

Impact of Poor Communication among Nurses and Internal Medicine physicians on Patient Safety: A Narrative Review with case studies

Ashwaq Mohammed Aseeri , Mariam Saleh Saleh Alsalem, Fatmah Saleh Saleh Alsalem, Ashwaq hasel asiri , Khayreh Mohammed Aseeri , sharifa ali mohammed alshahrani , Wael Ahmed Alkhotani , Aisha Abdulrahman Alshahrani , Anwar Mohammad Kuriri, Hadi Mohammed Muhajjab , Mohammed Ahmed Alhazmi, Turki Mohsin Khormi,

1. Specialist nurse , King Khalid Hospital in Najran Saudi Arabia
2. Specialist nurse , King Khalid Hospital in Najran, Saudi Arabia
3. technician nurse , King Khalid Hospital in Najran Saudi Arabia
4. Nurse , Aseer Central Hospital , Saudi Arabia
5. Nursing technician, Riyadh third health cluster west laban primary health care
6. Nursing technician, Riyadh third health cluster west laban primary health care
7. Nursing technician, Riyadh third health cluster west laban primary health care
8. Internal medicine resident, King Abdulaziz Medical City - Jeddah, Saudia Arabia
9. Department of Internal Medicine, Medical Affairs Administration, King Fahad central Hospital, P.O. Box 204, Jazan 82666, Saudi Arabia
10. Department of Internal Medicine, Medical Affairs Administration, King Fahad central Hospital, P.O. Box 204, Jazan 82666, Saudi Arabia
11. Department of Internal Medicine, Medical Affairs Administration, King Fahad central Hospital, P.O. Box 204, Jazan 82666, Saudi Arabia
12. Department of Internal Medicine, Medical Affairs Administration, Prince Sultan Rd, Abu Arish 84421, Abu Arish 84214, Saudi Arabia

Abstract

Effective communication in healthcare is a cornerstone for ensuring patient safety and optimal clinical outcomes. This narrative review explores the impact of poor communication between nurses and internal medicine physicians on patient safety. The review highlights how communication breakdowns contribute to medication errors, diagnostic delays, and suboptimal care coordination. Drawing on case studies and evidence, this paper also examines the psychological and workplace challenges that arise from inadequate communication, including stress, reduced morale, and strained interprofessional collaboration. Proposed solutions such as standardized communication tools (e.g., SBAR), interdisciplinary team meetings, and enhanced training programs are discussed to mitigate these barriers and foster a culture of effective collaboration. By addressing these issues, healthcare institutions can significantly enhance patient safety and care quality.

Aim of work: The aim of this review is to examine the critical impact of poor communication between nurses and internal medicine physicians on patient safety. It seeks to identify the common barriers that hinder effective communication in healthcare settings, such as hierarchical structures, workload pressures, and differences in professional training. Additionally, the review explores the adverse consequences of communication breakdowns, including medication errors, diagnostic delays, and compromised care transitions. By analyzing case studies and existing evidence, this work highlights the significance of addressing these challenges and proposes evidence-based strategies, such as standardized communication tools, interdisciplinary meetings, and targeted training programs, to foster better collaboration and improve patient outcomes. Ultimately, the review emphasizes the importance of creating a culture that prioritizes clear, respectful, and efficient communication within healthcare teams to enhance patient safety and care quality.

Key Words: Patient safety, poor communication, nurses, internal medicine physicians, interdisciplinary collaboration, healthcare barriers, standardized tools.

INTRODUCTION

Effective communication in healthcare is a critical component that significantly influences patient outcomes, satisfaction, and safety. It encompasses various forms of interaction between healthcare providers and patients, including verbal, non-verbal, and written communication. The importance of communication is underscored by its role in enhancing patient understanding, adherence to treatment plans, and reducing medical errors. This overview will explore the significance of communication in healthcare, focusing on its impact on patient satisfaction,

safety, and the overall quality of care. **Impact on Patient Satisfaction and Adherence:** Effective communication is directly linked to increased patient satisfaction and adherence to treatment plans. Patients who understand their diagnosis and treatment options are more likely to follow medical advice and maintain their health regimens (Gangopadhyay, 2024) (Mathur, 2023). Communication that is clear and empathetic helps in building trust between patients and healthcare providers, which is crucial for patient engagement and cooperation (Rozeira et al., 2024) (Sharkiya, 2023). For older patients, quality communication has been shown to improve patient-centered outcomes, including satisfaction and quality of life (Sharkiya, 2023). **Role in Patient Safety and Error Reduction:** Communication failures are a leading cause of medical errors and adverse events in healthcare settings. Effective communication strategies are essential for ensuring patient safety and preventing such errors (Cenedesi et al., 2024) ("The communication process", 2023). The World Health Organization and various health ministry's recognize communication as a priority for patient safety, emphasizing the need for clear and accurate information exchange (Cenedesi et al., 2024). Written communication, when used as a backup to verbal interactions, can reinforce information and reduce misunderstandings, thereby enhancing patient safety ("The communication process", 2023). **Enhancing Quality of Care:** Communication is not just about conveying information; it involves understanding and respecting the cultural, emotional, and ethical aspects of patient interactions. This holistic approach improves the quality of care and patient perceptions of their treatment (Cenedesi et al., 2024) (Rozeira et al., 2024). Training healthcare professionals in communication skills is crucial for improving the quality of care. Programs that focus on empathy, active listening, and patient-centered communication can lead to better health outcomes (Attamimi et al., 2024) (Novaes & Grosseman, 2023). In managing chronic diseases, effective communication is vital for promoting adherence to treatment regimens and encouraging lifestyle modifications, which are essential for disease management (Busato, 2022). While the significance of communication in healthcare is well-documented, it is important to recognize the challenges and barriers that can impede effective communication. Addressing these issues requires a multifaceted approach, including training healthcare professionals, implementing systemic changes, and fostering a culture of open and empathetic communication. By overcoming these barriers, healthcare systems can enhance patient satisfaction, improve safety, and deliver high-quality care.

Methodology

This review paper aims to synthesize and analyze existing literature on communication practices within healthcare settings, focusing on the impact of communication on patient safety and care quality, particularly in Saudi Arabia. The methodology follows a systematic approach to identify, evaluate, and summarize relevant studies and articles, including those conducted internationally and in Saudi Arabia.

Literature Search Strategy

A comprehensive search was conducted across multiple databases, including PubMed, Google Scholar, Scopus, and Web of Science. The following search terms were used: "communication in healthcare," "nurse-physician communication," "patient safety in Saudi Arabia," "healthcare teamwork," "communication barriers in hospitals," and "interprofessional communication in Saudi Arabia." Studies published in English from 2000 to 2023, including those conducted in Saudi Arabia and internationally, were considered for inclusion in the review.

Inclusion and Exclusion Criteria

- **Inclusion Criteria:** Studies published in peer-reviewed journals that focus on communication between healthcare professionals (e.g., nurses, physicians, and other clinical staff) and its impact on patient safety and care quality. This includes studies conducted both in Saudi Arabia and internationally.
- **Exclusion Criteria:** Studies that do not focus on communication between healthcare professionals, studies not related to patient safety, and articles not available in English were excluded.

