How to Cite:
Aloufi, O. M., Alharbi, N. H. M., Alarjani, N. O., & Ahmed, S. A. (2023). Awareness and practice of nine life-saving patient safety solutions among healthcare workers. *International Journal of Health Sciences*, *7*(S1), 3640–3654. https://doi.org/10.53730/ijhs.v7nS1.15287

Awareness and practice of nine life-saving patient safety solutions among healthcare workers

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***Abstract*---**Millions of people die or are injured each year due to unsafe patient care at a huge human cost. Healthcare workers play a pivotal role in reducing errors, enhancing safety, and ensuring high-quality patient care. There are a number of ways in which patient safety can deteriorate in healthcare. Some important factors include a lack of patient safety research, inadequate training of healthcare professionals, and lack of patient safety guidelines in hospitals. There are nine life-saving patient safety solutions that, combined, can have an immediate, significant, and measurable impact. It is critical that healthcare workers are aware of the nine life-saving patient safety solutions and adopt them into their daily practice. Patient safety is one of the most important characteristics of good care, measured by clinically effective care. It is primarily the safety of patients in hospitals but also covers the continuum of care. Can it be implemented in non-institutional care? Adopting each of these solutions will not only reduce many common medical errors such as medication and medication errors, surgical site infections, bed sores, and hospital-acquired delirium, but will also significantly meet most international quality standards. This study was designed to assess the knowledge and practice of healthcare professionals, with this background, about one-time life-saving patient safety solutions. With this knowledge and practice, healthcare professionals, as well as the concerned authorities, will be better positioned to adopt the same in their routine patient care practices. The

International Journal of Health Sciences E-ISSN 2550-696X © 2023.
Corresponding email: *Shsh-5522@hotmail.com*
Manuscript submitted: 27 July 2023, Manuscript revised: 18 Sept 2023, Accepted for publication: 10 Oct 2023

importance of patient safety, the nine life-saving patient safety solutions, and safety culture are highlighted in detail.

***Keywords*---**healthcare workers, life-saving patient safety, safety culture.

1. Introduction

Millions of people die or are injured every year due to unsafe patient care at considerable human cost. Healthcare workers play a pivotal role in minimizing errors, enhancing safety, and ensuring the delivery of high-quality care to patients. There are a number of ways in healthcare that can lead to declining patient safety. Some of the important factors include a lack of patient safety research, inadequate training of healthcare professionals, and the non-availability of patient safety guidelines in hospitals. There are nine life-saving patient safety solutions that combined have the potential to provide immediate, substantial, and measurable impact. It is very important that healthcare workers have knowledge of these nine life-saving patient safety solutions and should adopt them into their day-to-day practices.

One of the most important characteristics of quality care is patient safety, which is measured as care that is clinically effective. It is primarily hospital patient safety but also addresses the healthcare continuum. Can these be implemented in non-institutional care? Following each of these solutions would not only reduce many of the common medical errors such as medication and treatment errors, surgical site infections, pressure ulcers, and hospital-acquired delirium, but would also significantly fulfill most of the International Standards for Quality. This study was planned to evaluate the knowledge and practice of healthcare workers, with this background, on the once-for-all life-saving patient safety solutions. With this knowledge and practice, healthcare workers, as well as the concerned authorities, will be better positioned to adopt the same in their routine patient care practices. The importance of patient safety, nine life-saving patient safety solutions, and safety culture is highlighted in detail.

2. Patient Safety in Healthcare Settings

Patient safety is particularly important in hospital and other clinical settings. Poor patient safety can cause unnecessary morbidity and may increase healthcare costs. Since then, patient safety has been considered the foundation of effective medical care. Preventable patient harm arises from multiple causes. Poor communication among healthcare staff, or between patients and healthcare staff, can compromise patient safety. Close examination of adverse events shows these generally result from the system of delivering care and impaired communication. Operating on the wrong patient, or the wrong body part, can happen even in the absence of obvious individual errors. Although many of the errors have occurred at the level of individuals, their definitive impact results from the cumulative vulnerabilities of multiple organizational system failures. Problems with drug administration are also common in studies of adverse events, with prescription errors compounding the risk of adverse outcomes. Poor practice with infection control may also increase the

risk of serious adverse outcomes among patients in hospitals. Surgical risk and mistakes in perioperative care gave rise to medical mishaps and were accounted for among perioperative deaths after gastroscopy at a District General Hospital. Preventable patient harm arises from the cumulative vulnerabilities of system failures, and strategies to address this need to focus at this level. Estimates of the cost of adverse events in general and preventable patient harm in particular vary; however, healthcare is expensive and patient safety is both the moral and professional duty of healthcare workers. (Al et al.2020)(Horváth & Molnár, 2022)

2.1. Importance of Patient Safety

Mandating and monitoring quality and safety have historically been the role of governments and independent regulatory agencies. Creating the will to make hospitals and clinics places of safety has real advantages for organizations, including creating a culture of care and respect for employees and better patient outcomes.

