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The Pivotal Role of Nursing Leadership in Hospital Health Management and Quality Improvement Initiatives: A Comprehensive Review

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Abstract

Background: The healthcare context in which nurses practise is increasingly complex, with financial pressures and a continued demand for high-quality, safe patient care. It is in this context that nursing leadership can no longer be regarded solely as a supportive discipline but as integral to organizational performance.

Aim: To synthesize and critically analyze existing literature on the role of nursing leadership in health management and quality improvement initiatives within a hospital.

Methods: A systematic narrative review methodology was adopted. A comprehensive search of electronic databases for peer-reviewed literature between the years 2000 and 2024 was carried out. Keywords included "nursing leadership," "quality improvement," "patient safety," "health management," "transformational leadership," and "hospital." Studies that met the review inclusion criteria were thematically analyzed.

Results: Several pivotal nursing leadership roles were identified through the analysis, including: 1) establishing a safety culture and continuous improvement; 2) implementing and sustaining evidence-based practice (EBP); 3) applying strategic leadership styles, notably transformational and resonant leadership; 4) optimizing human resources management, including staffing and retention; and 5) using data related to performance monitoring.

Conclusion: Nursing leadership is an indispensable part of effective hospital health management. Evidence clearly indicates that strong, strategic, and supportive nursing leadership development is not an optional luxury but a core essential for the pursuit of excellence in patient care and the long-term sustainability of healthcare organizations.

Keywords: nursing leadership, quality improvement, patient safety, health management, transformational leadership

Introduction

The contemporary hospital is a complex, high-stakes environment in which safe, effective, and efficient care is paramount. Within this dynamic ecosystem, the role of nursing leadership has dramatically evolved from a primarily administrative and disciplinary function into a strategic and influential force that is central to organizational success. Nurses are the backbone of inpatient care, spending more time with patients than any other healthcare professional; this inherently positions nursing leaders-from charge nurses and unit managers to directors and CNOs-as the crucial link between executive vision and frontline practice. The quality of the leadership they provide has profound implications not only for patient outcomes but also for the well-being of the nursing workforce and the financial health of the institution.

This is a review impelled by the constant pressures facing health care systems worldwide, including increasing costs, workforce shortages, an aging population with complex comorbidities, and increased scrutiny from the public regarding patient safety outcomes (World Health Organization, 2021). Consequently, there has been a growing adoption of formal QI methodologies such as Lean, Six Sigma, and the Model for Improvement by hospitals in the effort to rationalize processes and improve care quality (Assaye et al., 2021). Despite these efforts, the successful implementation and sustainability of these changes greatly depend on the culture and leadership engagement of an organization. Nursing leaders, because of their position, are the chief creators and guardians of this culture on clinical units (Al Atiyyah et al., 2024).

This literature review will argue that effective nursing leadership is a non-negotiable,

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strategic asset in the management of health in hospitals. The aim is to synthesize a rather broad body of literature that explores the multifaceted roles nursing leaders play in driving quality improvement, creating a culture of safety, managing resources, and supporting their staff. Based on an examination of the evidence linking specific leadership styles and practices to tangible outcomes, this review will provide a consolidated framework for understanding how investing in nursing leadership development a direct investment in superior patient care and organizational resilience is.

Evolution and Theoretical Foundations of Nursing Leadership

Leadership in the practice of nursing has undergone a sea of change over the past five decades. Nursing leadership in yesteryear emanated from an authoritarian, task-oriented model that relied heavily on hierarchy and compliance (Marquis & Huston, 2009; Kramer et al., 2010). The "traditional" model has, for the most part, been replaced by more modern, relational approaches recognizing empowerment, inspiration, and collaboration.

Several key theoretical frameworks underpin contemporary nursing leadership research. Perhaps the most influential of these is Transformational Leadership, which looks to leaders who inspire and motivate followers to achieve something above and beyond the norm by appealing to their values and sense of purpose (Bass & Riggio, 2006). Nursing transformational leaders are those who have the ability to create a vision, stimulate interest in understanding issues from different perspectives, show individualized consideration, and establish a trusting relationship (Haddash, 2025). Contrasting this is Transactional Leadership, which relies on a system of reward and punishment for attaining or failing to meet predetermined goals. Of course, transactional elements are necessary for day-to-day management, yet evidence tends to indicate that an over-reliance on such styles will be less effective in bringing about sustained QI and staff engagement (Alsahli et al., 2024).