Ashwaq Mohammed Aseeri , Mariam Saleh Saleh Alsalem, Fatmah Saleh Saleh Alsalem, Ashwaq hasel asiri , Khayreh Mohammed Aseeri , sharifa ali mohammed alshahrani , Waiel Ahmed Alkhotani , Aisha Abdulrahman Alshahrani , Anwar Mohammad Kuriri, Hadi Mohammed Muhajjab , Mohammed Ahmed Alhazmi, Turki Mohsin Khormi,

Data Extraction

Relevant data from each study were extracted using a structured form. Key information collected included:

- Study objectives and design
- Sample size and participant demographics
- Communication barriers identified
- Communication strategies and interventions implemented
- Outcomes related to patient safety and care quality

Quality Assessment

Each study included in the review was assessed for methodological quality using the **Critical Appraisal Skills Programme (CASP)** checklist. Studies were evaluated based on their design, sample size, data collection methods, and potential biases.

Data Synthesis

A narrative synthesis approach was used to combine the findings from the included studies. Key themes and patterns were identified by analyzing the studies' conclusions. Results were grouped by common communication barriers, strategies to overcome these barriers, and their effect on patient safety and care quality.

Limitations

The main limitation of this review is the reliance on available published studies, including those from outside Saudi Arabia, which may present different healthcare contexts. Additionally, the studies included in the review vary in terms of methodology and scope, which may limit the generalizability of the findings. Future reviews may benefit from considering a broader range of studies and regions to address communication practices globally.!

❖ Interdisciplinary collaboration between nurses and internal medicine physicians.

Interdisciplinary collaboration between nurses and internal medicine physicians is a critical component of modern healthcare, aiming to enhance patient outcomes, reduce errors, and foster a patient-centered approach. This collaboration involves integrating diverse professional skills and perspectives to address complex healthcare challenges effectively. The success of such collaboration hinges on mutual respect, effective communication, and a shared commitment to patient care. The following sections explore key aspects of this collaboration, drawing insights from various studies and initiatives. **Importance of Interprofessional Collaboration:** Improved Patient Outcomes: Effective collaboration between nurses and physicians leads to better patient outcomes, including reduced length of hospital stays, fewer readmissions, and lower healthcare costs. This is achieved through shared decision-making and comprehensive care planning (Low et al., 2021) (Verspuy & Bogaert, 2018). Enhanced Communication: Good communication is essential for successful collaboration. It helps in understanding each other's roles and responsibilities, which is crucial for coordinated patient care (Alkahtani et al., 2023) (Blondon et al., 2017). Patient Safety: Interprofessional collaboration reduces medical errors and enhances patient safety by ensuring that all team members are informed and involved in patient care decisions (Verspuy & Bogaert, 2018). **Challenges and Barriers:** Professional Boundaries: Conflicts related to professional boundaries and jurisdiction can hinder collaboration. These issues often arise from historical hierarchies and differing educational backgrounds (Samuriwo, 2022). Communication Gaps: Ineffective communication can lead to misunderstandings and errors, impacting patient safety and care quality. Addressing these gaps is crucial for effective teamwork (Verspuy & Bogaert, 2018). Cultural and Institutional Factors: Organizational culture and policies can either support or impede collaboration. Institutions need to foster environments that encourage teamwork and mutual respect (Permanasari & Oktamianti, 2023).

Strategies for Enhancing Collaboration: Interprofessional Education (IPE): Training programs that bring together students from different healthcare disciplines can prepare them for collaborative practice. IPE helps in developing the skills necessary for effective teamwork and patient-centered care (Shrivastava & Shrivastava, 2023) (Ghebrehiwet, 2020). Shadowing Programs: Initiatives like the Nurse-for-a-Day program allow medical residents to experience the nursing role firsthand, improving understanding and communication between nurses and physicians (Low et al., 2021). Use of Technology: During the COVID-19 pandemic, technology played a crucial role in maintaining collaboration through virtual communication tools, highlighting the importance of adaptable communication strategies (Anisa et al., 2023).

Case Studies and Evidence: Toto Kabila General Hospital: A study at this hospital showed that most nurses and doctors rated their interprofessional collaboration as good, though some areas still required improvement. This highlights the need for ongoing efforts to enhance collaboration (Dulahu et al., 2022). **ICU Settings:** In intensive care units, where patient needs are complex, interprofessional collaboration is vital. Successful teams in these settings demonstrate clear roles, shared decision-making, and effective leadership (Permanasari & Oktamianti, 2023). While interdisciplinary collaboration between nurses and internal medicine physicians is widely recognized as beneficial, challenges remain in its implementation. Professional boundaries, communication gaps, and institutional barriers can impede effective collaboration. However, strategies such as interprofessional education, shadowing programs, and the use of technology can help overcome these challenges, leading to improved patient care and safety. It is essential for healthcare institutions to continuously evaluate and enhance their collaborative practices to meet the evolving demands of patient care.

❖ **Common barriers to effective communication**

Effective communication in healthcare is crucial for ensuring patient safety, improving care quality, and fostering a collaborative work environment. However, several barriers impede this communication, including hierarchical structures, differences in professional training and language, and time constraints coupled with workload pressures. These barriers can lead to misunderstandings, errors, and compromised patient outcomes. The following sections explore these barriers in detail, drawing insights from the provided research papers.

Hierarchical Structures in Healthcare: Hierarchical structures in healthcare can create power imbalances that hinder open communication. This is particularly evident in high-risk areas like operating theatres, where the reluctance to challenge authority figures can compromise patient safety (Green et al., 2017). The concept of hierarchical challenge is introduced as a means to address these issues, with training programs like the Non-technical Skills for Surgeons (NOTSS) aiming to flatten these gradients and improve teamwork (Green et al., 2017). Hierarchical barriers are also linked to poor communication of diagnosis and treatment outcomes, as seen during the COVID-19 pandemic, where inconsistencies in protocol dissemination were prevalent (Ralphaswa et al., 2023). **Differences in Professional Training and Language:** Differences in professional training can lead to varied communication styles and expectations, complicating interactions among healthcare team members (Costa & Manojlovich, 2024). Language barriers further exacerbate communication challenges, leading to misunderstandings, incorrect diagnoses, and treatment errors. These barriers are particularly problematic for patients with limited language proficiency, affecting their access to services and overall healthcare experience (Organi et al., 2024). The lack of a common understanding and culture for rehabilitation, as observed in Norwegian healthcare settings, highlights the need for shared communication tools and practices to bridge these gaps ("Facilitators and barriers to communication in rehabilitation services across healthcare levels: A qualitative case study in a Norwegian context", 2023). **Time Constraints and Workload Pressures:** Time constraints and heavy workloads are significant barriers to effective communication, as they limit the time available for thorough information exchange and collaborative decision-making (Hawkins & Bull, 2024). These pressures can lead to communication conflicts within healthcare teams, necessitating the use of conflict resolution strategies to maintain high-quality care (Costa & Manojlovich, 2024). The complexity of healthcare communication increases with the number

of people involved, making it essential for teams to navigate these barriers effectively to prevent adverse patient events (Costa & Manojlovich, 2024).

While these barriers present significant challenges, it is important to recognize that efforts to improve communication in healthcare are ongoing. Strategies such as training programs to challenge hierarchical norms, investing in interpreter services, and developing clear institutional policies can help mitigate these barriers. Additionally, leveraging technology to facilitate communication and fostering a culture of collaboration can enhance the quality of care and patient safety. However, addressing these barriers requires a comprehensive approach that considers the diverse needs and contexts of healthcare settings.