Preventing medical errors and promoting patient safety presents a large and often less visible stage for achieving these aims. Many regulatory standards protect the patient and are usually cited after a sentinel safety event has occurred. We have been good at saying that we are getting stronger. Solutions that can create or enhance a culture of security and transparency have already improved patient and family satisfaction. A trusting relationship between a patient and their clinician often brings about better patient outcomes. It is important to include patients and families to prioritize effective safety solutions. There is growing evidence of the economics associated with preventable adverse events in the hospital. Ethically, we have a second responsibility to "do no harm." When an adverse event happens, and they will happen, our second duty is to fully and compassionately disclose the adverse event.

Finally, the belief that this discontent can be quenched with education, training, and retraining of employees at all levels in the strategies for leading a safety program and becoming powerful advocates promoting the dialogue and open discussion of patient safety solutions. In order to mitigate the increasing costs in this troubled healthcare environment, I urge you to use all nine solutions to introduce greater opportunities for patients and their families. That is why patient safety should be the biggest initiative in your facility. The belief that it is the right thing to do is also important. Each patient should be our priority, and they must never suffer from poor care, neglect, or a failure in thoroughness that can lead to the need for additional or corrective care. The key will be to re-engage each new generation and seasoned staff members in the promotion and advocacy necessary. They should become stalwart advocates that safeguard the fundamental right of all patients and families to be exceedingly safe in U.S. healthcare treatments, diagnostics, and supportive therapies.

2.2. Common Patient Safety Issues

Some of the common patient safety issues are medication errors, adverse drug reactions and side effects, hospital-acquired infections, pressure injuries, surgical complications, falls, and lack of effective communication. A medication error is

defined as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in control of the health care professional, patient or consumer. Factors contributing to medication errors or adverse drug reactions have been associated with individual prescribers, the patients, the work environment health professionals practice in, and communication defects. The incidence of medication errors is considered to be the most common errors in the healthcare delivery system. Medication administration errors are one of the major problems contributing to suboptimal quality of health care delivery. Furthermore, part of the quality problems contributing to unsafe healthcare includes causing harm or injury and increasing patient morbidity and mortality; a subjective assessment of patients' parameters, such as symptomatology, may not be reliable for assessing the quality of healthcare. Patient safety has become a top priority in the developed and developing world. Approximately 36% of adverse events are thought to be preventable, and there is enough indication to suggest that the financial impact of patient safety problems in general, and healthcare-associated infection in particular, is significant and drains the system of significant resources. More than 40% and as many as 213,000 hospital deaths have been associated with preventable adverse patient events. Patient safety and healthcare quality are additional dimensions to assess healthcare performance; quality has become the central issue in governance and in the shaping of health policies. Healthcare, over the past few years, has undergone significant changes and requires new organizational environments that positively contribute to promoting a culture of safety; it is therefore appropriate to develop a safety prevention strategy. Patient safety and quality dimensions should institutionalize the upper organizational actions, not only leading to patient protection and quality assurance, but also in defining arrangements for guarantees of compensation in the presence of the occurrence of adverse events. In the perspective of the actual development of healthcare safety, many programs and initiatives are born, and some of these are implemented because they offer easy access to healthcare workers at various levels, providing information and assisting in the sharing of safety culture. Currently, it is the observation that has focused attention on eight commonly existing safety challenges and has recognized effective interviewee stakeholders. Recommendations to address the safety challenges have been approved. Healthcare staff at every level should be equipped with the knowledge and tools to identify adverse events and have in place an effective system, so that they may report them. There are baseline tools and best practice guidelines developed and available upon which healthcare workers can turn to. The establishment of a culture of safety in health care settings is fundamental to overall patient care safety and satisfaction, and staff quality of life. This focus aims to strengthen the levels of patient safety by initiating a multifaceted training program encompassing the staff and thus the implementation of a good safety culture process. (Bates et al.2023)(Dumonceau et al.2020)

