



RESEARCH ARTICLE

COMPREHENSIVE STRATEGIES FOR ENHANCING PATIENT SAFETY: ADDRESSING PREVENTABLE HARMS IN HEALTHCARE

¹Ms. Maggie Renjith, ²Dr. Mohanasundari S.K., ³Dr. Suvashis Dash, ⁴Mr. Guru, P. and ⁵Ms. Divya, R.

^{1,4,5}Tutor, CI(Nursing) College of Nursing, AIIMS Bibinagar; ²Assistant professor College of Nursing, AIIMS Bibinagar ; ³Assistant Professor, Plastic Surgery JPNATC, AIIMS New Delhi

ARTICLE INFO

Article History:

Received 20th January, 2024

Received in revised form

19th February, 2024

Accepted 15th March, 2024

Published online 17th April, 2024

Key words:

Patient Safety, Preventable Harms in Health Care, Health Care Workers, Prevention and Control, Errors, Comprehensive Strategies.

*Corresponding author: *Maggie Renjith*

ABSTRACT

Ensuring patient safety and quality improvement are critical aspects of providing effective healthcare. They form the foundation of delivering high-quality care that minimizes risks to patients. However, statistics reveal alarming rates of patient harm globally, with a significant portion attributed to preventable adverse events. Medication errors, in particular, account for approximately 50% of these preventable adverse events. Beyond medication errors, numerous other adverse events contribute to avoidable harm in healthcare settings. This article seeks to delve into the extent of this problem, identifying contributing factors and proposing strategies to mitigate preventable adverse events. By understanding the scope of the issue and implementing effective interventions, healthcare providers can enhance patient safety throughout the continuum of care delivery.

Copyright©2023, *Maggie Renjith et al.* This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: *Ms. Maggie Renjith, Dr. Mohanasundari S.K., Dr. Suvashis Dash, Mr. Guru, P. and Ms. Divya, R. 2023.* "Comprehensive Strategies for Enhancing Patient Safety: Addressing Preventable Harms in Healthcare". *International Journal of Current Research*, 16, (04), 27744-27751.

INTRODUCTION

Patient safety (PS) and quality improvement (QI) are essential for healthcare professionals to provide consistent and systematic care. Neglecting these aspects can lead to patient harm, including sentinel events that tarnish an organization's reputation. According to the World Health Organization, patient safety involves organized activities that establish cultures, processes, behaviours, and environments in healthcare to consistently lower risks, minimize avoidable harm, mitigate errors, and reduce their impact. (1) Patient safety is defined as the absence of preventable harm and the reduction of unnecessary risk associated with healthcare to an acceptable minimum. It's underscored in the Florence Nightingale pledge: "I will abstain from whatever is deleterious and mischievous, and will not take or knowingly administer any harmful drugs." (2) During the Crimean War, Florence Nightingale emphasized patient safety, stating, "It may seem a strange principle to enunciate...that it should do the sick no harm." Her legacy as a pioneer in patient safety and quality improvement remains pertinent today (3).

In India, efforts to enhance patient safety have often been fragmented. To address this, the National Patient Safety Implementation Framework (NPSIF) (2018-25) by the Ministry of Health and Family Welfare outlines comprehensive strategies. Firstly, it emphasizes improving structural systems across national, subnational, and healthcare facility levels to prioritize patient safety. Secondly, NPSIF advocates for assessing adverse events, establishing reporting systems, and fostering a culture of learning from errors. Thirdly, it underscores the importance of a competent workforce sensitive to patient safety concerns. Moreover, NPSIF stresses the need to prevent healthcare-associated infections to bolster patient safety. Additionally, it recommends implementing global patient safety campaigns and integrating patient safety into all healthcare programs and research endeavours. These strategies collectively aim to fortify patient safety standards throughout India's healthcare landscape (4). World Patient Safety Day, observed annually on September 17th, aims to raise awareness about preventing harm in healthcare. In 2023, it highlighted the theme "Engaging Patients for Patient Safety," emphasizing the pivotal role patients play in enhancing their own safety within the healthcare system (1).

