

The Impact Of Quality Of Hospital Systems On Patient Safety

¹Sahar Ali Qahtani, ²Hamed Marzoog M Alharthi, ³Abdulaziz
Muidh Almalki, ⁴Ziyad Faleh Ziyad Alnofei, & ⁵Majed
Abdullah Alrobiei

¹Corresponding Author Email: saharq@moh.gov.sa

¹Specialist Laboratory - Molecular Genetics, In Poison Control and
Forensic Chemistry Centre Jeddah, Ministry of Health, Saudi
Arabia

²Consultant Intensivist, ³Consultant Adult Urologist, ⁴Pediatric
Consultant, ⁵Registered Nurse

^{2,3}King AbdulAziz Specialist Hospital, Taif, Saudi Arabia

⁴Children Hospital, Taif

⁵Forensic Medicine, Taif Health Affairs

Abstracta

Patient safety is a critical aspect of healthcare delivery and a key indicator of the quality of hospital systems. The aim of this qualitative review paper is to explore the impact of the quality of hospital systems on patient safety. Through a thorough literature search and analysis of qualitative studies, this paper aims to provide an in-depth understanding of the factors that influence the safety of patients in hospitals. The paper begins by defining patient safety and examining its significance in healthcare. It then discusses the various dimensions of quality in hospital systems that have an impact on patient safety, such as structural elements, processes, and culture. The role of leadership and organizational culture in promoting a culture of safety is also explored. Moreover, the paper delves into the challenges that healthcare providers face in ensuring patient safety, such as communication barriers, staffing shortages, and inadequate resources. It also examines the role of technology in enhancing patient safety and the barriers to its implementation. In addition to the factors within hospitals, the paper also looks at the impact of external factors, such as policies and regulations, on the safety of patients in healthcare settings. The paper highlights the importance of compliance with national and

international standards and guidelines in ensuring patient safety. Furthermore, the paper discusses the importance of collaboration and shared accountability among healthcare providers in promoting a safe environment for patients. It also explores the impact of patient involvement and engagement in promoting their own safety. In conclusion, this qualitative review paper highlights the multidimensional nature of patient safety and emphasizes the need for a comprehensive and integrated approach towards ensuring it. It also provides recommendations for future research to further understand the impact of quality of hospital systems on patient safety.

Keywords: Hospital systems, quality, patient outcomes, and patient safety.

Introduction

Ensuring patient safety is a critical aspect of healthcare and is a primary concern for healthcare systems worldwide. Patient safety refers to the prevention of harm or injury to patients and the promotion of their well-being during their interactions with healthcare services. Despite advancements in medical technology and healthcare practices, there are still adverse events occurring in hospital settings that are preventable. As a result, there is an increased focus on improving the quality of hospital systems to enhance patient safety.

The quality of hospital systems has been defined as the level to which healthcare services provided to patients is consistent with current professional knowledge and achieves desired health outcomes (Mohammad-Mosadeghrad, 2013). Quality hospital systems are considered essential because they are linked to promoting and protecting patient safety and reducing healthcare costs. They are also an indicator of the healthcare system's effectiveness in providing appropriate and timely care. Therefore, it is crucial to assess the impact of quality hospital systems on patient safety to improve healthcare outcomes.

The primary objective of this review paper is to examine the existing literature on the impact of quality of hospital systems on patient safety. In recent years, there has been a growing body of research investigating the relationship between quality of hospital systems and patient safety. However, most of the studies have focused on the association between specific aspects of quality of

hospital systems, such as staffing levels or training, and patient safety. This review aims to provide a comprehensive evaluation of the overall impact of quality hospital systems on patient safety.

Literature has shown that hospital systems with higher quality have been associated with improved patient safety outcomes. For instance, a study by West, et al. (2014) found that hospitals with advanced technologies and better nurse staffing levels had lower patient mortality rates compared to facilities with fewer resources and staffing shortages. Furthermore, Oliveira, et al. (2014) study on the relationship between patient safety and quality of healthcare services found that facilities that provided evidence-based care, had robust clinical guidelines, and performed regular quality audits had lower adverse patient safety events.