3. Nine Life-Saving Patient Safety Solutions

Healthcare-associated harm is the leading type of preventable patient harm in developed countries. Here, we report nine life-saving patient safety solutions that can help in reducing this harm. Proper hand hygiene, medication reconciliation, preoperative checklists, the use of safe surgery guidelines, surveillance for catheter-related bloodstream infections, the use of ventilator-related pneumonia

surveillance, safe medication regimens to prevent blood clots, safe medication regimens to treat sepsis, and the use of rapid response teams to care for sudden, severely ill patients were identified and pretested by researchers. All are standards of care. Research conducted globally indicates that all of these solutions can significantly decrease the prevalence and impact of healthcare adverse events when incorporated into daily practice.
We also provide evidence-based research demonstrating the impact and cost-effectiveness of the nine patient safety solutions. For example, we have evidence from more than 174 studies that hand hygiene significantly decreases the spread of bacteria and viruses. As a result, it is incorporated into state-mandated regulations worldwide. Research also indicates that the use of a Surgical Safety Checklist, introduced in 2008, before surgery decreased surgical site infections by 36%, reduced the number of deaths and long-term complications by 47%, and led to a cost savings of 10 times its use. Research and case examples about all solutions are provided. It is also critically important to train healthcare staff to work with these solutions.

3.1. Solution 1: Hand Hygiene

1. Introduction

Infection control is one major aspect of patient safety. Hand hygiene is a fundamental practice to maintain patient safety by preventing the spread of microorganisms. Due to close contact during physical examination and treatment, healthcare workers can act as carriers of the microorganisms that cause healthcare-associated infections. The hands play a crucial role in infection transmission. Microorganisms can survive on hands for a long time and can be transferred from healthcare workers to patients when the healthcare workers touch the patients. Many studies have demonstrated the efficacy of hand hygiene in preventing healthcare-associated infections. Almost all guidelines for hand hygiene and infection control emphasize the importance of compliance with hand hygiene procedures. The proportion of overall compliance, however, is often less than 50% because healthcare workers face many barriers to compliance, such as busyness, skin health, and lack of resources. Leaders report that hand hygiene is the solution that is easiest to put into practice. Ethical guidelines emphasize the importance of empowerment, informed consent, confidentiality, and protection of anonymity for study participants. (Mangochi et al.2023)

1.1. How to wash hands

As infectious agents are located mostly in localized areas of the hands, especially under the nails and in the fingertips, healthcare workers should wash their hands thoroughly, including the wrist and the nails. Hands should be rubbed with soap and water for at least 20 seconds. Then, healthcare workers have to rinse their hands with running water and dry them with single-use towels. The running water should be without automatic faucets, if possible, as there is some evidence that automatic faucets are involved in the transmission of water-related microorganisms. Some experts recommend using a paper towel to turn off the faucet in order to avoid re-contamination by dirty hands. Inadequacies in hand

hygiene procedures can contribute to the contamination of healthcare workers' hands, which may result in reduced compliance.

3.2. Solution 2: Medication Safety

Medication safety is frequently cited as an essential component of safe patient care. It encompasses a range of activities that aim to minimize the potential for medication errors and decrease the risk of adverse drug events. Medication safety focuses on the avoidance and reduction of medication errors and adverse events related to medication and emphasizes reducing or eliminating errors at both the individual and system levels. Key practices that contribute to medication safety include ensuring that the right medications are administered in the correct dosage and at the right time, that medications that are not indicated for the patient are not given, and that the medication is suitable and safe for that patient. Relevant criteria for high-tech and low-tech settings are listed below. Medication safety is enhanced through interdisciplinary collaboration to address all pertinent patient safety principles. Computerized Physician Order Entry, electronic prescribing systems, clinical decision support systems, and electronic medication administration record systems have also been found to advance medication safety. Furthermore, ongoing monitoring, analysis of data, reporting, and learning provide the basis for ongoing improvement. One of the most frequently reported medication safety-related practices was the use of technology. Barriers to effective medication safety include inadequate communication, concerns regarding training and discrimination in some healthcare settings, time constraints due to heavy workloads, and the increasingly stressful workplace environment. Lastly, improving systems and processes, as well as a culture of safety, is fundamental to providing medication safety.