MATERIALS AND METHODS

This comprehensive systematic review systematically explored the English-language literature from 2010 to 2024, utilizing electronic searches across prominent databases such as Scopus, PubMed, Science Direct, UpToDate, Embase, Cochrane, and ProQuest. The search targeted preventable safety harms in healthcare, including misidentification of patients, poor communication, medication errors, surgery-related adverse events/harms, healthcare-associated infections, falls, diagnostic errors, and venous thromboembolism. Additionally, the search encompassed the theme of "Comprehensive Strategies for Enhancing Patient Safety." MeSH terms were applied in the PubMed database. The inclusion criteria comprised books and documents, Clinical trials, randomized controlled trials (RCTs), descriptive studies, systematic reviews, and narrative reviews, with articles published from 2010 to 2024 and full text available, limited to the English language. The selected articles underwent meticulous evaluation by a research team, with discrepancies resolved by a third evaluator. The final set of 36 papers provided a wealth of information on preventable patient safety harms and strategies to overcome them. The collected material was organized and categorized based on scientific content within their respective thematic areas.

Necessity of focusing on preventable patient harms to enhance patient safety: According to the World Health Organization, approximately 1 in 10 patients experiences harm in healthcare annually. The global burden of unsafe care, resulting in over 3 million deaths per year, rivals that of HIV/AIDS or road accidents. Particularly alarming is that 4 in 100 deaths in low-to-middle income countries are due to unsafe care, with 50% of harm being preventable and half attributable to medication errors.(1) The Lancet Global Health Commission's 2018 report on "High Quality Health Systems" reveals that India's death rate due to poor quality of care surpasses that of several countries, with approximately 122 deaths per 100,000 people annually. Common Adverse Events causing Avoidable Patient Harm include Medication errors, Unsafe surgical procedures, Healthcare-associated infections, Diagnostic errors, Patient falls, Pressure ulcers, Patient misidentification, and venous thromboembolism. These events not only burden patients and healthcare facilities financially but also investing in their reduction can significantly improve patient outcomes and lead to substantial cost savings. (1) Patient safety is integral to achieving Universal Health Coverage. Awareness of preventable harm events, their causes, and mitigation strategies enhances healthcare worker focus, improving patient care delivery

Preventable patient harms and strategies to overcome to enhance patient safety: The paramount goal of healthcare delivery is enhancing patient safety. Examining adverse events and strategies to mitigate them sheds light on rendering care with minimal harm. Discussing barriers to patient safety and implementing strategies is crucial for ensuring safe healthcare practices.

Misidentification of patient and strategies to prevent: Patient misidentification poses significant risks to patient safety, with 409 sentinel events identified out of 3326 incidents (12.3%) between 2014 and 2017. Such errors can lead to severe adverse events like wrong-site surgery and blood transfusion reactions (5).

Communication issues during handovers exacerbate misidentification risks, particularly with multiple healthcare providers involved.(6) Verifying patient identity before any procedure or medication administration, using two identifiers like name and Unique Healthcare Identifier (UHID), is recommended. Barcoded wristbands and implementing systems like Barcoded Medication Administration (BCMA) and WHO surgical safety checklists help mitigate misidentification risks. (7) Problem-solving interventions, including informational videos, have shown promise, reducing misidentification incidents by 18% in a university hospital in Japan (8).

Poor communication and strategies to improve effective communication: Effective communication among healthcare personnel is crucial for reducing patient harm. Poor communication increases the likelihood of avoidable adverse effects, with drug-related issues being predominant. Estimates suggest that 27% of medical malpractice cases stem from communication failures. Common reasons for communication gaps include improper handovers, language barriers, documentation errors, heavy workloads, and time constraints (9-11). Handoffs between healthcare teams present a critical juncture where communication lapses can lead to patient harm. To address this, standardized communication tools like WHO's ISBAR (Introduction, Situation, Background, Assessment, Recommendation) can facilitate effective transfer of patient information. ISBAR ensures comprehensive communication by including patient and staff records, current patient condition, clinical history, assessments, and recommendations for care (12). Face-to-face communication between patients and medical professionals, or among staff members, is indispensable for patient safety. Over-reliance on electronic systems at the expense of personal interaction can compromise safety (13). Language barriers pose a significant communication challenge. Assessing patients' language proficiency upon admission enables tailored communication strategies to mitigate risks and prevent adverse events (9). Verifying decisions related to patient care is paramount. Policies on verbal orders should be established, specifying their legitimacy and timeframe for documentation. Verbal orders should only be accepted in emergency situations, with clear protocols for reading back and confirming orders to ensure accurate transmission (14).