Other essential concepts include Resonant Leadership, emphasizing emotional intelligence and a leader's skills in managing their own and other people's emotions to create an atmosphere of positivity and responsiveness at work. Resonant leaders are aware of themselves, empathetic, and can manage relationships important in the highly pressurized and emotionally charged contexts seen in healthcare (Raso et al., 2020). Furthermore, a relatively new approach, called Authentic Leadership, has been described as a pattern of transparent and ethical leader behavior that promotes the open sharing of information and has regard for followers' viewpoints. These approaches have been found to lead to increased trust and improved safety climates (Wong & Laschinger, 2013).

The integration of these theories into nursing practice has transformed the leader's role from that of director to one of coach, facilitator, and mentor. This evolution reflects a broader recognition that the complex challenges of modern healthcare cannot be solved through command-and-control tactics but rather require the full engagement and intellectual capital of the entire nursing team (Swensen et al., 2016).

Key Domains of Nursing Leadership Influence on Quality and Safety

Creating a Safety Culture and Continuous Improvement

Perhaps the most essential contribution of nursing leadership to safety might be in the development and perpetuation of a safety culture. A culture of safety is one in which all staff share a commitment to safety, approaches to error are nonpunitive, and there is a belief in the efficacy of preventive measures on the part of all staff (Sammer et al., 2010). Nursing leaders are the chief architects of this environment. They do this by clearly prioritizing safety, responding constructively to errors and near-misses, and empowering staff to speak up regarding safety concerns without retaliation (O'Donovan & McAuliffe, 2020).

Leaders influence culture daily through actions and systems, such as conducting safety briefings, participating in root cause analyses, and ensuring resources for safe care (e.g., adequate staffing, functional equipment) are available (Hughes, 2008). When leaders consistently demonstrate that patient safety is an uncompromising core value, psychological safety among staff is enhanced, an essential precondition for open communication and reporting of which are needed for effective QI (Edmondson & Lei, 2014). Units with stronger leadership and better safety climates have consistently been found to have significantly lower rates of healthcare-associated infections, patient falls, and medication errors.

Implementing and Sustaining Evidence-Based Practice (EBP)

The translation of research evidence into clinical practice is the cornerstone of quality improvement. However, the gap between what is known and what is done remains a major challenge. Nursing leaders are the critical catalysts for closing this gap (Melnyk & Fineout-Overholt, 2022). They champion EBP by creating an enabling infrastructure for it; such facilitation will include access to databases of research, time to work on EBP projects, and journal clubs or EBP committees (Sandström et al., 2011).

Intellectual curiosity and a spirit of inquiry are fostered by leaders within the teams beyond infrastructure. They encourage the nurses to question existing practices and provide the mentorship and resources needed to develop and implement EBP projects (Stetler et al., 2014). The value of EBP is reinforced by linking it to patient outcomes and celebrating successes. Strong nursing leadership was cited as one of the most frequent facilitators for the

successful and sustained implementation of EBP, thereby bringing about improved clinical outcomes and greater nurse job satisfaction, in a systematic review done by Yadav et al. (2021)

Strategic Leadership Styles and Their Impact on Outcomes

The two theoretical leadership styles outlined previously have demonstrated tangible impacts on the performance of hospitals. A preponderance of evidence links Transformational Leadership to a wide range of positive outcomes. For example, in one landmark study, Boamah et al. (2018) report that units with transformational nurse managers had significantly lower rates of medication errors and falls in patients. This leadership style is also strongly associated with higher levels of staff satisfaction, organizational commitment, and perceived unit effectiveness (Donovan et al., 2016).

The emotionally intelligent approach of Resonant Leadership has been shown to buffer against the negative effects of workplace stress and burnout. In environments with resonant leaders, nurses report lower levels of emotional exhaustion and a greater sense of personal accomplishment, which in turn reduces turnover intent and improves the stability of the care team (Raso et al., 2020; Goleman et al., 2013). Similarly, Authentic Leadership has been correlated with increased staff trust in management, enhancing teamwork and communication—both critical components of patient safety (Wong & Laschinger, 2013). Table 1 and Figure 1 show the impact of nursing leadership styles on key outcomes.