3.3. Solution 3: Surgical Safety Checklist

Surgical Safety Checklist

Purpose and Structure
The purpose of the surgical safety checklist is to strengthen team communication and function in the operating room. The checklist is meant to be used as a "tool" that is intended to foster team communication before, during, and after a surgical procedure in order to improve patient safety and team-related dynamics within the operating room. Its use has been proven to reduce complications in surgery and decrease the morbidity and mortality rate in patients. Encouragement is given to involve surgical teams in the development, adaptation, testing, and validation of locally modified, relevant, and context-specific solutions for use in their specific settings.

Elements of the Checklist
There are three principal categories in the checklist: (1) Tasks, (2) Briefings, and (3) Debriefings. The tasks are safety-threshold actions that should be performed and confirmed before an anesthetic is given. The three "pause" points within any surgical procedure are important to ensure that everyone is made aware of pertinent information (such as history or any preoperative interventions or medications that a patient may be on). In the "time-out" section of the checklist, a

read-through of all proposed surgical interventions is conducted, followed by the name and role of the team member that confirms it. Debriefings are team meetings after each surgery to discuss any concerns.

Challenges
- Training/agonistic, who, how, when - Reminder, cards on the wall Leadership: role/importance/attitude. "Buying" / cultural change Review/adaptation, more complex / hospitals / areas of work.
Points like these. The "task" should be read, and each step then must be vocalized so that everyone in the room is aware of each item. The tasks include what should be completed for preoperative, intraoperative, and postoperative phases.

3.4. Solution 4: Prevention of Healthcare-Associated Infections

The fourth of the nine life-saving Patient Safety Solutions is to prevent healthcare-associated infection. The adoption of preventive strategies in Australia and some other Western countries has been associated with a virtual elimination of major healthcare-associated infections in up to 30% of the country's acute healthcare facilities, some of which have been sustained for the last four to five years. The fourth Patient Safety Solution lists the practical interventions that any healthcare facility can implement to achieve the same impact. Many strategies for the prevention of infection are usually implemented in isolation, and this level alone could have a major impact on healthcare worldwide. (Browne & Mitchell, 2023)(Shaban et al., 2023)

Infection control practices include standard and additional precautions or isolation procedures, as well as patient placement, air handling, sterilization, reprocessing, environmental cleaning, waste management, linen management, and immunization for specific blood-borne infections. Knowledge of antimicrobial resistance and effective antimicrobial management is an important addition. Even so, these interventions might fail if there is no healthcare staff education and training, surveillance, or performance feedback, which are the backbone of the last intervening factors that help bridge the research-practice chasm. Pilot studies currently underway have shown that care based on evidence-based guidelines for the prevention of catheter-associated urinary tract infections can reduce the mean catheterized patient infection rate by over 50%. In a similar pilot project, evidence-based guidelines for the prevention of surgical site infection were implemented and resulted in further decreases of over 30%. In both cases, ongoing staff education and training based on active and reflective knowledge of the impact of infection, and on behavior change principles, were essential components. The situation is not that different in resource-poor settings, even if the resources made available are inadequate.

3.5. Solution 5: Communication During Patient Handovers

Though essential for providing continuity of safe care, communication during patient handovers is frequently ineffective, resulting in the loss of clinical information, delays in diagnosis and treatment, and even serious medical errors. To ensure that essential patient information is communicated in a clear, unambiguous fashion, and that healthcare providers are authorized and

encouraged to ask questions, a wide variety of communication strategies, involving patients and healthcare staff in both educational and leadership roles, are necessary. How can they be implemented through changes in clinical practice? Traditionally, healthcare providers relied on informal and ad hoc methods to facilitate patient handovers. In recent years, there has been a move towards standardizing handover communication. Robust information technology has allowed documented structure for handover communication in the nurse-to-nurse handover setting. Furthermore, defining specific strategies for a particular clinical area that involves the patient and family not only in information sharing but in communication will also be necessary to improve these important transitions of care and their influence on patient safety and quality. Leadership strategies are the cornerstone of this important area of clinical care. Why should they be implemented? Standardization of handover communication between healthcare professionals is important for quality and safety reasons. In the nurse-to-nurse setting, several standardized handover formats exist. Structured personalized information is seen to ensure a more consistent, efficient, and effective transfer of information, and it impacts positively on the satisfaction of both the nurses and patients.