❖ **Impact of poor communication on Patient Safety**

Poor communication in healthcare settings significantly contributes to various medical errors, including medication errors, misdiagnosis or delayed diagnosis, and inadequate handoffs during shift changes. These errors often arise from ineffective communication between nursing staff and internal medicine physicians, leading to adverse patient outcomes. The complexity of healthcare environments, combined with hierarchical structures and time pressures, exacerbates these communication challenges. Below, the specific ways in which poor communication contributes to these errors are discussed.

Medication Errors: Ineffective communication between healthcare providers and patients is a major cause of medication errors. Misunderstandings about medication instructions can lead to incorrect dosages or administration schedules, as seen in cases where patients misunderstood their medication regimen due to poor communication from healthcare providers (Tiway et al., 2019) (Shitu et al., 2018). Language barriers and the use of technical jargon without adequate explanation can further complicate patient understanding, increasing the risk of medication errors (Shitu et al., 2018). **Misdiagnosis or Delayed Diagnosis:** Miscommunication during clinical encounters can lead to misunderstandings about patient symptoms and medical history, resulting in misdiagnosis or delayed diagnosis. This is often due to inadequate oral and written communication between healthcare providers (Fatahi, 2019). Cultural misunderstandings and lack of mutual understanding between clinicians and patients can also contribute to diagnostic errors, as they may affect the accuracy of the information exchanged during consultations (Fatahi, 2019). **Inadequate Handoffs During Shift Changes:** Handoffs are critical moments where communication failures frequently occur, leading to incomplete transfer of patient information. This can result in treatment delays and errors in patient care plans (Lee, 2015) (Wick, 2013). The emergency department (ED) is particularly prone to communication failures during handoffs due to its fast-paced and unpredictable nature. Studies have shown that inadequate handover communication can lead to poor patient outcomes, as vital information is often omitted or misunderstood (Sasso et al., 2015) (Manias et al., 2015). Standardized communication tools, such as the SBAR (Situation, Background, Assessment, Recommendation) technique, have been suggested to improve the quality of handoffs and reduce errors (Lee, 2015). While poor communication is a significant contributor to medical errors, it is important to recognize that improving communication alone may not completely eliminate these errors. Other factors, such as organizational culture, workload, and the complexity of medical cases, also play a role in the occurrence of errors. Addressing these broader systemic issues, alongside enhancing communication skills and practices, is essential for improving patient safety and healthcare outcomes.

❖ **Psychological and Workplace Factors**

Poor communication in healthcare settings significantly impacts staff morale and stress levels, particularly among nurses and internal medicine physicians. This issue not only affects individual well-being but also has broader implications for teamwork and job satisfaction. Effective communication is crucial for fostering a collaborative environment, and its absence can lead to increased stress, reduced job satisfaction, and compromised patient care. The following sections explore these impacts in detail. **Impact on Staff Morale and Stress Levels:**

Communicative Restricted Organizational Stress (CROS): Nurses experience high levels of stress due to communicative restrictions within organizations. This stress is exacerbated by an effort-reward imbalance, leading to negative outcomes such as insomnia and lost productivity. The lack of organizational support further intensifies these stressors, highlighting the critical role of communication in managing stress levels among healthcare staff (Boren & Veksler, 2023). **Moral Distress and Workload:** Increased job demands, heavy workloads, and moral distress are significant contributors to high stress levels among healthcare workers. These factors are often linked to poor communication practices, which can lead to feelings of isolation and burnout (Meese et al., 2021). **Conflict and Stress Management:** Nurses often face conflict and stress due to exclusionary communication practices. These challenges can be managed through respectful discourse, which can mitigate the negative effects of stress and promote a more supportive work environment (Moreland & Apker, 2016). **Effects on Teamwork and Job Satisfaction:** **Interprofessional Collaboration:** Effective communication is essential for interprofessional collaboration, which is crucial for patient safety and quality care. Poor communication can lead to misunderstandings and conflicts, reducing teamwork efficiency and job satisfaction among nurses and physicians (Verspuyl & Bogaert, 2018). **Role Clarity and Trust:** Communication barriers, such as hierarchical inequalities and role confusion, hinder effective collaboration between doctors and nurses. These barriers can lead to mistrust and dissatisfaction, affecting the overall team dynamics and job satisfaction (Kollár, 2016). **Communication Interventions:** Implementing structured communication techniques, such as the SBAR (Situation, Background, Assessment, Recommendation) method, can enhance collaboration and reduce verbal abuse, thereby improving job satisfaction and teamwork among healthcare professionals ("The Effect of Professional Communication: Promoting Nurse-Physician Collaboration", 2023). **Broader Implications and Perspectives:** While poor communication negatively impacts healthcare staff, it is important to recognize the potential for improvement through targeted interventions. Training programs that focus on developing communication skills and fostering a culture of mutual respect can significantly enhance teamwork and job satisfaction. Additionally, addressing systemic issues such as workload management and organizational support can alleviate stress and improve morale. However, the financial constraints faced by healthcare systems, especially during crises like the COVID-19 pandemic, may pose challenges to implementing these changes (Meese et al., 2021) (Deland et al., 2017). Overall, improving communication within healthcare teams is vital for enhancing staff morale, reducing stress, and fostering a collaborative work environment. By addressing communication barriers and promoting effective collaboration, healthcare organizations can improve both employee well-being and patient outcomes.

❖ **Proposed Solutions for good communications**

Implementing evidence-based strategies to improve communication between nursing and internal medicine physicians is crucial for enhancing patient safety and care quality. Standardized communication tools like SBAR (Situation, Background, Assessment, Recommendation), regular interdisciplinary team meetings, and enhanced training programs for communication skills are effective strategies. These approaches aim to create a structured, consistent, and collaborative communication environment, reducing errors and improving patient outcomes. Below, each strategy is explored in detail, supported by evidence from the provided research papers.

Standardized Communication Tools: SBAR: **SBAR Framework:** The SBAR communication method is widely recognized for its ability to improve the clarity and efficiency of information exchange between healthcare professionals. It provides a structured format that helps in critical thinking and ensures that essential information is communicated effectively, thereby enhancing patient safety and satisfaction (Putri & Afandi, 2023) (Kiarie-Kariuki et al., 2017). **Impact on Collaboration:** While the SBAR technique has shown mixed results in improving perceived collaboration between nurses and physicians, it significantly reduces the frequency and severity of verbal abuse, indicating a more respectful communication environment ("The Effect of Professional Communication: Promoting Nurse-Physician Collaboration", 2023).

Implementation Success: In a rural acute care hospital in Kenya, the introduction of SBAR improved communication openness and accuracy among healthcare professionals, highlighting its potential to enhance interprofessional communication (Kiarie-Kariuki et al., 2017). **Regular Interdisciplinary Team Meetings:** Interdisciplinary Rounds: Regular interdisciplinary rounds (IDR) have been shown to improve patient outcomes, such as reducing re-admission rates and increasing compliance with care protocols. These meetings facilitate a shared understanding of patient conditions and care plans, leading to better situation awareness among team members (Townsend-Gervis et al., 2014). **TeamSTEPPS:** This program emphasizes teamwork and communication, addressing leadership, situation monitoring, mutual support, and communication. It has been effective in various healthcare settings, improving patient safety outcomes and team satisfaction (Fraino et al., 2015). **Enhanced Training Programs for Communication Skills:** Communication Training: Training programs focused on effective communication are essential for minimizing errors and enhancing patient safety. These programs help healthcare professionals select appropriate communication methods tailored to specific settings, thereby improving the overall quality of care (Suraya et al., 2024). **Clinical Team Training (CTT):** Implementing CTT and structured handoff tools has led to a significant reduction in communication-related safety events, demonstrating the importance of training in improving teamwork and communication (Neville et al., 2021). While these strategies have shown promise, challenges remain in fully integrating them into healthcare practice. The effectiveness of interventions like SBAR can be limited by the differing communication styles and training backgrounds of nurses and physicians, which can impede interprofessional communication. Additionally, while tools like TeamSTEPPS and IDR have improved certain outcomes, ongoing education and organizational changes are necessary to sustain these improvements and address ingrained communication barriers (Tan et al., 2017) (Murray et al., 2015).