Table 1: Impact of Nursing Leadership Styles on Key Outcomes

Leadership Style	Core Characteristics	Impact on Staff	Impact on Patient Outcomes	Key References
Transformational	Inspirational, provides intellectual stimulation, and individualized consideration	Higher job satisfaction, empowerment, and reduced burnout	Lower adverse event rates (medication errors, falls), higher patient satisfaction	Boamah et al. (2018); Donovan et al. (2016)
Resonant	High emotional intelligence, empathy, and mindfulness	Lower emotional exhaustion, increased teamwork, and higher retention	Improved safety culture, better care coordination	Raso et al. (2020); Goleman et al. (2013)
Authentic	Self-awareness, transparency, ethical, balanced processing	Increased trust, greater staff engagement, and psychological safety	Enhanced reliability of care processes, reduced complications	Wong & Laschinger (2013)
Transactional	Management-by-exception, contingent reward	Effective for routine task completion, but can lower empowerment if overused	Mixed; can maintain standards but does not drive breakthrough improvement	Bass & Riggio (2006)

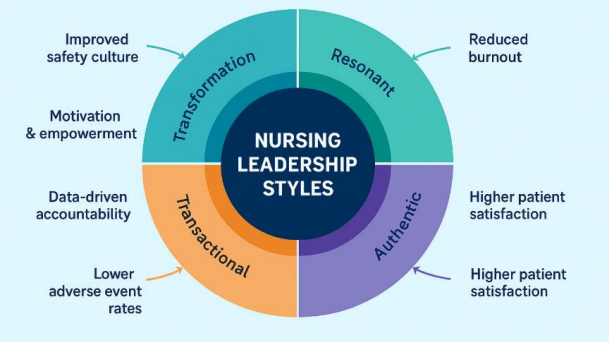

Figure 1: Framework of Nursing Leadership Influence on Hospital Quality and Safety Outcomes

Nursing Leadership in Operational Health Management

Human Resource Management: Staffing, Retention, and Succession Planning

Quality of care is threatened most by the nursing shortage worldwide. Nursing leaders are responsible for the strategic management of human capital and are at the very front line of the challenge. Their role in creating a healthy work environment is a direct determinant of staff retention. Leaders who support fair treatment of staff and advocate for their staff create a "magnet" culture that attracts and retains talented nurses, even in the most competitive markets.

A highly critical operational function is staffing. Financial pressures often drive staffing decisions, but effective nurse leaders use evidence and patient acuity data to make a case for safe nurse-to-patient ratios. Many studies have identified a clear dose-response relationship, including comprehensive work from Aiken et al. (2011), with higher patient loads per nurse associated with increased mortality, failure-to-rescue rates, and job dissatisfaction. Thus, negotiating for adequate resources can be considered a direct quality and safety intervention from the perspective of the leader (Shin et al., 2018).

Moreover, proactive succession planning is a mark of strategic leadership. Current leaders assure continuity in leadership excellence and preserve organizational knowledge for sustained QI efforts

through the identification and mentoring of high-potential staff for future leadership (Titzer et al., 2014).

Financial and Resource Stewardship

Nursing leaders are increasingly responsible for large operational budgets. The effective management of such resources is an important aspect of health management. It involves managing not only labor costs but also supplies, equipment, and overtime costs (Jones et al., 2018). The best leaders link financial management to quality. For instance, pressure-relieving equipment may involve an initial investment, but it results in considerable savings because it prevents the costly hospital-acquired pressure injury (Alrashdi et al., 2024).

Leaders are also drivers of financial health through QI projects that drive efficiency and reductions in waste. Applying methodologies for process improvement to clinical workflows, for example, can assist nurse leaders in length-of-stay reduction, decreasing unnecessary diagnostic testing, and improving throughput processes of which have a positive bottom-line impact on the hospital (Swensen et al., 2016).

Data-Driven Performance Monitoring and Accountability

In this era of value-based purchasing and public reporting, using data for performance improvement has become an essential competency for leaders. Nursing leaders must be competent collectors, analysts, and interpreters of both clinical and operational data to monitor performance of their units and inform QI efforts (Assaye et al., 2021). This would mean tracking fall rates, CLABSI, and patient satisfaction scores, among others.

