider and pharmacist, can further contribute to the likelihood of preventable adverse events.

Home care has grown to be a major element of healthcare delivery, with increased numbers of patients receiving extended care at home instead of in hospital. Home-based care may be more comfortable and may help to minimize hospital admissions, but it does also present new patient safety issues. Medications, medical equipment and the identification of complications and the timing of further care are all tasks that patients and family caregivers are often tasked with [17]. Lack of clinical supervision, inadequate training of the caregiver(s), problems with medication management, and poor communication between the hospital and home environment can all result in preventable mistakes. Older people with multiple chronic health problems and people taking complex medication regimens are at special risk of unsafe events in a home care environment.

While the types of medical errors vary by type of health care setting, there are some strategies that are common to all settings. Adopting standardised clinical protocols, effective communication, multidisciplinary teamwork, medication reconciliation, continual staff education, incident reporting systems and appropriate use of health information technologies (HIT) have been found to decrease preventable harm in a variety of clinical contexts [9-18]. Improving patient safety, however, needs interventions to be introduced both at the level of the setting and at the level of an organisation, so that safe care is delivered across the whole continuum of the health-care system. Table 1 summarises the common types of medical errors and the major contributing factors across different healthcare settings identified in the reviewed studies.

Table 1: Common Medical Errors and Contributing Factors across Healthcare Settings

Healthcare Setting	Common Medical Errors	Major Contributing Factors	Key References
Hospitals	Medication errors, prescribing errors, diagnostic delays, healthcare-associated infections, communication failures	High patient turnover, complex care, inadequate staffing, poor handovers	[9,10]
Intensive Care Units	Medication errors, equipment-related incidents, procedural complications	Critical illness, polypharmacy, invasive procedures, rapid decision-making	[14–16]
Paediatric Care	Dose calculation errors, prescribing errors, administration errors	Weight-based dosing, physiological differences, communication with caregivers	[11,12]
Outpatient Care	Prescribing errors, medication reconciliation failures, delayed follow-up	Fragmented care, limited monitoring, poor continuity of care	[13]
Home Care	Medication administration errors, monitoring failures, equipment misuse	Limited supervision, caregiver knowledge gaps, transition-of-care issues	[17]

Source: Developed by the author based on the reviewed literature [9–18].

5. Strategies for Preventing Medical Errors

Human performance and the healthcare systems in which professionals operate are both critical to preventing medical errors, and many healthcare organisations are beginning to see the need for a comprehensive solution. Modern patient safety programmes have thus moved away from an individual focus on patient error to a systems approach that aims to uncover flaws in healthcare systems and structures. In the field of systems thinking, errors in medicine are usually recognized as the product of a combination of factors instead of individual negligence. Healthcare organisations can decrease preventable opportunities for harm by redesigning clinical workflows and simplifying complex processes, eliminating unnecessary variation in clinical practice, and adding multiple layers of safety checks. Standardised protocols, clinical guidelines, safety checklists, and continuous quality improvement programmes have all been shown to be effective at improving patient safety by decreasing clinical practice variation and supporting consistency of healthcare delivery and processes [19–21].

Technology has become a critical part of today's patient safety initiatives. The use of electronic health records, computerised physician order entry systems, barcode medication administration, electronic prescribing and clinical decision-support systems have increased the accuracy of documentation and decreased medication and prescribing errors [22]. These technologies help healthcare staffs detect possible drug interactions, allergies, wrong doses, and duplicated prescriptions before they cause harm to patients. AI and predictive analytics, more recently, have also demonstrated significant potential in aiding diagnostic decision-making, risk stratification for clinical deterioration and early intervention. While technology has its merits, there are potential drawbacks as well, such as system design that can lead to error, alert fatigue, and user training issues that lead to inadequate learning. Therefore, digital interventions should be used in addition to good clinical judgment [22, 23].

Another basic method to prevent medical errors is to have effective incident reporting systems in place. Reporting systems that promote the documentation of adverse events, near misses, and unsafe conditions enable organisations to pinpoint trends and take corrective measures before additional adverse events happen [24]. New patient safety initiatives now encourage non-punitive reporting systems where employees are encouraged to report errors without fear of punishment or disciplinary action. These reporting systems enable organisation learning, as they provide useful information for informing policy development, process redesign and quality improvement initiatives. With the help of root cause analysis and periodic safety audits, incident reporting plays a role in continuing to improve the delivery of care in the healthcare sector [24, 25].

A good patient safety culture is intrinsic to effective reporting. A positive safety culture inspires openness, accountability, teamwork and ongoing learning within health care organisations. The perception of having support from the organisation is associated with an increase in reporting of errors, involvement in quality improvement efforts, and adherence to established safety protocols by healthcare workers [26]. On the other hand, punitive organisational cultures can make it difficult to learn from past incidents and often do not allow for transparency. Therefore, leadership commitment to patient safety, ongoing surveillance of safety outcomes, and active participation of staff are essential to maintaining a culture that focuses on patients' well-being over operational concerns [26, 27].