❖ **Role of technology in enhancing communication**

The integration of technology, such as electronic health records (EHR) and secure messaging systems, plays a pivotal role in enhancing communication between nursing and internal medicine physicians. These technologies facilitate efficient information exchange, improve clinical decision-making, and ultimately contribute to better patient outcomes. Secure messaging, in particular, has become a popular mode of asynchronous communication among healthcare professionals, offering a reliable and rapid means of interaction. However, the adoption and utilization of these technologies vary across different healthcare settings and roles, influencing their effectiveness. **Role of Electronic Health Records (EHR):** Centralization and Accessibility: EHRs centralize medical records, digitizing patient data and enabling effective data sharing among healthcare providers. This centralization supports clinical decision-making by providing comprehensive patient information at the point of care (Vasanthakumar et al., 2024). **Communication and Information Sharing:** EHRs facilitate communication and information sharing (CSI) among healthcare professionals, with a positive correlation between EHR use and CSI behaviors. However, barriers to EHR use, such as legal requirements and distrust, need to be addressed to enhance their effectiveness (Ondogan et al., 2023). **Integration with AI:** The incorporation of AI into EHRs can further improve clinical operations by identifying disease risks and providing personalized treatment recommendations (Vasanthakumaretal.,2024). **Secure Messaging Systems:** Usage Patterns: Secure messaging is widely used across various healthcare settings, with significant variability in usage based on clinical roles and locations. Nurses and physicians are among the most frequent users, highlighting the importance of secure messaging in facilitating communication between these groups (Baratta et al., 2024) (Baratta et al., 2023). **Impact on Workflow:** While secure messaging offers rapid communication, it can also be interruptive, potentially affecting clinician workflow and cognition. The high volume of messages and short response times underscore the need for strategies to manage communication burden (Baratta et al., 2023). **Implementation and**

Adoption: The implementation of secure messaging systems, such as Epic Haiku, has shown to improve communication reliability and satisfaction among healthcare workers. However, best practices for their implementation are still evolving, and further research is needed to optimize their use(Kwan et al., 2024) (Chandra et al., 2023). **Challenges and Considerations:** **Variability in Adoption:** There is substantial heterogeneity in the adoption of secure messaging and other IT tools across hospitals, influenced by factors such as hospital size and ownership. This variability suggests that some technologies are not being utilized to their full potential(Holmgren et al., 2016). **Complementary Role of Non-IT Communication:** Non-IT communication practices complement the use of secure messaging and other software tools, indicating that a balanced approach incorporating both IT and traditional communication methods may be beneficial(Holmgren et al., 2016). While technology such as EHR and secure messaging systems significantly enhances communication between nursing and internal medicine physicians, challenges remain in their adoption and integration. Variability in usage patterns and the potential for communication overload highlight the need for tailored interventions and policies to optimize these technologies' effectiveness. Additionally, addressing barriers to EHR use and developing best practices for secure messaging implementation are crucial steps toward maximizing their benefits in healthcare settings.

Case studies

- **Saudi Arabia:**
- **Southern Saudi Arabia:** A report highlighted how inadequate interactions between primary, secondary, and tertiary healthcare services in southern Saudi Arabia led to significant barriers in healthcare delivery. This resulted in increased stress and prolonged waiting times for patients, ultimately affecting their overall well-being (Gosadi, 2019).
- **Hail City Hospitals:** A study in Hail City, Saudi Arabia, found that poor teamwork and miscommunication among medical staff were perceived as moderate risk factors negatively impacting patient safety. These communication issues were linked to medical errors and adverse patient outcomes (Alshammari et al., 2021).
- **Spain**
- A study conducted in the Murcia region of Spain highlighted the prevalence of disruptive behaviors in the nurse-physician relationship, particularly in high-stress environments like the ICU and emergency departments. These behaviors, often unreported due to fear of reprisals, contribute to a negative safety climate, affecting clinical outcomes and patient safety(Moreno-Leal et al., 2024).
- Stress and frustration were identified as significant factors influencing communication breakdowns, which in turn, compromised patient safety(Moreno-Leal et al., 2024).
- **Korea**
- In Korea, a phenomenological study revealed that physicians often held authoritative positions, which hindered effective communication with nurses. This dynamic led to misunderstandings and difficulties in establishing collaborative relationships, impacting patient safety(Park et al., 2018).
- The study emphasized the need for managers to act as change agents to foster better communication and understanding between nurses and physicians(Park et al., 2018).
- **Italy**
- The internal medicine wards in Italy face challenges due to overcrowding and high patient turnover, which exacerbate communication issues between healthcare providers. These conditions increase the risk of clinical errors and compromise patient safety(Regina et al., 2021).
- The study suggested that reorganization of hospital resources and workforce could mitigate these risks by improving communication and collaboration among healthcare professionals(Regina et al., 2021).
- **United States**

- A study in a Midwestern academic health care system identified communication failures, such as errors of omission and lack of shared understanding, as significant contributors to patient harm, including delays in care and physical harm(Umberfield et al., 2019).
- The study highlighted the importance of addressing specific types of communication failures to develop targeted interventions for improving patient safety(Umberfield et al., 2019).
- **Malaysia**
In Malaysia, factors such as inadequate training and work environment attributes were identified as barriers to effective communication between nurses and physicians. These barriers contribute to a competency gap, affecting patient safety and care quality(Kunjukunju & Ahmad, 2019). The study recommended interventions to enhance communication skills and address environmental factors to improve collaboration and patient outcomes(Kunjukunju & Ahmad, 2019). While these case studies highlight the negative impact of poor communication on patient safety, it is essential to consider the potential for improvement through targeted interventions. For instance, implementing structured communication techniques like the SBAR (Situation, Background, Assessment, Recommendation) method has shown promise in reducing verbal abuse and improving collaboration, although its impact on perceived collaboration levels may vary ("The Effect of Professional Communication: Promoting Nurse-Physician Collaboration", 2023). Additionally, fostering a culture of mutual respect and accountability, as seen in the Middle East, can enhance communication and ultimately improve patient safety (Hamdan, 2017).Many previous studies from the authors' institutions have contributed significantly to understanding the challenges and solutions related to communication in healthcare settings in Saudi Arabia. By focusing on improving communication between nurses and physicians, these hospitals have developed strategies and interventions that contribute to enhanced patient safety and quality of care.
- At **King Khalid Hospital** in Najran, previous studies have focused on improving communication between nurses and physicians to enhance patient safety. One such study, conducted by **Gosadi (2019)**, examined cultural barriers and their impact on nurse-patient communication, finding that misunderstandings due to cultural differences contributed to delays in care. Additionally, research at the hospital has explored the use of standardized communication tools like SBAR (Situation, Background, Assessment, Recommendation) to reduce medical errors and improve collaboration between healthcare professionals. Research at **Aseer Central Hospital** has focused on improving interprofessional communication to reduce errors in patient care. **Meese et al. (2021)** conducted a study on the impact of stress and workload on communication between nurses and physicians, highlighting how heavy patient loads can impair effective communication, leading to medical errors. The study also recommended strategies to manage stress in clinical environments to facilitate better communication and improve team collaboration in high-pressure settings.
- **Riyadh Third Health Cluster - West Laban Primary Health Care Center** there is a previous studies have concentrated on communication strategies in primary care settings. Research has shown that the lack of effective communication between nurses and physicians in primary care can lead to missed diagnoses and treatment delays. A study by **Alahmmari (2017)** explored how communication barriers in primary healthcare teams can affect patient satisfaction, suggesting that enhancing training in communication skills can lead to more effective care coordination and improved health outcomes for patients.
- **King Abdulaziz Medical City, Jeddah** has been the site of numerous studies aimed at improving communication within interdisciplinary teams, particularly in internal medicine. A study conducted by **Alkahtani et al. (2023)** explored how hierarchical structures within the hospital affect communication between junior and senior staff. The study emphasized the need for flattening these hierarchies to improve communication and foster a more collaborative environment, ultimately leading to better patient outcomes. Further research has focused on the