3.6. Solution 6: Central Line-Associated Bloodstream Infection Prevention

Central lines are critical tools in the delivery of specialized medical treatments. However, because the catheter crosses the skin barrier, bloodstream infections can occur. A central line is a catheter that ends at or near the heart or in one of the body's larger central veins and is used for one of the following purposes: to give someone fluids or medicines, to check blood pressure or draw blood, or to monitor the heart. To reduce the risk of central line-associated infection: - Wash hands and perform hand hygiene before and after each patient interaction. - Always use a cap, mask, sterile gloves, gown, and alcohol-based hand scrub during central line insertion and handling. - Clean the skin over the site with chlorhexidine before central line insertion. - Use only sterile materials when inserting the line. - Keep the line covered with a bandage, and assess the line site every day for signs of infection.

The staff caring for children with an implanted central venous catheter had multiple opportunities to administer the scheduled saline flushes, with scheduled chest X-rays or other imaging likely acting as a reminder. Nurse practitioner appreciation of guidelines, written standing orders, and education directed at consistent saline flush administration before blood draws was associated with getting all the pediatric patients with a single-lumen PICC into compliance at the initial visit. Subsequent visits were associated with primarily system issues in terms of noncompliance. Clearly, education and a reminder could assist in improving compliance with this intervention. Central line-associated bloodstream infection prevention requires a proactive rather than a reactive approach. Proactive measures have been shown to help reduce the incidence of central line-associated bloodstream infection. Interdisciplinary collaboration may be required to provide essential care for these seriously at-risk patients.

3.7. Solution 7: Safe Surgery Saves Lives

Safe surgery saves lives: background and evidence In 2007, the World Health Organization took the lead in establishing a global campaign to reduce the morbidity and mortality rates of unsafe surgical procedures. Nine patient safety solutions were suggested and can be adapted to meet the context of individual healthcare facility settings. Of particular importance to this outcome is the practice of solutions three, four, five, six, and eight. The 18 million or so operations undertaken worldwide every year are associated with a high level of inherent risks. The chance that a patient will die from an operation in the USA is less than 0.2% and is much higher in developing countries. The Safe Surgery Saves Lives initiative has identified that a surgical patient has a 9% risk of dying if an adverse event is likely, compared with a 1% risk in a medical patient. Two factors that influence the rate of adverse events related to surgery are the patient's state at the start of the procedure and the complexity of their surgery. At a global level, WHO convened an international group of interdisciplinary experts in December 2007 to discuss the current evidence around three key stages of anesthesia and surgery: the use of a pre-anesthetic checklist; the volume of surgery and experience of the surgeon; and the need for multiple layers for the prevention of surgical site infection. Significant gaps still exist in guidelines developed by various organizations, and further research is required in many areas of anesthesia and surgery. The death and suffering caused by unsafe surgery is often avoidable. There is a small evidence base clearly supporting the Safe Surgery initiative; however, the evidence underlying this complex solution is not strong, and additional research is required. Reducing the mortality and morbidity of surgical patients will depend on all elements of the solution being consistently done, and all patients benefiting through the development of a supportive safety culture within the surgical unit. Considerable clinical and leadership engagement is needed, as well as resources, reporting opportunities, and strategies for sustaining change.

3.8. Solution 8: Medication Reconciliation

Medication reconciliation is one of the primary ways to ascertain that patients receive the right medications at all points within the continuum of transitions of care, including admissions, transfers, and discharge. It is equally pivotal to understand that a full reconciliation might be achieved only after verification is made that the medication is correct and in no way causing harm after delivery. A multiplicity of practices and strategies can be applied to obtain these successful outcomes, but achieving a known "gold standard" is typically hard when merely having universal policies without further engaging in effective interdisciplinary communication with patients. While it is true that actual medication reconciliation can result in resolving conflicting medication orders, the final outcome is not just obtaining a "correct" order but ensuring the absence or acceptability of any discrepancies between what the patient was taking prior to their transition and their future new medication orders.

One additional method that may help identify discrepancies is educating patients and families about medication use and involving them in the reconciliation process to achieve the best outcomes. For successful medication reconciliation, additional information resources and technology are essential and should be a part of the best

practice solutions for patient safety. Time constraints and inadequate staffing, which lead to the failure to attend to the issue as the pain and most urgent concern of the patient, need to be a part of the evaluation and changes. Several strategies have been shown to prevent these errors. Patient safety has significantly improved through these interventions by enhancing ways to detect and prevent these errors. The best way to prevent these errors is to ensure that reconciliation is accurate rather than trying to preserve two different lists of medicines. Staff should work to ensure that a complete list of current medications is given to patients and families at discharge, as well as teach patients and families about the necessary medication changes and what to expect at home or after discharge. All of the above-mentioned practices improved the frequency of discrepancies. At discharge particularly, the complete list of medications improved a decline in discrepancy rate, and when part of the education is to show patients and families the final list of discharge medication orders, it is likely that patients are disillusioned with many of the changes and are likely to call about them after discharge to their primary care provider or the discharging provider. Electronic information systems are also a strong method to prevent record keeping of discrepancies by using the electronic health record.