While gathering data is important, the most effective leaders in practice make information both visible and actionable for their teams. They build dashboards, lead performance review meetings, and engage staff in meaningfully understanding the "story behind the data" (Duncan, 2022). Accountability of the team for the outcomes through supportive, rather than punitive, means encourages the shared ownership of quality and safety. This data-driven approach permits objective assessment of QI work and ensures that changes result in real improvement (Potters et al., 2016). Table 2 and Figure 2 illustrate the core competencies for nursing leaders in health management and QI

Table 2: Core competencies for nursing leaders in health management and QI

Competency Domain	Specific Skills and Knowledge	Application in Practice
Clinical Quality and Safety	Understanding of QI methodologies (PDSA, Lean), patient safety science, and EBP implementation.	Leading an RCA, coaching staff on a new EBP guideline, and implementing a checklist to reduce CLABSI.
Financial Management	Budget development and monitoring, cost-benefit analysis, and business case development.	Justifying the business case for a new staff position based on reduced turnover costs and managing unit supply expenses.
Human Resource Management	Talent development, performance management, conflict resolution, and staff engagement strategies.	Conducting meaningful performance reviews, mentoring a new graduate nurse, and mediating a team conflict.
Data and Analytics	Data interpretation, dashboard development, and performance metric selection.	Presenting quarterly quality data to the team, using run charts to track the impact of a practice change.
Strategic Leadership	Change management, vision setting, influence and advocacy, and emotional intelligence.	Championing a hospital-wide culture change initiative, advocating to executives for safe staffing.

Figure 2: Integrated Nursing Leadership Model for Hospital Health Management and Quality Improvement

Challenges and Future Directions for Nursing Leadership

Despite recognized importance, nursing leadership faces some significant challenges. Role ambiguity and overload are common, with leaders frequently caught between the competing demands of frontline staff and executive leadership; these factors contribute to a very high level of stress and burnout among nurse leaders (Warshawsky et al., 2022). Many nurse leaders are promoted based on clinical expertise yet receive limited training in business, finance, and leadership theory-a phenomenon called the "accidental manager" (Christensen et al., 2018).

These pressures are heightened by the current nursing shortage, which forces leaders to operate units with high vacancy rates and reliance on temporary

staff, often at the cost of team cohesion and safety culture (Havaei et al., 2021; Beshbishy, 2024). The ever-increasing technological complexity of healthcare-including the widespread implementation of EHRs-means that leaders also need to be skilled at managing technological change and at ensuring technology supports, rather than detracts from, clinical workflow and the nurse-patient relationship (Piscotty & LaGore, 2025).

Meeting these challenges requires a collective effort. Well-structured leadership development programs are important for building up nurses into leadership positions and continuing to develop them. These should cover not only finance and operations but also emotional intelligence, resilience, and strategic thinking (Titzer et al., 2014). Executive support is just as important; CNOs and other leaders must establish structures that will enable middle managers to support the growth of frontline leaders, equip them with adequate resources, and involve them in strategic decision-making processes (Hughes, 2008).

Future studies need to look at what hybrid models of leadership are most powerful in driving QI and the role of informal clinical leaders. As health care continues to evolve, tomorrow's leaders must be systems thinkers, innovators, and partners in codesigning the future of patient care with the communities they serve (Swensen et al., 2016).

Conclusion and Recommendations

This review has synthesized compelling evidence that nursing leadership is an indispensable, strategic asset in hospital health management and a critical determinant of the success of quality improvement initiatives. Effective nursing leadership impacts everything from bedside care to decisions made in the boardroom. By leading through the development of a safety culture, promoting evidence-based practice, judiciously managing human and financial resources, and using data to drive improvement, nursing leaders directly influence the quality and safety of patient care. The evidence clearly demonstrates that leadership is not a passive attribute but an active practice. Transformational, resonant, and authentic styles of leadership are powerfully associated with superior outcomes for both patients and staff. Investing in nursing leadership, therefore, is not an administrative overhead but a core strategy in building resilient, high-reliability health care organizations.

Tapping into the full potential of nursing leadership requires a multi-dimensional and intentional approach. First, hospitals need to move beyond ad-hoc training and invest in comprehensive, evidence-based leadership development programs. These rigorous, structured initiatives should focus on both current and aspiring nurse leaders, developing core competencies in emotional intelligence, financial acumen, change management, and quality improvement science. Simultaneously, executive leadership must formally embed nursing leaders within strategic planning and decision-making, appropriately equipping them as system architects with the authority and the resources required to drive real change. To make this leadership cadre sustainable, organizations must proactively prioritize the support and well-being of the leaders through effective mitigation of the prevalent burden of burnout by providing adequate resources, realistic spans of control, and fostering a culture that promotes leader wellness.