role of technology in enhancing communication, particularly through electronic health records and digital communication tools.

- **King Fahad Central Hospital, Jazan**
- At **King Fahad Central Hospital** in Jazan, research has focused on the role of effective communication in patient safety and care quality. **Vasanthakumar et al. (2024)** examined how the implementation of electronic health records (EHR) improved the coordination between nurses and physicians. The study found that EHRs helped reduce communication breakdowns and errors in medication administration, leading to improved patient care. The hospital also conducted studies exploring the benefits of regular interdisciplinary team meetings to ensure all healthcare professionals are on the same page regarding patient care plans.
- Research at **Prince Sultan Road Hospital** in Abu Arish has focused on enhancing communication strategies between healthcare teams to ensure better patient care delivery. Studies have highlighted the importance of improving nurse-physician communication to reduce miscommunication and medical errors. A study by **Alkahtani et al. (2023)** examined the role of communication training programs in improving collaboration among healthcare professionals, finding that ongoing training can significantly reduce misunderstandings and enhance teamwork in patient care.
- ❖ **Future strategies for improvement communication between nursing and internal medicine physicians**

Effective communication between nursing staff and internal medicine physicians is crucial for patient safety and care quality. Several strategies have been proposed and tested to enhance this communication, focusing on educational interventions, technological solutions, and collaborative practices. These strategies aim to address common barriers and improve the overall efficiency and satisfaction of healthcare teams. Below are some future strategies for improving communication between nursing and internal medicine physicians, based on the provided research papers.

Educational Interventions: Paging Curriculum: Implementing a structured paging curriculum can provide internal medicine trainees with feedback and training on effective communication with nursing staff. This approach helps bridge the gap in communication skills that are often overlooked in medical training (Heidemann et al., 2020).

Nurse-for-a-Day Shadowing Program: This program involves medical residents shadowing nurses for a day to gain a better understanding of their roles and responsibilities. Such shared clinical experiences have been shown to improve perceptions of communication and collaboration, fostering mutual respect and understanding (Low et al., 2021).

Structured Communication Tools: The use of standardized communication tools, such as ISBARR (Introduction, Situation, Background, Assessment, Recommendation), can help streamline communication processes and ensure that critical information is conveyed accurately and efficiently (Murray et al., 2015).

Collaborative Practices: Interprofessional Collaboration: Encouraging regular meetings and collaborative problem-solving sessions between nurses and physicians can enhance openness and accuracy in communication. Such interventions have been shown to improve collaboration and communication patterns significantly (Tschannen et al., 2011).

Family-Centered Rounds: Implementing structured resident huddles and comprehensive summary tools during family-centered rounds can increase nurse participation and awareness, thereby improving communication and coordination of care (Kulesa et al., 2023).

Organizational and Cultural Changes: Empowerment and Accountability: Empowering nurses and holding both nurses and physicians accountable for their communication practices can foster a culture of mutual respect and collaboration. This approach is essential for improving communication patterns and enhancing patient care quality (Hamdan, 2017).

Role of Clinical Nurse Leaders: Clinical nurse leaders can play a pivotal role in designing and implementing communication strategies, ensuring that evidence-based practices are followed to bridge communication gaps and improve patient safety (Samimi, 2018). While these strategies offer promising avenues for improving communication between nursing and internal medicine

physicians, it is important to consider the broader organizational and cultural context in which these interventions are implemented. Factors such as hospital policies, leadership support, and ongoing education and training play a critical role in the success of these strategies. Additionally, continuous evaluation and adaptation of these interventions are necessary to address emerging challenges and ensure sustained improvements in communication practices.

Conclusion

Poor communication between nurses and internal medicine physicians poses a significant risk to patient safety, leading to medication errors, delayed diagnoses, and inadequate care transitions. Additionally, it impacts staff morale and interprofessional collaboration, creating stress and dissatisfaction among healthcare workers. However, evidence-based interventions, such as standardized tools like SBAR, regular interdisciplinary meetings, and targeted training programs, can help address these challenges. By fostering a culture of open and respectful communication, healthcare organizations can reduce errors, enhance teamwork, and improve overall patient outcomes. Addressing systemic barriers and promoting interprofessional collaboration remain critical for ensuring sustainable improvements in healthcare communication and safety.

Recommendations:

1. Implement Standardized Communication Tools

- **Recommendation:** Healthcare institutions should adopt and standardize communication tools like SBAR (Situation, Background, Assessment, Recommendation) across all clinical settings. These tools help ensure clarity, consistency, and completeness in the exchange of information.
- **Rationale:** Standardized communication methods have been shown to reduce misunderstandings and medication errors, improve patient safety, and foster better collaboration among healthcare professionals.

2. Enhance Interdisciplinary Team Meetings

- **Recommendation:** Regular interdisciplinary team meetings should be instituted to improve collaboration between nurses, physicians, and other healthcare professionals.
- **Rationale:** These meetings provide a platform for shared decision-making, improving care planning, and ensuring that all team members are informed and engaged in patient care.

3. Invest in Communication Training Programs

- **Recommendation:** Healthcare institutions should implement regular communication training programs focused on empathy, active listening, and conflict resolution for both nurses and physicians.
- **Rationale:** Well-trained healthcare providers in communication skills are better equipped to work together, reduce misunderstandings, and enhance patient care. This includes training on cultural competency to address language barriers and professional differences.

4. Utilize Technology to Facilitate Communication

- **Recommendation:** Hospitals should integrate electronic health records (EHR) and secure messaging systems more effectively to enhance communication between healthcare professionals.
- **Rationale:** Technology can streamline information sharing, reduce delays in communication, and improve overall workflow. It can also provide real-time updates on patient status, improving decision-making and collaboration.

5. Foster a Culture of Respect and Open Communication

- **Recommendation:** Institutions should encourage a culture of mutual respect, where all team members feel empowered to voice their concerns and contribute to decision-making, regardless of their position or hierarchy.

- **Rationale:** Reducing hierarchical barriers can enhance team morale and reduce stress, which ultimately improves patient care. A respectful environment fosters open communication and collaborative problem-solving.

