Advances in Consumer Research
https://acr-journal.com/
Volume-3 | Issue-3 | March 2026
Original Researcher Article

Shaping the Future of Healthcare: Examining the Role of Artificial Intelligence in Transforming Hospital Management Practices

Shriraj Bhanudas Dere [1], Dr. Samadhan Bundhe [2]
[1]Research Student Sandip University, Nashik
shriraj.mns@gmail.com
[2]Research Guide Sandip University, Nashik
samadhan.bundhe@sandipuniversity.edu.in..

ABSTRACT
Artificial intelligence (AI) increasingly transformed hospital management practices by strengthening administrative decision-making, improving operational efficiency, and optimizing resource utilization. This study examined the extent and role of AI adoption in hospital management and analysed its impact on managerial decision-making, workflow efficiency, and resource utilization. It further assessed the perceptions, readiness, and acceptance of hospital administrators and healthcare professionals toward AI-enabled management practices. Additionally, the study evaluated the influence of AI-driven hospital management systems on operational performance, cost efficiency, and service quality, and proposed an integrated socio-technical framework explaining how AI was reshaping contemporary hospital management and healthcare delivery. A descriptive and exploratory research design was adopted to capture both the level of AI adoption and its perceived impact on hospital performance outcomes. The study employed a quantitative approach and collected primary data from 250 hospital management professionals drawn from public, private, trust-based, and corporate hospitals using convenience sampling. Data were collected through a structured questionnaire based on a five-point Likert scale and were analysed using appropriate statistical techniques. Secondary data from peer-reviewed journals, academic books, and credible reports strengthened the theoretical foundation. The findings indicated moderate to high AI adoption, with positive effects on decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality. Despite favourable organizational readiness, variations in perceptions highlighted the need for continuous training and change management. Overall, the study concluded that AI-enabled hospital management systems mattered.
Keywords: Artificial Intelligence, Hospital Management, Managerial Decision-Making, Workflow Efficiency, Resource Utilization, Healthcare Administration

INTRODUCTION:

Rapid progress in machine learning techniques, computing infrastructure, and large-scale data availability has elevated artificial intelligence (AI) as a powerful catalyst for change in the healthcare sector (Rajpurkar, 2022; Alpaydin, 2020; Brynjolfsson & McAfee, 2014). Preliminary AI practices relied primarily on logic-based frameworks and rules (Russell & Norvig, 2010; McCorduck, 2004). In contrast, recent developments in deep learning and neural network architectures have enabled AI systems to perform specific medical tasks with speed and accuracy that can rival or surpass human performance (LeCun, Bengio, & Hinton, 2015). By automating routine processes and optimizing resource allocation and scheduling, AI now plays a vital role in supporting clinical decision-making, diagnostic services, individualized treatment, and hospital administration (DuBois, 2019; Davenport, 2018; Wang & Preininger, 2019). Furthermore, AI-driven innovations have improved diagnostic precision in radiology and pathology and facilitated the expansion of telemedicine, remote patient monitoring, and virtual care, significantly transforming interactions between patients and healthcare providers (Kaur et al., 2020; Cortez, 2018).

History of AI in Healthcare

The development of AI in healthcare began with early ideas of machine intelligence in the 1950s, including Alan Turing's question on machine thinking and the formal introduction of AI at the Dartmouth Conference in 1956. During the 1970s and 1980s, healthcare AI progressed through rule-based expert systems such as MYCIN and INTERNIST-I, although their use was constrained by limited flexibility and adaptability (Tafirenyika, 2023). After the "AI winter," progress accelerated from the 1990s onward due to improvements in computing power and data storage. Since the 2010s, machine learning and deep learning have enabled data-driven applications in medical imaging, disease prediction, and clinical decision support, with growing emphasis on ethical and explainable AI (Tafirenyika, 2023). Following the COVID-19 outbreak, AI adoption in healthcare increased rapidly, supporting screening, diagnosis, treatment planning, drug discovery, and predictive risk assessment (Loh, 2018).

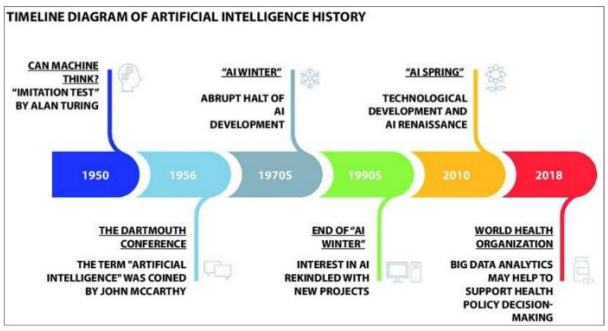

Figure 1: Timeline Diagram showing the History of Artificial Intelligence in Healthcare

Source: Tafirenyika, S. (2023). AI in healthcare: Predictive modeling, explainability and clinical impact. *World Journal of Advanced Research and Reviews, 19*(3), 1700–1718.