Medication errors and strategies to prevent: Medication errors pose a significant threat to patient safety, with one out of every 30 patients in healthcare experiencing harm, a quarter of which are life-threatening.(1) In India, medication errors contribute to 7,000 reported deaths annually, primarily due to inappropriate medication use. Studies indicate up to 5.2 million medical errors nationwide each year, with adverse medication events reported as high as 82 per 1,000 prescriptions in Delhi. (15) Prescribing errors, accounting for 2% to 94% of medication errors, are often attributed to inappropriate prescribing practices. Contributing factors include polypharmacy, patient age, comorbidities, and involvement of multiple physicians in patient care.(16) Other reported causes include incomplete prescriptions, dispensing errors, allergic reactions, and selection of incorrect medications from Look Alike Sound Alike (LASA) drug pairs (17). Performance deficits, communication gaps, inadequate training, heavy workloads, and interruptions further exacerbate medication errors.

Implementing strategies such as medication reconciliation, computerized provider order entry, and clinical decision-support systems can mitigate prescription-related errors. Conservative prescribing practices and minimizing interruptions during medication administration also enhance patient safety (18). Implementing screening tools to identify and assess polypharmacy safety is crucial for mitigating risks in healthcare. Concurrently, deprescribing strategies can help manage polypharmacy-related errors. Consensus among practitioners involved in patient care is essential for effective implementation. Shared decision-making involving patients, caregivers, and multidisciplinary teams enhances patient safety (18). Proper staffing in healthcare is paramount as inadequate staffing correlates strongly with medication errors and adverse events. (19) An incident reporting system, characterized by non-punitiveness, anonymity, inclusivity, and accountability, fosters an environment where healthcare workers (HCWs) feel safe reporting errors. Adopting a just culture approach encourages reporting, facilitating the identification and rectification of system gaps (13 & 20). High-risk medications, such as inotropes and electrolytes, pose significant harm due to their narrow therapeutic index. Adhering to three safety checks and the 10 rights of drug administration is crucial when administering any medication. Errors can occur at various stages, including dispensing, storage, documentation, administration, and monitoring. Implementing stringent protocols, such as dual verification during dispensing and storing high-alert medications separately with clear labelling, mitigates risks associated with ambiguities. Visual and auditory confusions, exemplified by look-alike and sound-alike drug pairs, necessitate color-coding and distinct labelling to prevent errors. Utilizing Tallman lettering for differentiation further alerts HCWs. Highlighting high-risk medications in documentation reinforces their significance during administration. Regular monitoring post-administration, particularly for high-alert drugs, is vital. Ongoing surveillance helps detect and address adverse reactions promptly, enhancing patient safety (21)

Surgical related adverse events and strategies to prevent:

Ensuring patient safety throughout perioperative care is critical, given the high global volume of surgical procedures and the persistently high rate of surgical errors, accounting for 10% of preventable patient harm.(1) In India, where around 4642 surgeries are performed annually for every 88,273 people, common procedures include Cataract (22.8%), Caesareans (3.8%), surgeries for fractures (3.27%) and hernia (2.86%).(22) Despite this, reported incidents of wrong surgical site surgeries (WSS) are surprisingly low due to underreporting. (23) Contributing factors to WSS include involvement of multiple surgeons, performing multiple procedures in a single visit, time pressures, unusual patient characteristics, introduction of new techniques or equipment, stress, fatigue, and lack of necessary skills or training. (24)

To ensure surgical safety, structured and standardized checklists must be employed to improve communication and reduce the likelihood of errors such as wrong-site surgeries and retained foreign objects. Patient involvement is crucial as they have the most at stake. The WHO surgical safety checklist is a vital tool for enhancing patient safety by conducting three safety checks before anaesthesia induction, skin incision, and patient departure from the operating theatre (OT). This checklist verifies critical factors including patient identity, surgery procedure, surgical site, allergies, blood product requirements, and instrument counts, facilitating better

communication among the surgical team. Timely training, skill enhancement, and strategies to manage stress and fatigue are essential to enhance safe surgery. While the OT is an appropriate setting for professional education, learner involvement should never compromise patient safety. Controlling distractions in the operative arena is imperative for optimal surgical outcomes.(24)

Health Care-Associated Infections and strategies to prevent:

Healthcare-associated infections (HAIs) significantly impact patient safety, leading to prolonged hospital stays, antimicrobial resistance, financial burdens on patients and healthcare systems, and preventable disabilities. Globally, HCAI rates stand at 0.14%, rising by 0.06% annually. (1) In India, the prevalence is notably high, approximately 9.06 infections per 1,000 intensive care unit patient days, varying widely between hospitals (4.4% to 83.09%). This rate surpasses those of other affluent nations (25) Preventing Healthcare-Associated Infections (HAIs) is a paramount responsibility of healthcare management. Adhering to infection control practices, protocols, and policies outlined by organizations such as the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) is crucial in this regard. Hand hygiene, including the use of alcohol-based hand rub, hand washing, and hand scrub, is highlighted as the most effective behavior change for infection control, reducing nosocomial infections by 40% to 70%. Additionally, maintaining strict environmental hygiene and selecting appropriate disinfection agents based on the level of disinfection are essential strategies.