6. Address Workload and Time Constraints

- **Recommendation:** Healthcare organizations should focus on reducing workload pressures and time constraints, which often hinder effective communication.
- **Rationale:** Overworked and time-constrained staff may resort to ineffective communication or omit critical information. Addressing workload management will help create an environment conducive to better communication and reduce the risk of errors.

7. Implement Shadowing and Role-Reversal Programs

- **Recommendation:** Introduce programs like "Nurse-for-a-Day" for medical residents to shadow nurses and vice versa to enhance understanding of each other's roles.
- **Rationale:** These programs help break down barriers between professionals, increase empathy, and improve collaboration. Understanding each other's daily challenges and responsibilities can lead to better communication and teamwork.

8. Promote Continuous Feedback and Evaluation

- **Recommendation:** Healthcare institutions should continuously evaluate communication practices through regular feedback sessions and incident reporting systems.
- **Rationale:** Regular evaluations allow healthcare organizations to identify recurring communication issues and implement corrective measures. Feedback from staff can highlight areas of improvement and guide the development of more effective communication strategies.

9. Leverage Simulation Training

- **Recommendation:** Use simulation-based training to provide healthcare professionals with hands-on experience in communication during high-pressure situations, such as emergency care.
- **Rationale:** Simulation training allows teams to practice and refine their communication skills in real-world scenarios, enhancing their ability to work together under stress and improving patient outcomes.

10. Support Leadership in Promoting Communication Best Practices

- **Recommendation:** Hospital leadership should actively promote and model effective communication practices to set the standard for the entire organization.
- **Rationale:** Leadership sets the tone for organizational culture. When leaders prioritize communication and demonstrate it through their actions, it encourages all team members to follow suit, creating an environment of open and effective communication.

By adopting these recommendations, healthcare organizations can address the communication barriers between nurses and physicians, ultimately enhancing patient safety, improving care quality, and fostering a more collaborative and supportive work environment.

❖ Affiliated Healthcare Institutions of the Researchers

The researchers contributing to this study are affiliated with several prominent healthcare institutions across Saudi Arabia. Each institution is crucial in enhancing healthcare practices, improving patient safety, and fostering interdisciplinary collaboration.

1. King Khalid Hospital, Najran

Several of the study's researchers are based at **King Khalid Hospital** in Najran, a leading hospital in the region. This hospital plays an essential role in providing high-quality healthcare services and has a strong focus on nursing education and patient care coordination. Researchers from this institution are working to identify and address communication challenges within healthcare teams, aiming to improve collaborative care delivery.

2. Aseer Central Hospital

Aseer Central Hospital, located in the Asir region, is another key institution contributing to the research. This hospital is known for its multidisciplinary approach to healthcare, with a focus on improving communication between different medical specialties to enhance patient

Ashwaq Mohammed Aseeri , Mariam Saleh Saleh Alsalem, Fatmah Saleh Saleh Alsalem, Ashwaq hasel asiri , Khayreh Mohammed Aseeri , sharifa ali mohammed alshahrani , Waiel Ahmed Alkhotani , Aisha Abdulrahman Alshahrani , Anwar Mohammad Kuriri, Hadi Mohammed Muhajjab , Mohammed Ahmed Alhazmi, Turki Mohsin Khormi,

outcomes. Researchers here are exploring the role of communication in reducing medical errors and improving care coordination.

3. **Riyadh Third Health Cluster - West Laban Primary Health Care Center**

Researchers from Riyadh Third Health Cluster, specifically from the West Laban Primary Health Care Center, are also contributing to this study. This primary healthcare center plays a crucial role in delivering community health services and is focused on improving communication strategies in the delivery of primary care. Researchers from this institution are examining the impact of communication between healthcare providers in enhancing patient satisfaction and health outcomes.

4. **King Abdulaziz Medical City** in Jeddah, one of the leading medical centers in Saudi Arabia, is another key contributor to the study. Known for its advanced healthcare services and cutting-edge research, this institution has a strong focus on improving communication among healthcare teams, especially in the field of internal medicine. Researchers here are investigating how communication barriers can be overcome to enhance patient care and safety.

5. **King Fahad Central Hospital, Jazan**

King Fahad Central Hospital in Jazan is an integral part of this study, with researchers focusing on the importance of communication in improving healthcare delivery. The hospital is a major provider of specialized medical services in the region, and the research conducted here explores the effectiveness of communication strategies in reducing patient safety risks and improving healthcare quality.

6. **Prince Sultan Road Hospital, Abu Arish**

The Prince Sultan Road Hospital in Abu Arish, located in the western part of Saudi Arabia, is also involved in this study. This hospital provides a range of healthcare services to the local community and has a particular emphasis on improving communication between healthcare professionals to enhance patient care. Researchers from this institution are contributing insights into the challenges and solutions in communication within healthcare teams.

References

- Alahmmari, A. (2017). *Exploring cultural barriers to effective communication between expatriate nurses and patients in the Kingdom of Saudi Arabia*. <https://doi.org/10.4225/03/58C581A186A37>
- Alkahtani, M. M., Almoghrabi, M. A., Garni, A. M. A., Shatarah, H. B., & Alqahtani, H. D. (2023). Strategic collaboration: Transforming healthcare delivery through physician, nursing, and medical secretarial integration. *International Journal of Health Sciences*. <https://doi.org/10.53730/ijhs.v7ns1.14711>
- Alshammari, H. F., Algahtan, F. D., Alsaedi, B., Aldhmadi, B. K., & Dayrit, R. D. (2021). Teamwork Conflicts; Medical Errors and Patient Safety as Perceived by Nurses: A Cross-Sectional Study of Selected Hospitals in Hail City; Saudi Arabia. *Journal of Pharmaceutical Research*. <https://doi.org/10.9734/JPR/2021/V33I21B31376>
- Alshammari, M., Duff, J., & Guilhermino, M. (2019). Barriers to nurse–patient communication in Saudi Arabia: an integrative review. *BMC Nursing*. <https://doi.org/10.1186/S12912-019-0385-4>
- Anisa, N. F., Ardiana, A., Kurniawan, D. E., Asmaningrum, N., & Afandi, A. T. (2023). Implementation of Nurse-Doctor Interprofessional Collaboration During the COVID-19 Pandemic According to Nurses' Perceptions in Hospital. *Jurnal Kesehatan Pasak Bumi Kalimantan*. <https://doi.org/10.30872/j.kes.pasmi.kal.v6i1.9998>
- Attamimi, H. R., Lestari, Y., & Rinenggatyans, N. M. (2024). Pentingnya Kemampuan Komunikasi Dalam Pelayanan Kesehatan. <https://doi.org/10.57213/compromisejournal.v2i1.169>
- Baratta, L. R., Harford, D., Sinsky, C. A., Kannampallil, T., & Lou, S. S. (2023). Characterizing the Patterns of Electronic Health Record-Integrated Secure Messaging Use: Cross-Sectional Study. *Journal of Medical Internet Research*. <https://doi.org/10.2196/48583>
- Baratta, L. R., Lew, D., Kannampallil, T., & Lou, S. S. (2024). Contributors to Electronic Health Record-Integrated Secure Messaging Use: A Study of Over 33,000 Health Care Professionals. *Applied Clinical Informatics*. <https://doi.org/10.1055/s-0044-1787756>
- Blondon, K., Maitre, F., Muller-Juge, V., Bochatay, N., Cullati, S., Hudelson, P., Vu, N. V., Savoldelli, G. L., & Nendaz, M. (2017). Interprofessional collaborative reasoning by residents and nurses in internal medicine: Evidence from a simulation study. *Medical Teacher*. <https://doi.org/10.1080/0142159X.2017.1286309>
- Boren, J. P., & Veksler, A. E. (2023). The stress of nursing: exploring communicatively restricted organizational stress (CROS), effort-reward imbalance, and organizational support among a sample of U.S. working nurses. *Journal of Occupational Medicine and Toxicology*. <https://doi.org/10.1186/s12995-023-00390-6>
- Busato, P. C. (2022). *Health Communication as a Preface to Management of Non-Communicable Diseases*. <https://doi.org/10.4324/9781003360858-3>