Additionally, there is a requirement to develop a data-driven leadership culture through the provision of appropriate tools, training, and technical assistance for leaders on how to effectively leverage data in monitoring performance and engaging their teams in continuous improvement. Ultimately, high-quality and safe patient care is inextricably linked to a strong, supported, and strategically engaged nursing leadership workforce. Recognizing, nurturing, and empowering this vital role will enable healthcare organizations to navigate the complexities of the modern era and realize their fundamental mission of healing.

References

1. Aiken, L. H., Sloane, D. M., Clarke, S., Poghosyan, L., Cho, E., You, L., ... & Aungsuroch, Y. (2011). Importance of work environments on hospital outcomes in nine countries. *International Journal for Quality in Health Care*, *23*(4), 357-364. https://doi.org/10.1093/intqhc/mzr022
2. Al Atiyyah, A. H., Al Mutairi, D. M., Al Johani, K. I., Al Mutairi, M. B., Al Abdaly, H. S., Albreak, I. A., ... & Alrasheedi, W. A. (2024). Laboratory-Nursing Partnerships in Managing Multi-Drug-Resistant Organisms (MDROs): A Comprehensive Review. *Saudi Journal of Medicine and Public Health*, *1*(1), 154-164. https://doi.org/10.64483/jmph-73
3. Alrashdi, H. A. S., Alshammary, N. H. N., Alazmi, M. S. H., Ashamry, Z. H., Alrashidi, L. M. M., Alrashidi, N. S. D., ... & Alresheedi, R. K. M. (2024). The Role Of Nursing In Preventing Hospital-Acquired Infections. *The Review of Diabetic Studies*, 19-32. https://doi.org/10.70082/c1xrrr13
4. Alsahli, S. S. M., Alruqi, A. F., Alfaqih, A. A. M., Abutalib, F. M., Alkhaytan, A. N., Moafa, G. A., & ALANAZI, S. F. (2024). Management of Dental Anxiety, Nurse Intervention, and Support for Sedation: A Comprehensive Review. *Saudi Journal of Medicine and Public Health*, *1*(1), 131-143. https://doi.org/10.64483/jmph-59
5. Assaye, A. M., Wiechula, R., Schultz, T. J., & Feo, R. (2021). Impact of nurse staffing on patient and nurse workforce outcomes in acute care

settings in low-and middle-income countries: a systematic review. *JBI evidence synthesis*, *19*(4), 751-793. *DOI:* 10.11124/JBISRIR-D-19-00426

6. Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Psychology press.
7. Beshbishy, A. M. (2024). Advancements in Vaccination Tracking and Delivery Systems through Health Informatics: A Review of Digital Innovations and COVID-19 Impact. *Saudi Journal of Medicine and Public Health*, *1*(1), 16 – 26. https://doi.org/10.64483/jmph-16
8. 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. https://doi.org/10.1016/j.outlook.2017.10.004
9. Christensen, S. S., Wilson, B. L., & Edelman, L. S. (2018). Can I relate? A review and guide for nurse managers in leading generations. *Journal of nursing management*, *26*(6), 689-695. https://doi.org/10.1111/jonm.12601
10. Donovan, S. L., Salmon, P. M., & Lenné, M. G. (2016). Leading with style: a literature review of the influence of safety leadership on performance and outcomes. *Theoretical Issues in Ergonomics Science*, *17*(4), 423-442. https://doi.org/10.1080/1463922X.2016.1143986
11. Duncan, M. C. (2022). Formal Mentoring Programs: An Exploration of Barriers to Implementation in Nursing Schools. , Electronic Theses and Dissertations. Paper 434. https://digitalcommons.acu.edu/etd/434
12. Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annu. Rev. Organ. Psychol. Organ. Behav.*, *1*(1), 23-43. https://doi.org/10.1146/annurev-orgpsych-031413-091305
13. Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence*. Harvard Business Press.
14. Haddash, N. A. M. A. (2025). Therapeutic Potential of Plant-Based Dietary Interventions in Chronic Disease Remission: Mechanisms, Clinical Evidence, and Practical Implementation. *Saudi Journal of Medicine and Public Health*, *2*(2), 53-61.
15. Havaei, F., Ma, A., Staempfli, S., & MacPhee, M. (2021, January). Nurses' workplace conditions impacting their mental health during COVID-19: A cross-sectional survey study. In *Healthcare* (Vol. 9, No. 1, p. 84). MDPI. https://doi.org/10.3390/healthcare9010084
16. Hughes, R. (2008). Patient safety and quality: An evidence-based handbook for nurses.
17. Jones, C., Finkler, S. A., Kovner, C. T., & Mose, J. (2018). *Financial management for nurse managers and executives-e-book*. Elsevier Health Sciences.
18. Kramer, M., Schmalenberg, C., & Maguire, P. (2010). Nine structures and leadership practices essential for a magnetic (healthy) work environment. *Nursing administration quarterly*, *34*(1), 4-17. *DOI:* 10.1097/NAQ.0b013e3181c95ef4
19. Marquis, B. L., & Huston, C. J. (2009). *Leadership roles and management functions in nursing: Theory and application*. Lippincott Williams & Wilkins.
20. Melnyk, B. M., & Fineout-Overholt, E. (2022). *Evidence-based practice in nursing & healthcare: A guide to best practice*. Lippincott Williams & Wilkins.
21. O'donovan, R., & Mcauliffe, E. (2020). A systematic review of factors that enable psychological safety in healthcare teams. *International journal for quality in health care*, *32*(4), 240-250. https://doi.org/10.1093/intqhc/mzaa025
22. Piscotty, R., & LaGore, A. (2025). Nursing Care Reminder Frequency, Helpfulness, and Well-Being among Acute Care Registered Nurses. *Journal of Informatics Nursing*, *10*(1), 39-46.
23. Potters, L., Ford, E., Evans, S., Pawlicki, T., & Mutic, S. (2016). A systems approach using big data to improve safety and quality in radiation oncology. *International Journal of Radiation Oncology* Biology* Physics*, *95*(3), 885-889. https://doi.org/10.1016/j.ijrobp.2015.10.024
24. Raso, R., Fitzpatrick, J. J., & Masick, K. (2020). Clinical nurses' perceptions of authentic nurse leadership and healthy work environment. *JONA: The Journal of Nursing Administration*, *50*(9), 489-494. *DOI:* 10.1097/NNA.0000000000000921
25. 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. https://doi.org/10.1111/j.1547-5069.2009.01330.x
26. Sandström, B., Borglin, G., Nilsson, R., & Willman, A. (2011). Promoting the implementation of evidence-based practice: A literature review focusing on the role of nursing leadership. *Worldviews on Evidence-Based Nursing*, *8*(4), 212-223. https://doi.org/10.1111/j.1741-6787.2011.00216.x
27. Shin, S., Park, J. H., & Bae, S. H. (2018). Nurse staffing and nurse outcomes: A systematic review and meta-analysis. *Nursing outlook*, *66*(3), 273-282. https://doi.org/10.1016/j.outlook.2017.12.002
28. Stetler, C. B., Ritchie, J. A., Rycroft-Malone, J., & Charns, M. P. (2014). Leadership for evidence-

based practice: Strategic and functional behaviors for institutionalizing EBP. *Worldviews on Evidence-Based Nursing*, *11*(4), 219-226. https://doi.org/10.1111/wvn.12044

29. Swensen, S., Kabcenell, A., & Shanafelt, T. (2016). Physician-organization collaboration reduces physician burnout and promotes engagement: the Mayo Clinic experience. *Journal of healthcare management*, *61*(2), 105-127.
30. Titzer, J. L., Shirey, M. R., & Hauck, S. (2014). A nurse manager succession planning model with associated empirical outcomes. *JONA: The Journal of Nursing Administration*, *44*(1), 37-46. *DOI:* 10.1097/NNA.0000000000000019
31. Warshawsky, N. E., Cramer, E., Grandfield, E. M., & Schlotzhauer, A. E. (2022). The influence of nurse manager competency on practice environment, missed nursing care, and patient care quality: A cross-sectional study of nurse managers in US hospitals. *Journal of nursing management*, *30*(6), 1981-1989. https://doi.org/10.1111/jonm.13649
32. Wong, C. A., & Laschinger, H. K. (2013). Authentic leadership, performance, and job satisfaction: the mediating role of empowerment. *Journal of advanced nursing*, *69*(4), 947-959. https://doi.org/10.1111/j.1365-2648.2012.06089.x
33. World Health Organization. (2021). *Global patient safety action plan 2021-2030: towards eliminating avoidable harm in health care*. World Health Organization.
34. Yadav, S. K., Singh, S., & Prusty, S. K. (2025). A systematic review of business models in healthcare: research directions for emerging and developed economies. *Benchmarking: An International Journal*, *32*(4), 1308-1337. https://doi.org/10.1108/BIJ-07-2023-0473