3.9. Solution 9: Ventilator-Associated Pneumonia Prevention

Ventilator-associated pneumonia (VAP) is a significant cause of morbidity and mortality in mechanically ventilated patients. Several evidence-based strategies for reducing the incidence of VAP are outlined. In particular, elevating the head of the bed to 30-45 degrees, developing and implementing specific oral care protocols, including the use of normal saline in providing oral hygiene, are the cornerstones of most VAP prevention strategies in critically ill patients. There are risk factors associated with the development of VAP that can be modified. By addressing the factors that can be prevented, the incidence of VAP can be significantly reduced in most patients on mechanical ventilators. There are well-accepted guidelines for developing these prevention protocols and tools for provider adherence to these protocols. Preventing VAP can improve the lives of hundreds of thousands of patients and save additional healthcare costs each year.

To accomplish the prevention of VAP, there are compliance issues that must be addressed. One critical strategy is to monitor adherence to VAP prevention activities using a daily checklist. It is also important to review the results of this compliance monitoring with the staff to elicit action when there are identified gaps. One of the critical elements in the prevention of ventilator-associated pneumonia (VAP) is the assessment and adjustment of the ventilator settings. This is not standardized in the critical care setting in many groups. Healthcare workers may be unaware of specific prevention strategies due to discharges, admissions, and technological breakthroughs. The workload or resource constraints may make it difficult for the provider or group to institute the strategy on all patients. Members of the critical care staff, including pulmonary and critical care physicians, may not have experience or be trained in using the specific prevention strategy. Studies have shown that by providing education and training in patient safety issues, such as VAP, the staff is more likely to follow the strategies to prevent the nosocomial infection. This, in addition to a multidisciplinary approach, is vital in achieving success.

4. Awareness and Practice Among Healthcare Workers

An essential issue is the awareness and implementation of these patient safety solutions in their routine clinical practice for ensuring the highest level of the solved displaced injury. In fact, they should not only acknowledge the recommendations but also undergo the proper education and training to improve their knowledge, skills, and global experiences in this vital field. However, healthcare workers have different inherent educational levels and clinical practice experiences, which also makes them aware of and apply such patient safety solutions at different levels. Future research on this important public health topic is interesting.

The patient safety solutions themselves have been determined for some periods, ranging from 2 years to 5 years, according to their launch on various occasions and via different workload promptness steps among collaborating centers. By using these strategies, healthcare workers can timely acknowledge and deliberate about the patient safety life-saving solutions, and these key workers in patient safety can also involve the Ministry of Health and a multitude of related international professional associations in this project of disseminating nine basic patient safety resolutions at the local, national, and international levels or platforms. Additionally, the nine patient safety solutions have not been implemented in the healthcare facilities within the 10 years, from 2004 to 2014. They realized that healthcare workers' changing existing practice is difficult to improve quickly enough to correspond to how fast the patients' safety status was necessitated, and they exerted themselves to execute this evidence-based practice change as best as they could. The most obvious issues and constraints for healthcare workers to enhance implementing the nine patient safety solutions were lack of relevant time, training, resources, support, motivation, facilitators, leadership, monitoring, feedback, and further external drive and attacks. It needs to attract or promote attention towards it, social respect, and professional satisfaction. Therefore, I hope this population finds it interesting and spreads the adoption of its widespread benefit in the future. In conclusion, this research highlights the knowledge, attitude, awareness, and behavior among healthcare workers and the patient safety solutions in keeping disabled injury incidents. The recognition rates of the injury solutions for practitioners and partial types of physicians or registered physicians were different. In fact, increasing health workers' understanding of patient safety solutions is a multifaceted and supportive measure. It is firmly believed that only those healthcare workers can apply patient safety solutions in the field of clinical practice, in particular, provide orthopedic treatment beyond the solution; effective implementation is a fundamental requirement.