HAIs often involve multidrug-resistant pathogens like MRSA, VRE, and MDR-GNB. Implementing measures such as contact isolation, cohorting of patients, antimicrobial stewardship, and reducing hospital stays can control outbreaks. (26) Anticipatory use of sterile gloves, respiratory hygiene, cough etiquette, and adherence to standard precautions further contribute to HCAI prevention (27). Following bundle care approaches for specific infections like Ventilator Associated Pneumonia, Catheter Associated Urinary Tract Infections, Central line associated bloodstream infections, and Surgical Site Infections plays a regulatory role in combating HAIs. Moreover, practices such as safe injections, sharps injury prevention, biomedical waste management, and decontamination of reusable patient care items are integral components of standard precautions to mitigate HAIs.

Falls and strategies to prevent: Patient falls pose a significant risk in healthcare settings, with rates ranging from 3 to 5 per 1000 bed days, resulting in increased hospital stays and financial burdens. Globally, falls are the second leading cause of unintentional injury death, with the elderly being most vulnerable, especially in low and middle-income countries where 80% of fall-related mortality occurs (28). In India, falls are prevalent, affecting 26% to 37% of the population, with contributing factors including poor vision, vertigo, imbalance, fear of falling, history of fall, presence of osteoarthritis, visual impairment, hearing impairment, and depression are contributing factors for fall. It added that the risk of fall was higher in female elderly population (29). Preventing falls is crucial in healthcare to avoid sentinel events. Proper risk assessment using tools like the Morse Falls Scale is essential, along with measures such as alarms, adequate lighting, and companionship for vulnerable patients.

Table I. Factors hindering patient safety leading to Preventable patient harms, contributing factors and strategies to control

S.No	Factors hindering patient safety leading to Preventable patient harms	contributing factors	Strategies to Control
1	Misidentification of patient	<ul style="list-style-type: none"> • Communication gap especially there is Involvement of multiple Health care providers • Misidentification during registration,wrong information by patient, Homonymy • Human errors related to high stress work environment • Intrinsic patient related factors impair verbal communication. 	<ul style="list-style-type: none"> • Use Of Two Identifiers • Barcoded Medication Administration System(BCMA) • ImplementationOf Structured Checklists /Tools(WHO Surgical Safety Checklists) • Problem Solving Strategies Based Interventions
2	Poor communication	<ul style="list-style-type: none"> • Improper and inadequate handing over • Language barrier • Error in patients documentation • Heavy workload 	<ul style="list-style-type: none"> • Format/checklists/Tools for hand offs (ISBAR) • EnhancingEffective face-to-face communication between patients and medical professionals and among HCWs • Assessment of language barrier related risk of patients at the time of admission and use of tailored preventative strategy for communication gap. • Patient verification prior all patient related activities • Policies for Verbal order
3	Medication errors	<ul style="list-style-type: none"> • Inappropriate use of abbreviations • Incomplete prescriptions • Wrongmedication components and quantity • Misidentification patient • Selecting the incorrect medication from LASA (Look Alike Sound Alike) drug pairs • Prescribing by brand name • Polypharmacy • Involvement of multiple practitioners in patient care • Lack of resources related factors • Distraction in the environment 	<ul style="list-style-type: none"> • Medication reconciliation • Computerized provider order input especially in conjunction with clinical decision-support systems and conservative prescribing practices • Minimizing interruptions during management of medications • Screening tools for polypharmacy and deprescribing strategies • Shared decision making. • Maintenance of adequate staffing • An incident reporting system follows Just culture. • Policies to manage high alert drugs (prescription, storage,Preparation, administration, Documentation and monitoring)
4	Surgery related adverse events/harms	<ul style="list-style-type: none"> • Involvement of multiple surgeons • Multiple procedures a single surgical visit • Unusual time pressures • Unusual physical characteristics. • Introduction and use of new techniques and new equipment • Stress,fatigue and sleep deprivation • Retained foreign objects • Lack of required skill and training 	<ul style="list-style-type: none"> • Structured and standardised checklists to enhance communication, systems, and routines in operative area(WHO's Surgical safety checklists) • Training and skill strengthening of HCWs • Identify and manage stress and fatigue among Surgical team members. • Provision of a distraction free environment