One of the key components of quality hospital systems that impacts patient safety is healthcare personnel. Healthcare workers form the backbone of the healthcare system and their competence, skill, and engagement influence patient safety outcomes. Skilled healthcare workers are an essential element of efficient healthcare delivery, and they play a critical role in preventing unsafe events and errors. A study by Mosadeghrad (2014) revealed that quality of hospital systems, such as adequate staffing levels, sufficient training programs, and effective communication among healthcare workers, contribute to the successful implementation of patient safety protocols and, consequently, reduce the occurrence of adverse events.

Additionally, patients are at the center of healthcare, and their involvement in decision-making and their satisfaction with care have a significant impact on patient safety outcomes. Patients who are actively involved in their care are more likely to adhere to treatment plans and report any safety concerns, which can prevent harm or errors. Furthermore, a patient's satisfaction with the quality of care they receive at a hospital has been linked to improved adherence to safety protocols. A study by Carter, et al. (2016) found that patients who reported high satisfaction with the quality of care in a hospital setting were more likely to follow hand hygiene protocols, reducing the risk of healthcare-associated infections.

In conclusion, high-quality hospital systems are essential in ensuring patient safety and reducing adverse events in healthcare settings. This review paper will critically assess the current

literature on the impact of quality of hospital systems on patient safety, with a focus on healthcare personnel and patient involvement in decision-making. Understanding the relationship between quality hospital systems and patient safety is crucial in guiding policymakers and healthcare leaders in developing strategies to improve the quality of care delivery and ultimately enhance patient safety outcomes.

Methods & Results

Methodology

The purpose of this qualitative review paper is to explore the impact of quality of hospital systems on patient safety within the healthcare setting. This paper utilized a qualitative research approach, specifically a thematic analysis, to identify key themes and patterns in the literature related to the impact of hospital systems on patient safety. The methodology involved a systematic search of electronic databases, including PubMed, CINAHL, and Scopus, using keywords such as “quality”, “hospital systems”, “patient safety”, and “impact”. The searches were limited to articles published in English between 2010 and 2020.

Initially, a total of 50 articles were identified from the search. After a careful screening of titles and abstracts, some selected articles were deemed relevant for further analysis. Inclusion criteria included articles that discussed the impact of hospital systems on patient safety, were published in peer-reviewed journals, and were available in full-text version. Exclusion criteria included articles that primarily focused on specific clinical interventions or treatments, articles that only discussed patient safety issues without discussing the role of hospital systems, and non-empirical studies such as reviews, editorials, or commentaries.

The selected articles were then reviewed in-depth, and relevant information was extracted and organized into themes. The themes were identified based on the recurring patterns and similarities found in the literature. These themes included organizational culture, leadership, teamwork, communication, and technology. This process continued until data saturation was reached, and no new themes or information were identified.

Results

After the thematic analysis, five key themes emerged from the literature review, highlighting the impact of quality of hospital systems on patient safety.

Organizational culture

The first theme identified was organizational culture, which refers to the shared values, beliefs, and practices that guide the behaviour of individuals within the organization. It was found that a positive and supportive organizational culture plays a significant role in promoting patient safety. Studies have shown that a culture focused on continuous learning, open communication, and accountability can lead to a better understanding of patient safety issues and encourage healthcare professionals to actively participate in initiatives aimed at improving patient safety (Farokhzadian, et al., 2016; Gandhi, et al., 2018).

Leadership

Leadership was another prominent theme that emerged from the literature review. Effective leadership at all levels of the organization is crucial in promoting patient safety. Strong and visible leadership can create a culture of safety, enhance staff engagement, and promote a shared responsibility for patient safety (Sammer, et al., 2010). Furthermore, it was found that leaders who lead by example, foster open communication, and encourage staff involvement in patient safety initiatives are more successful in driving positive changes in the hospital system (Boamah, et al., 2018).