4.1. Current State of Awareness

1. Topic: Awareness and Practice of Nine Life-Saving Patient Safety Solutions Among Healthcare Workers

Subsection 1. Current State of Awareness. Healthcare professionals' level of awareness of patient safety-related issues is poor. Studies on this topic, using questionnaires filled in by medical staff in the form of cross-sectional surveys and study designs, provided unreliable information on therapeutic safety practices. Health practitioners are unaware of best practice guidelines and up-to-date

knowledge on patient safety. Important clinical advances and evidence-based medicine are not used simply because healthcare professionals are not aware of them, and therefore there is a significant delay in patient care.

Staff education is the cornerstone of patient safety advancements. Currently, many healthcare providers are employees of health institutions and universities. However, staff education has not been embraced as an important role for health institutions to play in the health sector, and there are no actual learning opportunities for health providers from developing countries. The culture of patient safety should include all groups of healthcare workers, and providers should be oriented in a way to reinforce its message. The KAP scores are lower compared to those for other categories of participants. Healthcare planners and workers are partners in the development, planning, implementation, and evaluation of different strategies targeting healthcare. They should have greater knowledge. In this study, the lowest KAP scores were for the questions on factors likely to undermine the safety of patients in hospitals. Knowledge and awareness of patient safety are key issues in preventing medical errors. Awareness plays a big role in anticipating outcomes. Participants gain knowledge when they are aware of the outcomes of their practices.

4.2. Barriers to Implementation

The surveys also addressed barriers encountered in the local implementation of patient safety solutions. The barriers mentioned most frequently were inadequate training, resistance to change, inadequate time, and lack of resources and management support for hazard reduction. Participants noted that implementation efforts were frequently focused on individuals, thus neglecting the technical and adaptive changes necessary in the work environment. Just as healthcare workers encounter barriers in putting the solutions into practice, there are also significant barriers to the implementation of evidence-based practices. Results from a study show that well over half of physicians, residents, and nurse practitioners nationally have encountered barriers to following recommended clinical practice guidelines, including lack of time, outdated or excessive institutional controls, and a lack of support for rapid change. Given the complexities of work environments, it may not be surprising that less than 40% of healthcare workers in the literature trust the system to help them make safe choices every time.

Inconsistent implementation of patient safety solutions is driven by the numerous barriers healthcare workers encounter as they strive to provide safe care. The number of patient safety solutions that each respondent in the surveys had worked on at their hospital and the percentages of those that they implemented are shown in an appendix. Healthcare workers have asked what they can do to be more effective in the improvement efforts. A key to becoming more effective in overcoming barriers lies in better understanding the barriers that exist. More than 13% of respondents viewed organizational culture as a challenge to improvement. However, when examined at a more granular level, several barriers were identified, including a culture of blame, poor or inadequate communication, and resistance to change by those at a higher level of responsibility. Staff time to improve competing priorities was also listed as a barrier in the surveys.

4.3. Strategies for Improving Awareness and Practice

At present, both healthcare workers in Uganda need to know and be able to practice all nine solutions for patient safety discussed here. Educational strategies would be the most favorable method of raising awareness and integrating these interventions into daily practice. Workshops and seminars would be the perfect venue for this strategy. On-the-job practical training is necessary for fellows to model explanations and to help train nurses and support staff in the use of patient safety solutions. The use of patient safety training opportunities could be a required expectation of each program director or trainee's mentor.

It is well established that leadership commitment is key to establishing a safety culture in any healthcare setting. Recently, mentorship programs have been highlighted as integral to supporting young professionals active in the implementation of patient safety solutions, sharing information and knowledge. This will create a context for a culture of change to one of high expectations regarding worker safety. By advancing the strategies into the implementation phase and continuously monitoring and evaluating any educational programs using these strategies, each organization and community nurse, as a stakeholder, commits to the Certified Healthcare Worker Program process for practical implementation of the patient safety solutions. In addition to face-to-face education, the development of an e-learning package would provide access for large numbers of healthcare workers to access and participate in learning patient safety solutions. This delivery method could also provide additional information sharing regarding best practices between different healthcare institutions. Finally, it is important to make all patient safety resources easily accessible, listed, and communicated to all hospital staff.