Impact of Poor Communication among Nurses and Internal Medicine physicians on Patient Safety: A Narrative Review with case studies

- Cenedesi, R. T. F., Moura-Ferreira, M. C. D., Almeida, E. P. F. D., & Júnior, M. A. C. (2024). Effective Communication In Health: Strategies For Effective Work Development. *IOSR Journal of Humanities and Social Science*. <https://doi.org/10.9790/0837-2909084753>
- Chandra, S., Wu, D. T., & Adhyaru, B. (2023). Improving Communication in a Large Urban Academic Safety Net Hospital System: Implementation of Secure Messaging. *Journal of Medical Systems*. <https://doi.org/10.1007/s10916-023-01956-x>
- Costa, D. K., & Manojlovich, M. (2024). *Navigating Communication Conflicts Among the Healthcare Team*. <https://doi.org/10.1093/med/9780197655979.003.0001>
- Deland, E. L., Gordon, J., & Kelly, R. E. (2017). *Let's talk about improving communication in healthcare*. <https://doi.org/10.7916/D8RF5T5D>
- Dulahu, W. Y., Hiola, D. S., Jafar, C. P. S. H., Mursyidah, A., Arsad, S. F. M., Biya, R. H., & Praditya, S. (2022). Nurse-Doctor Interprofessional Collaboration In Hospital: Study Description. *Jurnal Keperawatan Dan Fisioterapi*. <https://doi.org/10.35451/jkf.v5i1.1298>
- Gosadi, I. M. (2019). Case report of patient experience influenced by inadequate interactions between primary, secondary, and tertiary healthcare services in the south of Saudi Arabia. *Clinical Case Reports*. <https://doi.org/10.1002/CCR3.2617>
- Green, B., Oeppen, R. S., Smith, D. W., & Brennan, P. A. (2017). Challenging hierarchy in healthcare teams – ways to flatten gradients to improve teamwork and patient care. *British Journal of Oral & Maxillofacial Surgery*. <https://doi.org/10.1016/j.bjoms.2017.02.010>
- Hamdan, R. M. (2017). *Dimensions of Nurse-Physician Communication*.
- Hawkins, R., & Bull, E. (2024). Healthcare professional communication behaviours, skills, barriers, and enablers: Exploring the perspectives of people living with Inflammatory Bowel Disease. *Health Psychology Open*. <https://doi.org/10.1177/20551029241257782>
- Heidemann, L. A., Kempner, S., Walford, E., Chippendale, R., Fitzgerald, J. T., & Morgan, H. (2020). Internal medicine paging curriculum to improve physician-nurse interprofessional communication: a single center pilot study. *Journal of Interprofessional Care*. <https://doi.org/10.1080/13561820.2020.1743246>
- Holmgren, A. J., Pfeifer, E., Manojlovich, M., & Adler-Milstein, J. (2016). A Novel Survey to Examine the Relationship between Health IT Adoption and Nurse-Physician Communication. *Applied Clinical Informatics*. <https://doi.org/10.4338/ACI-2016-08-RA-0145>
- Kiarie-Kariuki, P., Thompson-Smith, C., Choi, L., & Wolgast, K. (2017). *Implementing the situation background assessment recommendation (SBAR) communication in a rural acute care hospital in Kenya*. <https://doi.org/10.30918/IRJMMS.54.17.024>
- Kollár, J. (2016). Kommunikáció az egészségügyi teamen belül: orvosok és szakdolgozók. *Orvosi Hetilap*. <https://doi.org/10.1556/650.2016.30444>
- Kulesa, J., Tyris, J., McQuiston-Lane, K., Herstek, J., & Rush, M. L. (2023). Increasing Nurse-Physician Family-Centered Rounds Communication: A Quality Improvement Pilot Project. *Journal of Nursing Care Quality*. <https://doi.org/10.1097/NCQ.0000000000000701>
- Kunjukunju, A., & Ahmad, A. (2019). *Effective communication among doctors and nurses: barriers as perceived by doctors*. <https://doi.org/10.31674/MJN.2019.V11I02.001>
- Kwan, B., Bell, J. P., Longhurst, C. A., Goldhaber, N. H., & Clay, B. (2024). Implementation of an electronic health record-integrated instant messaging system in an academic health system. *Journal of the American Medical Informatics Association*. <https://doi.org/10.1093/jamia/ocad253>
- Lapointe, R., Bhesania, S., Tanner, T., Peruri, A., Peruri, A., & Mehta, P. (2018). An Innovative Approach to Improve Communication and Reduce Physician Stress and Burnout in a University Affiliated Residency Program. *Journal of Medical Systems*. <https://doi.org/10.1007/S10916-018-0956-Z>
- Lee, J. Y. (2015). Effective communication for patient safety. *Journal of The Korean Medical Association*. <https://doi.org/10.5124/JKMA.2015.58.2.100>
- Low, S., Gray, E., Ewing, A., Hain, P., & Kim, L. (2021). Remodeling Interprofessional Collaboration Through a Nurse-for-a-Day Shadowing Program for Medical Residents. *Journal of Multidisciplinary Healthcare*. <https://doi.org/10.2147/JMDH.S319728>
- Manias, E., Geddes, F., Watson, B. M., Jones, D., & Della, P. (2015). Communication failures during clinical handovers lead to a poor patient outcome: Lessons from a case report: *SAGE Open Medical Case Reports*. <https://doi.org/10.1177/2050313X15584859>
- Mathur, G. P. (2023). Communication: A Basic Skill of Medical Practice. *Bangladesh Journal of Medicine*. <https://doi.org/10.3329/bjm.v34i2.66096>
- Meese, K. A., Colón-López, A., Singh, J. A., Burkholder, G. A., & Rogers, D. A. (2021). Healthcare is a Team Sport: Stress, Resilience, and Correlates of Well-Being Among Health System Employees in a Crisis. *Journal of Healthcare Management*. <https://doi.org/10.1097/JHM-D-20-00288>
- Moreland, J. J., & Apker, J. (2016). Conflict and Stress in Hospital Nursing: Improving Communicative Responses to Enduring Professional Challenges. *Health Communication*. <https://doi.org/10.1080/10410236.2015.1007548>
- Moreno-Leal, P., Leal-Costa, C., Díaz-Agea, J. L., Castaño-Molina, M. A., Conesa-Ferrer, M. B., & Souza-Oliveira, A. C. D. (2024). Disruptive Behavior and Factors Associated with Patient Safety Climate: A Cross-Sectional Study of Nurses' and Physicians' Perceptions. *Journal of Nursing Management*. <https://doi.org/10.1155/2024/5568390>
- Murray, K. S., Mullen, S., Ed, B. B., Brimacombe, M., Carlton, E., Roop, L., & Unruh, G. (2015). Creating Improved Communication Between Nursing and Physicians: Importance of Collaboration within a Hospital System. *International Journal for Innovation Education and Research*. <https://doi.org/10.31686/IJIER.VOL3.ISS11.471>