Safe delivery of healthcare relies on communication and teamwork as healthcare is increasingly reliant on working in collaboration with multidisciplinary teams. Ineffective communication during patient handovers, referrals, medication reconciliation, or emergency situations has consistently been associated with preventable adverse events. The use of standardised communication systems, multidisciplinary ward rounds and team-based decision making, together with structured handover protocols, will lead to more accurate information transfer and less miscommunication between health care professionals [28]. Collaboration is further enhanced through simulation training and interprofessional education because it creates better situational awareness, trust between people and shared responsibility for patient outcomes. This is because good teamwork improves clinical decision making, minimizes the chances of preventable medical errors [28, 29] and ultimately contributes to better healthcare services.

The key role of leadership involves ensuring the ongoing success of patient safety efforts, including setting the direction, making sure there are adequate resources, and holding people accountable at all levels of patient care. Healthcare leaders can shape patient safety by developing policies, planning staffing needs, investing in patient safety technology and supporting ongoing efforts to improve quality. Leaders who actively involve front-line health-care workers in safety efforts result in higher staff commitment and promote joint problem solving. Also, it is essential that patient safety is seen as a priority that is not competing with other financial and operational priorities, ensuring that patient safety is embedded in the culture of the organisation and continuous improvement becomes a normal part of everyday care provision [27-30].

Ongoing professional development and education are also crucial for minimizing medical errors. Continuous education helps healthcare workers stay current with evidence-based practices, continually develop new skills, and remain competent in the changing healthcare landscape. Simulation-based training, competency assessments, medication safety training, and continuing professional education are all educational interventions that enhance technical and non-technical skills such as communication, teamwork, and clinical decision-making [31]. Continuous training also ensures that staff are up to date with new technologies and changing clinical guidelines, which will help to minimise the risk of error when it comes to using unfamiliar systems or procedures.

Medical errors must also be prevented with the full cooperation of various health care workers, especially pharmacists and nurses. Pharmacists play an important role in medication counselling with health professionals and patients, medication reconciliation and detecting potential drug interactions, as well as a thorough prescription review. They have been linked to significant decreases in adverse events related to medication [32]. Nurses also have a vital part to play in patient safety, constantly monitoring patients, administering medicines, noticing signs of clinical deterioration, educating patients and effectively communicating with multidisciplinary team members. Nurses, having direct patient interaction, are likely to be the first health care workers to notice a possible safety issue and take appropriate and timely action. The overall findings of pharmacists, nurses, physicians and other health care providers show that coordinated, multidisciplinary teamwork with robust organization systems, patient-focused leadership and a commitment to patient safety are vital in minimizing medical errors [19-32]. Table 2 presents the summary of the principal evidence-based strategies for preventing medical errors that emerged from the literature reviewed.

Table 2: Evidence-Based Strategies for Preventing Medical Errors

Prevention Strategy	Description	Role in Improving Patient Safety	Key References
Systems-based approaches	Focus on redesigning healthcare processes, standardising workflows, implementing clinical guidelines, safety checklists, and quality improvement initiatives.	Reduces system failures, minimises process variability, and prevents recurrent errors.	[19–21]
Health information technology	Adoption of electronic health records (EHRs), computerised physician order entry (CPOE), barcode medication administration, electronic prescribing, and clinical decision-support systems.	Improves documentation accuracy, reduces medication and prescribing errors, and supports clinical decision-making.	[22,23]
Incident reporting systems	Reporting adverse events, near misses, and unsafe conditions in a non-punitive environment.	Promotes organisational learning, identifies safety risks, and supports continuous quality improvement.	[24,25]
Patient safety culture	Establishing an organisational culture that promotes openness, accountability, teamwork, and continuous learning.	Encourages error reporting, staff engagement, and adherence to patient safety practices.	[26,27]
Communication and teamwork	Use of structured handovers, multidisciplinary rounds, standardised communication tools, and interprofessional collaboration.	Improves coordination of care, reduces communication failures, and enhances patient outcomes.	[28,29]
Leadership	Leadership commitment to patient safety through policy development, resource allocation, staff engagement, and quality improvement.	Strengthens organisational commitment and sustains long-term patient safety initiatives.	[27,30]
Education and staff training	Continuing professional education, simulation training, competency assessment, and medication safety programmes.	Improves clinical competence, communication skills, and adherence to evidence-based practice.	[31]
Pharmacist involvement	Medication review, medication reconciliation, identification of drug interactions, and patient counselling.	Reduces medication-related errors and improves medication safety.	[32]
Nursing contributions	Continuous patient monitoring, safe medication administration, patient education, early recognition of deterioration, and effective communication.	Facilitates early identification of safety risks and strengthens safe, high-quality patient care.	[32]

Source: Developed by the author from the reviewed literature [19–32].