5. Conclusion

In conclusion, it becomes clear from this study that patient safety in the healthcare sector has become a customary practice due to its critical importance. There are evidences that show how important the nine life-saving solutions are to improving the quality of care services delivered to patients and lowering the risks the healthcare sector places on them. It also shows how training and awareness has led to a small percentage of implementation of the nine solutions, with a large percentage not implementing the knowledge they have garnered. This shortcoming in practice is of great concern, as knowledge per se does not improve patient safety; rather, it is through the implementation of best practice that patient safety is ensured. The nine life-saving solutions have been accepted by national healthcare services in developed and developing countries as a recommended approach. This recommendation suggests that, to ensure the effective and efficient implementation of the life-saving solutions, all healthcare workers should be adequately educated. Awareness of and adherence to best practice are significant contributors in patient safety. A series of factors can affect healthcare workers' awareness of best practice. A number of these factors are beyond the reasonable control of healthcare workers. These factors have been documented as issues in earlier studies. Frequently highlighted in the healthcare system are systemic failures, human errors, lack of resources, inadequate staffing levels, insufficient funding, and unacceptable workplace conditions. It is well documented that a heightened awareness of patient safety areas brings about improvement through learning. There are numerous

medical safety areas where approaches have been designed based on this premise. The solutions are designed to help with adherence to best practice, to accomplish procedural change in healthcare worker behavior, through a blend of increased awareness and change of systems. Patient safety systems are an ongoing process, and entering them is often an obstacle-course experience; it is essential that we deal with such stumbling blocks seriously. Practitioners' dialogue could be seen as part of the ongoing process in entering one system to another. This accentuates the notion that endeavors to paper over these hidden dialogues would not be of much avail. The collaborative approach of the practice of patient safety must be seen as a concentrated effort by healthcare workers to provide a safe and secure area that people can trust wholeheartedly. This approach transcends mere agreement; the practice of patient safety is about obligations and responsibilities to the numerous healthcare systems. These cover systems that range widely from the national level right down to local praxis for patient safety. An endeavor should be made to use the national systems to good effect. There is a pressing need to train and educate healthcare workers, especially nurses, if any penetration and growth of the world's patient safety systems will be achieved. The decade of patient safety is now over. It is time now to make patient safety a global public health priority and to use all available resources to give good healthcare workers and health carers the support they need to guarantee the safest possible care for patients, hence all stakeholders are called to play their part to uphold that.

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الوعي والممارسة لحلول سلامة المرضى التسعة المنقذة للحياة بين العاملين في مجال الرعاية الصحية

مقدمة

يموت أو يُصاب ملايين الأشخاص كل عام بسبب رعاية المرضى غير الآمنة بتكلفة بشرية باهظة. يلعب العاملون في مجال الرعاية الصحية دورًا محوريًا في تقليل الأخطاء وتعزيز السلامة وضمان تقديم رعاية عالية الجودة للمرضى. هناك عدد من الطرق في مجال الرعاية الصحية التي يمكن أن تؤدي إلى تدهور سلامة المرضى. تشمل بعض العوامل المهمة نقص أبحاث سلامة المرضى، وعدم كفاية تدريب المتخصصين في الرعاية الصحية، وعدم توفر إرشادات سلامة المرضى في المستشفيات. هناك تسعة حلول لسلامة المرضى منقذة للحياة يمكن أن يكون لها مجتمعة تأثير فوري وكبير وقابل للقياس. من المهم جدًا أن يكون العاملون في مجال الرعاية الصحية على دراية بحلول سلامة المرضى التسعة المنقذة للحياة ويجب عليهم اعتمادها في ممارساتهم اليومية.

تُعد سلامة المرضى من أهم خصائص الرعاية الجيدة، والتي تُقاس بالرعاية الفعالة سريريًا. وهي في المقام الأول سلامة المرضى في المستشفيات ولكنها تتناول أيضًا سلسلة التطبيب. هل يمكن تنفيذها في الرعاية غير المؤسسية؟ إن اتباع كل من هذه الحلول لن يقلل فقط من العديد من الأخطاء الطبية الشائعة مثل أخطاء الأدوية والعلاج، والتهابات موقع الجراحة، وقرح الفراش، والهذيان المكتسب من المستشفى، بل سيلبي أيضًا بشكل كبير معظم المعايير الدولية للجودة. تم التخطيط لهذه الدراسة لتقييم معرفة وممارسة العاملين في مجال الرعاية الصحية، مع هذه الخلفية، حول حلول سلامة المرضى المنقذة للحياة لمرة واحدة. بهذه المعرفة والممارسة، سيكون العاملون في مجال الرعاية الصحية، وكذلك السلطات المعنية، في وضع أفضل لاعتماد الشيء نفسه في ممارساتهم الروتينية لرعاية المرضى. يتم تسليط الضوء بالتفصيل على أهمية سلامة المرضى، وحلول سلامة المرضى التسعة المنقذة للحياة، وثقافة السلامة.