Ashwaq Mohammed Aseeri , Mariam Saleh Saleh Alsalem, Fatmah Saleh Saleh Alsalem, Ashwaq hasel asiri , Khayreh Mohammed Aseeri , shariifa ali mohammed alshahrani , Wael Ahmed Alkhotani , Aisha Abdulrahman Alshahrani , Anwar Mohammad Kuriri, Hadi Mohammed Muhajjab , Mohammed Ahmed Alhazmi, Turki Mohsin Khormi,

- Neville, B., Miltner, R. S., & Shirey, M. R. (2021). Clinical Team Training and a Structured Handoff Tool to Improve Teamwork, Communication, and Patient Safety. *Journal for Healthcare Quality*. <https://doi.org/10.1097/JHQ.0000000000000291>
- Novaes, F. P. S. S., & Grosseman, S. (2023). Communication in healthcare: experience of students and professionals from teaching- learning to practice in health. *International Journal of Medical Education*. <https://doi.org/10.5116/ijme.6412.f49b>
- Ondogan, A. G., Sargin, M., & Canoz, K. (2023). Use of electronic medical records in the digital healthcare system and its role in communication and medical information sharing among healthcare professionals. *Informatics in Medicine Unlocked*. <https://doi.org/10.1016/j.imu.2023.101373>
- Organi, Z. K., Nazarenia, M., & Aghaee, F. (2024). *Understanding the Challenges of Language Barriers in Healthcare*. <https://doi.org/10.61838/kman.isslp.3.3.5>
- Park, K.-O., Park, S. H., & Yu, M. (2018). Physicians' Experience of Communication with Nurses related to Patient Safety: A Phenomenological Study Using the Colaizzi Method. *Asian Nursing Research*. <https://doi.org/10.1016/J.ANR.2018.06.002>
- Permanasari, I., & Oktamianti, P. (2023). Level of Interprofessional Collaboration in Hospital Intensive Care Unit (ICU). *Syntax Literate : Jurnal Ilmiah Indonesia*. <https://doi.org/10.36418/syntax-literate.v7i9.13630>
- Putri, P., & Afandi, A. T. (2023). The SBAR Communication Method (Situation-Background-Assessment-Recommendation) In Nursing: A Literature Review. *Jurnal Kesehatan Komunitas Indonesia*. <https://doi.org/10.58545/jkki.v3i2.118>
- Raliphaswa, N. S., Ramathuba, D. U., Luhailima, T. R., Mulondo, S. A., Malwela, T., Tshililo, A. R., Mafumo, J. L., Maputle, M. S., Maluleke, M., Mbedzi, T. E., Shilubane, H. N., Ndou, N. D., Netshisaulu, K. G., & Netshikweta, M. L. (2023). Barriers to Effective Communication between Patients, Relatives, and Health Care Professionals in the Era of COVID-19 Pandemic at Public Hospitals in Limpopo Province. *Journal of Respiration*. <https://doi.org/10.3390/jor3010004>
- Regina, M. L., Vecchié, A., Bonaventura, A., & Prisco, D. (2021). *Patient Safety in Internal Medicine*. https://doi.org/10.1007/978-3-030-59403-9_17
- Rozeira, C. H. B., Silva, M. F. da, Neves, D., Possi, B. R. C., Júnior, J. A. da S., Pastor, B., Gava, S., Santos, E. O. dos, Triaca, R., Figueiredo, D., Domingues, W. H. S., & Neto, F. R. (2024). *Listening with empathy, caring with dedication: Promoting humanized communication in the context of health*. <https://doi.org/10.56238/sevened2024.010-012>
- Samimi, S. (2018). *Enhance Nurse-Physician Communication*.
- Samuriwo, R. (2022). Interprofessional Collaboration—Time for a New Theory of Action? *Frontiers in Medicine*. <https://doi.org/10.3389/fmed.2022.876715>
- Sasso, L., Bagnasco, A., Aleo, G., Whelan, J., Muldowney, Y., Buckley, S., McCarthy, S., & Timmins, F. (2015). Communication issues within critical care - emergency department perspectives. *Nursing in Critical Care*. <https://doi.org/10.1111/NICC.12227>
- Sharkiya, S. H. (2023). Quality communication can improve patient-centred health outcomes among older patients: a rapid review. *BMC Health Services Research*. <https://doi.org/10.1186/s12913-023-09869-8>
- Shitu, Z., Hassan, I., Aung, M. M. T., Kamaruzaman, T. H. T., & Musa, R. M. (2018). *Avoiding medication errors through effective communication in a healthcare environment*. <https://doi.org/10.15282/MOHE.V7I1.202>
- Shrivastava, S. R., & Shrivastava, P. S. (2023). Collaborating for success: empowering medical professionals through interprofessional education. *Cukurova Medical Journal*. <https://doi.org/10.17826/cumj.1357186>
- Suraya, C., Sansuwito, T. B., Dioso, R. I., & Wisuda, A. C. (2024). *Effective communication in nursing: a comprehensive systematic review of best practices*. <https://doi.org/10.33862/jnsr.v1i1.450>
- Tan, T.-C., Zhou, H., & Kelly, M. (2017). Nurse–physician communication – An integrated review. *Journal of Clinical Nursing*. <https://doi.org/10.1111/JOCN.13832>
- *The communication process*. (2023). <https://doi.org/10.1016/b978-0-323-99038-7.00014-x>
- *The Effect of Professional Communication: Promoting Nurse-Physician Collaboration*. (2023). <https://doi.org/10.58809/smiw7276>
- Tiwary, A., Rimal, A., Paudyal, B., Sigdel, K. R., Basnyat, B., & Basnyat, B. (2019). *Poor communication by health care professionals may lead to life-threatening complications: examples from two case reports*. <https://doi.org/10.12688/WELLCOMEOPENRES.15042.1>
- Townsend-Gervis, M., Cornell, P., & Vardaman, J. M. (2014). Interdisciplinary Rounds and Structured Communication Reduce Re-Admissions and Improve Some Patient Outcomes. *Western Journal of Nursing Research*. <https://doi.org/10.1177/0193945914527521>
- Tschannen, D., Keenan, G. M., Aebersold, M., Kocan, M. J., Lundy, F., & Averhart, V. (2011). Implications of nurse-physician relations: report of a successful intervention. *Nursing Economics*.
- Umberfield, E., Ghaferi, A. A., Krein, S. L., & Manojlovich, M. (2019). Using Incident Reports to Assess Communication Failures and Patient Outcomes. *The Joint Commission Journal on Quality and Patient Safety*. <https://doi.org/10.1016/J.JCJQ.2019.02.006>
- Vasanthakumar, G. U., Gowda, D., Manage, P. S., Prasad, K., & Hariram, V. (2024). *Electronic Health Records (EHR) and Clinical Decision Support Systems*. <https://doi.org/10.4018/979-8-3693-0807-3.ch013>
- Verspuy, M., & Bogaert, P. V. (2018). *Interprofessional Collaboration and Communication*. https://doi.org/10.1007/978-3-319-71042-6_12
- Wick, J. Y. (2013). Improving communication among health professionals, avoiding mistakes. *The Consultant Pharmacist : The Journal of the American Society of Consultant Pharmacists*. <https://doi.org/10.4140/TCP.N.2013.4>