6. Emerging Technologies and Future Directions

Patient safety is undergoing a transformation with the emergence of new technologies that are offering innovative solutions for patient safety, from the prevention of medical errors to the support of clinical decision making [19–33]. The deployment of Artificial Intelligence (AI), machine learning, and digital health technologies is giving healthcare organisations the potential to detect potential risks at an earlier stage, assist healthcare professionals in complex decision making, and enhance the effectiveness of healthcare delivery [33]. These technologies are not intended to replace clinical care, but they are seen increasingly as decision-support tools to help augment clinical skills and assist in safer patient care [20–33].

AI has shown great promise in minimizing diagnostic and medication errors by analyzing vast amounts of clinical data [20–33]. The use of AI algorithms can identify abnormal clinical patterns, forecast patient deterioration, recognize potential drug interactions, and aid healthcare professionals in making more accurate and timely decisions. Predictive analytics also has improved the ability to monitor and track patients, with the ability to predict which patients are more likely to experience adverse events, enabling healthcare teams to take preventive measures before they occur [20–33]. The capacities can help to enhance patient results and prevent needless harm in various health care areas.

Another recent innovation that has shown promise in healthcare is the emergence of large language models (LLMs) [34]. These cutting-edge AI systems can help with medical documentation, summarising patient records, generating discharge summaries, answering clinical questions with evidence, and educating healthcare staff. They can also enhance communication by making complex medical information more understandable to patients and allowing the clinicians to find the latest evidence more quickly [21–34]. Despite this, issues of accuracy, reliability, transparency and

ethical considerations in how AI-generated information can be used remain, and proper human oversight and validation are crucial prior to wide clinical use [22-34].

In addition to AI, a range of other digital health innovations, such as electronic health records, telemedicine, remote patient monitoring, wearable health devices, and interoperable health information systems, are further enhancing patient safety by ensuring continuity of care and timely communication among healthcare providers [20-35]. The technologies also enable real-time tracking and better coordination of patient care. However, their successful implementation depends on adequate digital infrastructure, staff training, robust cybersecurity measures, and effective governance to ensure patient privacy and data security [20-35].

Long-term effectiveness of these new technologies in decreasing medical errors in different healthcare settings has yet to be assessed [2-33]. Additional research is also required to help define best practices for integrating AI into daily clinical practice, understand ethical and legal implications of its use, and explore strategies that increase the acceptance and utilization of digital innovations by health care professionals [22-35]. A robust evidence base in these areas will help in the safe, effective and responsible implementation of technologies that will improve patient safety while maintaining high standards of clinical care [33-35].

7. CONCLUSION

The issue of medical errors is still a major concern for patient safety and is a problem across the globe. As mentioned throughout this review, these errors manifest themselves in various forms, such as medication error, diagnostic error, surgical error, communication error and documentation error, and are a consequence of the interplay between human, organisational and system-related factors. The fact that they occur in hospitals, ICU, paediatric services, outpatient clinics and home care means that patient safety issues are not simply a problem in one corner of healthcare, but need to be addressed as a cross-organ issue, spanning across all areas of care.

The review further demonstrates that preventing medical errors requires a systems-based rather than an individual-focused approach. While healthcare professionals are an integral part of providing safe healthcare, the evidence suggests that sustainable improvement can only happen if healthcare organisations further enhance their clinical systems, standardise their procedures, ensure collaboration between various disciplines and encourage a positive patient safety culture. The use of interventions like electronic prescribing, clinical decision support systems, incident reporting systems, effective communication, continuous professional education, medication reconciliation, and leadership commitment has consistently been proven to decrease preventable harm and increase health care quality. Pharmacists, nurses and other members of multi-disciplinary teams are increasingly contributing to patient safety, reinforcing the need for a multi-disciplinary approach to ensure patient safety.

Technological innovation for patient safety is also highlighted in the review. There is significant potential to use AI/large language models, EHRs, telemedicine and other digital health technologies to support clinical decision-making, medication safety, communication, and patient risk stratification for adverse events. These technologies will be best used in addition to professional judgment, however, and their success will rely on the availability of sufficient infrastructure, employee training, good governance, and ongoing review and monitoring for safe and ethical use.

Results have implications for clinical practice. Healthcare organisations should prioritise ongoing investments in patient safety programmes, which incorporate technological innovations and robust quality improvement processes, along with strong organizational leadership and effective teamwork, and regular staff education. Equally critical is to build supportive organizational cultures that are learning organizations and that foster transparent, non-blame reporting. Further research is also warranted to test the long-term impact of new technologies and create evidence-based strategies that can be transferred to other healthcare environments. Organisational commitment, multidisciplinary cooperation and ongoing innovation are essential to ensuring a significant decrease in medical errors and better provision of safer, higher quality patient care in healthcare systems.

Conflict of Interest Declaration: The author declares no conflict of interest.

Ethical Conformity Statement: Ethical approval was not required for this study because it is a narrative review based on previously published literature.

Contribution/Originality: The primary contribution of this paper is the synthesis of up-to-date knowledge about medical errors and patient safety into an integrated narrative review. It offers insights into the prevalence of medical errors, their impact in various healthcare environments, and strategies for prevention, emphasizing the potential of AI and digital health tools in enhancing patient safety.

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