Continue

5.	Health Care-Associated Infections	Compromise in infection control practices at any point of care delivery.	<p>Strict adherence to Infection control practices, Protocols and policies (WHO & CDC)</p> <ul style="list-style-type: none"> • Active microbial surveillance • Standard Precautions <ul style="list-style-type: none"> • Hand hygiene • Personal Protective Equipment • Respiratory Hygiene (Cough Etiquette) • Ensure appropriate patient placement(cohorting) • Cleaning and Disinfection • Biomedical Waste Disposal • Needle stick and sharps injury prevention • Safe Injection Practices • Transmission based precautions(Air born, droplet, contact) • Bundle Care for the prevention of Health Care Associated Infections. • Maintenance of staffing ratios • Antimicrobial stewardship • Decreasing hospital stay • Handling of laundry and linen
6	Falls	<ul style="list-style-type: none"> • Vertigo /Imbalance • Fear &History of fall • Presence of osteoarthritis, • Visual impairment • Hearing impairment • Depression • Medications which affect the sensorium and balance. 	<ul style="list-style-type: none"> • Fall risk assessment • Environmental modifications-Alarms/ adequate lighting/ • Sitters/companions • Safety belts for stretchers and wheel chair and use of siderails • Facility rounds and frequent monitoring of vulnerable patients • Patient & Family education on slip, trip and fall
7.	Unsafe injection practice related harms.	<ul style="list-style-type: none"> • Hazardous injection practices • Jeopardized infection control practices • Lack of trained or skilled HCWs 	<ul style="list-style-type: none"> • Prepare injections in a sterile field • Follow relevant standard precautions • Avoid/limit use of multidose vials • Handle sharps/needles effectively • One needle one syringe one time for single patient to enhance injection safety
8.	Diagnostic errors	<ul style="list-style-type: none"> • Cognitive issues- faulty heuristics • Systems-based ones- poor coordination and communication between providers. 	<ul style="list-style-type: none"> • Integration of good communication strategies and shared decision making • Peer review • Education and training on diagnostic processes. • Result notification systems ,aim to address lapse in communication leading delayed diagnosis and treatment of patients
9.	Venous thromboembolism	<ul style="list-style-type: none"> • Age • Active cancer • Recent trauma/Surgeries • Previous VTE • Immobilization • Ongoing hormonal treatment • Being an active tobacco smoker • BMI>30 	<ul style="list-style-type: none"> • Risk assessment tools for VTE and prioritise management based on the risk • Early ambulation • Pharmacological and mechanical prophylaxis reinforced with other interventions like education and monitoring
10.	Pressure Ulcers	<ul style="list-style-type: none"> • Constant pressure/shear/friction • Immobility • Incontinence • Lack of sensory perception • Poor nutrition and hydration • Age • Medical condition affecting bloodflow(DM, vascular disease etc) 	<ul style="list-style-type: none"> • Risk assessment for pressure ulcers (BRADEN Scale) • Repositioning the patient • Offering suitable support surfaces • Evaluating and improving nutritional status • Meticulous Skin care

Environmental modifications like siderails, safety belts, and frequent monitoring are also vital. While the feasibility of strategies like facility rounds for monitoring vulnerable patients is uncertain, patient and family education on fall prevention is indispensable. Multimedia interventions have shown promise in reducing fall rates and resulting injuries. (30)

Unsafe injection practices and strategies to prevent: Globally, over 16 billion injections are administered annually, posing risks of infectious and non-infectious adverse effects. Mathematical modelling estimates between 157,592 and 315,120 hepatitis C virus infections, 16,939 to 33,877 HIV infections, and 1.67 million hepatitis B virus infections over ten years were attributed to unsafe injection practices. (1) In India, an estimated 3 billion injections are given yearly, with 1.89 billion deemed unsafe. Prescribers play a crucial role in preventing overuse and enhancing injection safety (31). To ensure injection safety, preparatory steps are critical. Injections should be prepared in a sterile environment to minimize contamination risks. Hand hygiene before handling patients or medications is essential. All materials used should be sterile, and aseptic techniques must be strictly followed during preparation. Multi-dose vials should be used sparingly or designated for single-patient use only, labeled with the opening date, and disposed of when sterile conditions are compromised or as per manufacturer guidelines. Proper skin preparation before injection is imperative. Safe handling of sharp objects minimizes the risk of blood-borne infections and needle-stick injuries. Puncture-resistant sharps containers should be available for immediate disposal. Avoid physically removing, recapping, bending, or breaking needles. Employ the scoop technique if recapping is necessary, and dispose of sharps containers when three-quarters full, sealing them securely (27).