Teamwork

The third theme that emerged from the literature review was teamwork. Effective teamwork has been shown to improve patient safety by promoting efficient communication, coordination of tasks, and collaborative decision-making (Rosen, et al., 2018). In contrast, poor teamwork and communication have been found to be key contributing factors to errors and adverse events (Lee & Doran, 2017). Therefore, fostering a collaborative and supportive team environment is crucial for enhancing patient safety in hospitals.

Communication

Communication was another recurring theme identified in the literature. It was found that effective communication, both within

and between multidisciplinary teams, is essential for promoting patient safety. Studies have shown that ineffective communication, such as breakdowns in handover or lack of clear communication channels, can lead to medication errors, delays in diagnosis, and other adverse events (Müller, et al., 2018). Therefore, promoting effective communication through training, standardization of communication processes, and technology can significantly improve patient safety.

Technology

The final theme identified in the literature review was the role of technology in promoting patient safety. Advancements in healthcare technology, such as electronic health records, computerized physician order entry, and barcode medication administration, have been linked to improvements in patient safety (Middleton, et al., 2013). However, the adoption and implementation of technology in hospital systems can also introduce new safety concerns and require proper training and monitoring to achieve its maximum potential (Wachter, 2010).

Summary

Overall, the findings from this qualitative review highlight the importance of quality hospital systems in promoting patient safety. A supportive organizational culture, effective leadership, teamwork, communication, and technology are all essential components of a high-quality hospital system that can significantly impact patient safety. Understanding the impact of these factors can guide healthcare leaders and policymakers in developing strategies to promote a safe and high-quality healthcare environment for patients.

Discussion & Conclusion

Discussion

In this qualitative review paper, we have explored the impact of quality of hospital systems on patient safety. The review has revealed that the relationship between quality of hospital systems and patient safety is complex and multidimensional. A high-quality hospital system includes various aspects such as structure, process, and outcome measures, which are critical in ensuring safe care delivery to patients.

One of the key findings of this review is the importance of a strong organizational culture in promoting patient safety. A positive culture that emphasizes open communication, teamwork, and continuous learning has been shown to improve patient outcomes and reduce medical errors. This highlights the need for hospitals to invest in creating a culture of safety and fostering a supportive working environment for staff.

Another important factor that emerged from this review is the role of leadership in ensuring a high-quality hospital system. Effective leadership at all levels, including top management, clinical leaders, and frontline managers, is essential in setting and maintaining high standards of care. Leaders play a critical role in promoting a culture of safety, identifying and addressing system vulnerabilities, and supporting staff in providing safe and effective care.

Furthermore, this review has also highlighted the crucial role of staff training and education in promoting patient safety. Adequate training in patient safety protocols and best practices can improve staff knowledge and skills, leading to more effective and safe care delivery. Moreover, ongoing education and training can also contribute to a culture of continuous learning, thereby ensuring continual improvement in patient safety.

The review has also shown the significance of implementing evidence-based practices and using technology to improve patient safety. Evidence-based practices are rooted in research and have been shown to improve outcomes and reduce medical errors. By using technology, hospitals can streamline processes, improve communication, and reduce the risk of human error, ultimately promoting patient safety.

However, we also identified several challenges that can hinder the achievement of a high-quality hospital system and compromise patient safety. These include resource constraints, staffing shortages, and a lack of communication and coordination among healthcare teams. These challenges not only impact the quality of care but also increase the risk of adverse events. Therefore, it is imperative for hospitals to address these barriers and invest in resources and strategies to overcome them.

Moreover, the review also revealed the need for a systems perspective in understanding patient safety. While individual factors such as human error or communication breakdowns can contribute to adverse events, they are often symptoms of deeper,

underlying system failures. It is crucial for hospitals to adopt a systems approach, which focuses on identifying and addressing system vulnerabilities rather than just blaming individuals for errors.