Diagnostic errors and strategies to prevent: Diagnostic errors, defined as the failure to establish an accurate and timely explanation of a patient's health problem(s) or communicate it effectively, occur in 5–20% of doctor-patient visits according to WHO factsheets. Physician reviews found detrimental diagnostic mistakes in at least 0.7% of adult admissions, impacting most people at some point in their lives. Research identifies cognitive issues, like faulty heuristics, and systems-based factors, such as poor coordination and communication, as root causes (1). Addressing diagnostic errors requires multifaceted approaches. Integrating communication and shared decision-making into workflows, alongside education and training on diagnostic processes, aids in clinical reasoning and bias reduction. Peer review helps catch potential errors before reaching patients, mitigating harm. Implementing result notification systems to bridge communication gaps in ambulatory and inpatient settings is crucial for timely diagnosis and treatment, thereby reducing diagnostic errors and patient harm. (32)

Venous thromboembolism (VTE) and strategies to prevent: Venous thromboembolism (VTE) poses a significant healthcare concern, contributing to one-third of hospitalization complications and hindering patient safety. It comes in one of the nine hospital acquired events that hinders patient safety. (1) Age, Active cancer, Recent trauma/Surgeries, Previous VTE, Immobilization, Ongoing hormonal treatment, Being an active tobacco smoker, BMI>30 etc were few identified risk factors for VTE. Utilizing risk assessment tools to identify high-risk patients and prioritize their care is crucial

for preventing adverse outcomes. (33) Early ambulation post-surgery is universally beneficial. Active prophylaxis, whether pharmacological or mechanical, reduces VTE incidence. Mechanical methods like intermittent pneumatic compression devices and graduated compression stockings are safe even for high-risk bleeding patients. Low-dose anticoagulants decrease VTE risk by 50–80%, albeit with a slight bleeding risk increase. VTE prophylaxis, coupled with education and monitoring, enhances patient safety. Emphasizing interventions like risk assessment, early ambulation, and prophylaxis reinforces VTE prevention efforts, reducing associated harms and improving patient outcomes (34).

Pressure Ulcers and strategies to prevent: Pressure ulcers account for over 10% of adult hospital admissions and significantly impact physical, mental, and quality of life despite being largely preventable. (1) Constant pressure, shear, and friction, exacerbated by immobility, incontinence, sensory impairment, poor nutrition, and medical conditions affecting blood flow, contribute to their development. Using tools like the BRADEN Scale for risk assessment is crucial. (35) Prevention strategies include patient repositioning, appropriate support surfaces, and nutritional optimization. Staging pressure ulcers guides treatment, which may involve pressure off-loading, dietary adjustments, and appropriate wound care. Cleaning pressure injuries and their surroundings, debriding biofilm and devitalized tissue as needed, and closely monitoring for complications like osteomyelitis and infection are vital. Selecting the right wound dressing based on wound extent and exudate is essential for effective management. (36)

CONCLUSION

Patient safety remains a paramount concern in healthcare, with various adverse events posing significant risks to patient well-being worldwide. Efforts to enhance patient safety are multifaceted and require comprehensive strategies addressing a range of factors, from diagnostic errors to healthcare-associated infections, falls, unsafe injection practices, venous thromboembolism, and pressure ulcers. It's imperative to prioritize preventive measures and implement evidence-based interventions to mitigate these risks and improve patient outcomes. The implementation of national frameworks like the National Patient Safety Implementation Framework in India underscores the importance of a systematic approach to patient safety, emphasizing structural improvements, adverse event reporting, workforce competency, and infection control. International initiatives such as World Patient Safety Day further highlight the global commitment to advancing patient safety. Effective communication, standardized protocols, risk assessment tools, and continuous education are essential elements in preventing patient harm and enhancing safety culture within healthcare settings. By addressing preventable patient harms and implementing tailored strategies to overcome them, healthcare systems can strive towards delivering safer, higher-quality care for all patients. Ultimately, promoting patient safety is not just a moral imperative but also a fundamental aspect of achieving equitable and effective healthcare delivery worldwide.