Conclusions

In conclusion, the findings of this qualitative review paper demonstrate that the quality of hospital systems has a significant impact on patient safety. A high-quality hospital system, which includes a supportive culture, strong leadership, adequate training, evidence-based practices, and technology, is crucial for ensuring safe and effective care delivery. However, several challenges, such as resource constraints and communication gaps, must be addressed to achieve a high-quality hospital system.

It is essential for hospitals to adopt a systems approach and promote a culture of safety to mitigate the risk of adverse events. Moreover, ongoing education and training for staff and the use of technology can also contribute to improving patient safety. Ultimately, the findings of this review emphasize the need for continuous efforts in quality improvement to achieve a high-quality hospital system and ensure patient safety.

References

- Boamah, S. A., Laschinger, H. K. S., Wong, C., & Clarke, S. (2018). Effect of transformational leadership on job satisfaction and patient safety outcomes. *Nursing outlook*, 66(2), 180-189.
- Carter, E. J., Wyer, P., Giglio, J., Jia, H., Nelson, G., Kauari, V. E., & Larson, E. L. (2016). Environmental factors and their association with emergency department hand hygiene compliance: an observational study. *BMJ quality & safety*, 25(5), 372-378.
- Farokhzadian, J., Dehghan Nayeri, N., & Borhani, F. (2018). The long way ahead to achieve an effective patient safety culture: challenges perceived by nurses. *BMC health services research*, 18, 1-13.
- Gandhi, T. K., Kaplan, G. S., Leape, L., Berwick, D. M., Edgman-Levitan, S., Edmondson, A., ... & Wachter, R. (2018). Transforming concepts in patient safety: a progress report. *BMJ Quality & Safety*, 27(12), 1019-1026.
- Lee, C. T. S., & Doran, D. M. (2017). The role of interpersonal relations in healthcare team communication and patient safety: a proposed model of interpersonal process in teamwork. *Canadian Journal of Nursing Research*, 49(2), 75-93.
- Middleton, B., Bloomrosen, M., Dente, M. A., Hashmat, B., Koppel, R., Overhage, J. M., ... & Zhang, J. (2013). Enhancing patient safety and quality of care by improving the usability of electronic health

- record systems: recommendations from AMIA. *Journal of the American Medical Informatics Association*, 20(e1), e2-e8.
- Mohammad Mosadeghrad, A. (2013). Healthcare service quality: towards a broad definition. *International journal of health care quality assurance*, 26(3), 203-219.
- Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *International journal of health policy and management*, 3(2), 77.
- Müller, M., Jürgens, J., Redaelli, M., Klingberg, K., Hautz, W. E., & Stock, S. (2018). Impact of the communication and patient hand-off tool SBAR on patient safety: a systematic review. *BMJ open*, 8(8), e022202.
- Oliveira, R. M., Leitão, I. M. T. D. A., Silva, L. M. S. D., Figueiredo, S. V., Sampaio, R. L., & Gondim, M. M. (2014). Strategies for promoting patient safety: from the identification of the risks to the evidence-based practices. *Escola Anna Nery*, 18, 122-129.
- Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*, 73(4), 433.
- Sammer, C. E., Lykens, K., Singh, K. P., Mains, D. A., & Lackan, N. A. (2010). What is patient safety culture? A review of the literature. *Journal of nursing scholarship*, 42(2), 156-165.
- Wachter, R. M. (2010). Patient safety at ten: unmistakable progress, troubling gaps. *Health affairs*, 29(1), 165-173.
- West, E., Barron, D. N., Harrison, D., Rafferty, A. M., Rowan, K., & Sanderson, C. (2014). Nurse staffing, medical staffing and mortality in intensive care: an observational study. *International journal of nursing studies*, 51(5), 781-794.