REFERENCES

<https://www.who.int/news-room/fact-sheets/detail/patient-safety>.

- Florence Nightingale Pledge | School of Nursing | Vanderbilt University [Internet]. [cited 2024 Feb 6]. Available from: <https://nursing.vanderbilt.edu/news/florence-nightingale-pledge/>
- Patient Safety/Quality Improvement (PS/QI): Florence Nightingale Prevails - Cecelia E. Schmalbach, 2015 [Internet]. [cited 2024 Feb 15]. Available from: <https://journals.sagepub.com/doi/10.1177/0194599815577604>
- Government of India. Ministry of Health and Family Welfare (MOHFW). National Patient Safety Implementation Framework (2018–2025). MOHFW; 2018. Accessed March 05, 2024. <https://www.who.int/docs/default-source/searo/india/antimicrobial-resist...>
- De Rezende HA, Melleiro MM, Shimoda GT. Interventions to reduce patient identification errors in the hospital setting: a systematic review protocol. *JBHI Database System Rev Implement Rep*. 2019 Jan;17(1):37–42.
- Fukami T, Uemura M, Terai M, Umemura T, Maeda M, Ichikawa M, et al. Intervention efficacy for eliminating patient misidentification using step-by-step problem-solving procedures to improve patient safety. *Nagoya J Med Sci*. 2020 May;82(2):315–21.
- Shah K, Lo C, Babich M, Tsao NW, Bansback NJ. Bar Code Medication Administration Technology: A Systematic Review of Impact on Patient Safety When Used with Computerized Prescriber Order Entry and Automated Dispensing Devices. *Can J Hosp Pharm*. 2016;69(5):394–402.
- Hasegawa T, Fujita S, Seto K, Kitazawa T, Matsumoto K. Patients' identification and reporting of unsafe events at six hospitals in Japan. *Jt Comm J Qual Patient Saf*. 2011 Nov;37(11):502–8.
- Bartlett G, Blais R, Tamblyn R, Clermont RJ, MacGibbon B. Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *CMAJ*. 2008 Jun 3;178(12):1555–62.
- CPHRM MS RN, JD. The Impact of Poor Communication on Medical Errors [Internet]. *The Doctor Weighs In*. 2017 [cited 2024 Feb 23]. Available from: <https://thedoctorweighsin.com/impact-poor-communication-on-medical-errors/>
- Taran S. An Examination of the Factors Contributing to Poor Communication Outside the Physician-Patient Sphere. *McGill J Med*. 2011 Jun;13(1):86.
- Burgess A, Diggele C van, Roberts C, Mellis C. Teaching clinical handover with ISBAR. *BMC Medical Education* [Internet]. 2020 [cited 2024 Feb 7];20(Suppl 2). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7712559/>
- Daker-White G, Hays R, McSharry J, Giles S, Cheraghi-Sohi S, Rhodes P, et al. Blame the Patient, Blame the Doctor or Blame the System? A Meta-Synthesis of Qualitative Studies of Patient Safety in Primary Care. *PLoS One*. 2015 Aug 5;10(8):e0128329.
- Wakefield DS, Wakefield BJ, Despina L, Brandt J, Davis W, Clements K, et al. A Review of Verbal Order Policies in Acute Care Hospitals. *JCJQPS*. 2012 Jan 1;38(1):24–33.
- Bhutada A. Incidence of Medication Error in Critical Care Unit of a Tertiary Care Hospital: Where Do We Stand? *Indian J Crit Care Med*. 2020 Sep;24(9):753–4.
- Assiri GA, Shebl NA, Mahmoud MA, Aloudah N, Grant E, Aljadhey H, et al. What is the epidemiology of medication errors, error-related adverse events and risk factors for errors in adults managed in community care contexts? A systematic review of the international literature. *BMJ Open*. 2018 May 5;8(5):e019101.
- Hickner J, Zafar A, Kuo GM, Fagnan LJ, Forjuoh SN, Knox LM, et al. Field Test Results of a New Ambulatory Care Medication Error and Adverse Drug Event Reporting System—MEADERS. *Ann Fam Med*. 2010 Nov;8(6):517–25.
- Dahal R, Bista S. Strategies to Reduce Polypharmacy in the Elderly. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Feb 23]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK574550/>
- Nantsupawat A, Poghosyan L, Wichaikhum OA, Kunaviktikul W, Fang Y, Kueakomoldej S, et al. Nurse Staffing, Missed care, Quality of Care and Adverse Events: A Cross Sectional Study. *J Nurs Manag*. 2022 Mar;30(2):447–54.
- Stavropoulou C, Doherty C, Tosey P. How Effective Are Incident-Reporting Systems for Improving Patient Safety? A Systematic Literature Review. *Milbank Q*. 2015 Dec;93(4):826–66.
- The 10 Rights of Medication Administration [Internet]. *Nursing Notes*. 2015 [cited 2024 Feb 23]. Available from: <https://nursingnotes.co.uk/resources/10-rights-of-medication-administration/>
- Bhandarkar P, Gadgil A, Patil P, Mohan M, Roy N. Estimation of the National Surgical Needs in India by Enumerating the Surgical Procedures in an Urban Community Under Universal Health Coverage. *World J Surg*. 2021 Jan 1;45(1):33–40.
- Shekhar A, Anand A, Jha CK, Yadav SK, Sinha DK. Surgical Safety Audit in India, or Lack Thereof: An Urgent Need for National Policy on Wrong-Site Surgery Registry and Research. *Journal of Health Management*. 2023 Jun 22;09720634231167233.
- Patient Safety in the Surgical Environment [Internet]. [cited 2024 Feb 19]. Available from: <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2010/09/patient-safety-in-the-surgical-environment>
- Balusu C. Addressing the Prevalence of Healthcare-Associated Infections in India. *Undergraduate Journal of Public Health* [Internet]. 2022 Apr 30 [cited 2024 Feb 19];6(0). Available from: <https://journals.publishing.umich.edu/ujph/article/id/2307/>
- Haque M, McKimm J, Sartelli M, Dhingra S, Labricciosa FM, Islam S, et al. Strategies to Prevent Healthcare-Associated Infections: A Narrative Overview. *Risk Manag Healthc Policy*. 2020 Sep 28;13:1765–80.
- Standard precautions for the prevention and control of infections: aide-memoire [Internet]. [cited 2024 Feb 20]. Available from: <https://www.who.int/publications-detail-redirect/WHO-UHL-IHS-IPC-2022.1>
- Falls [Internet]. [cited 2024 Feb 20]. Available from: <https://www.who.int/news-room/fact-sheets/detail/falls>
- Joseph A, Kumar D, Bagavandas M. A Review of Epidemiology of Fall among Elderly in India. *Indian J Community Med*. 2019;44(2):166–8.
- LeLaurin JH, Shorr RI. Preventing Falls in Hospitalized Patients: State of the Science. *Clin Geriatr Med*. 2019 May;35(2):273–83.
- Arora N. Injection practices in India. *WHO South-East Asia J Public Health*. 2012;1(2):189.
- Hall KK, Shoemaker-Hunt S, Hoffman L, Richard S, Gall E, Schoyer E, et al. Diagnostic Errors. In: *Making Healthcare Safer III: A Critical Analysis of Existing and Emerging Patient Safety Practices* [Internet] [Internet]. Agency for

- Healthcare Research and Quality (US); 2020 [cited 2024 Feb 24]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555525/>
- CDC. Centers for Disease Control and Prevention. 2018 [cited 2024 Feb 24]. Preventing HA-VTE: A Public Health and Patient Safety Challenge | CDC. Available from: <https://www.cdc.gov/ncbddd/dvt/features/keyfinding-pba-vte.html>
- Abboud J, Abdel Rahman A, Kahale L, Dempster M, Adair P. Prevention of health care associated venous thromboembolism through implementing VTE prevention clinical practice guidelines in hospitalized medical patients: a systematic review and meta-analysis. *Implement Sci.* 2020 Jun 24;15:49.
- Chung ML, Widdel M, Kirchhoff J, Sellin J, Jelali M, Geiser F, et al. Risk factors for pressure ulcers in adult patients: A meta-analysis on sociodemographic factors and the Braden scale. *J Clin Nurs.* 2023 May;32(9–10):1979–92.
- Visconti AJ, Sola OI, Raghavan PV. Pressure Injuries: Prevention, Evaluation, and Management. *Am Fam Physician.* 2023 Aug;108(2):166–74.