A Review of the Role of Artificial Intelligence in Healthcare

advanced smart healthcare by improving diagnostic accuracy, personalized treatment, and clinical efficiency while supporting data-driven decision-making and automating routine clinical tasks (Bajwa et al., 2021; Gao et al., 2024; Olawade et al., 2024). AI plays a central role across healthcare functions by enhancing medical imaging and diagnostics, enabling virtual care and remote monitoring, improving patient engagement and rehabilitation, streamlining administrative processes, and accelerating medical research and drug discovery (Tafirenyika, 2023) (Figure 2).

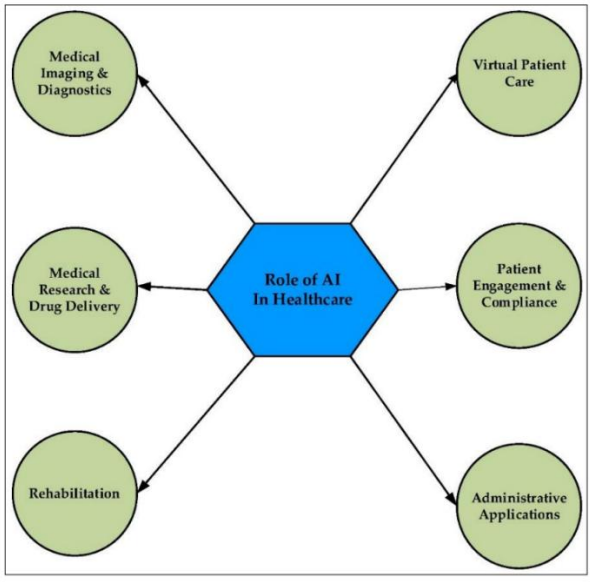

Figure 2: A Review of the Role of Artificial Intelligence in Healthcare

Source: Tafirenyika, S. (2023). AI in healthcare: Predictive modeling, explainability and clinical impact. *World Journal of Advanced Research and Reviews, 19*(3), 1700–1718.

Healthcare investment in artificial intelligence is rapidly expanding, with spending increasing from $4.4 billion in 2022 to over $6.2 billion in 2023 and projected to reach $13.8 billion by 2027, growing at a CAGR of nearly 29% (Jain, 2023). Surveys indicate that over 96% of healthcare organizations recognize AI's potential to improve patient engagement, health outcomes, and operational and financial performance. AI applications now span drug discovery, diagnostics, robotic surgery, and data management, virtual nursing, and personalized medicine, enhancing efficiency and quality of care (Rajpurkar et al., 2022; Tafirenyika, 2023) (Figure 3). AI also strengthens clinical decision-making, accelerates drug development, and improves diagnostic accuracy and treatment outcomes (Davenport, 2018; LeCun et al., 2015). However, ethical governance, data privacy, and explainable AI remain critical to building trust and ensuring responsible adoption in healthcare (Brynjolfsson & McAfee, 2014; Cortez, 2018).

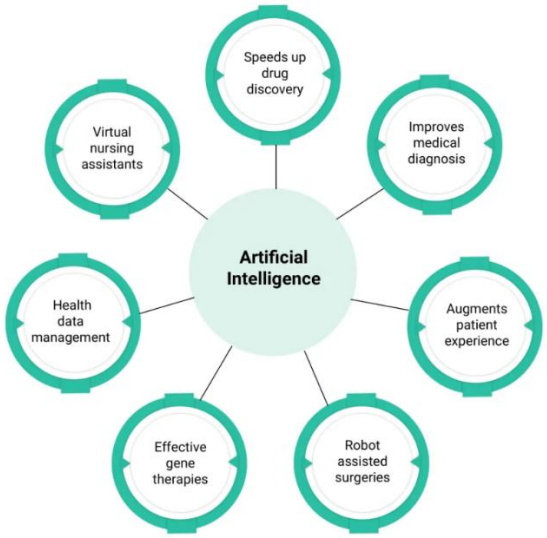

Figure 3: The Growing Number of Applications of AI in Healthcare in the Future

Source: Jain, R. (2023). *The future of healthcare AI applications in safe decision-making.* Asahi Technologies. https://www.asahitechnologies.com/blog/the-future-of-healthcare-ai/

Literature Review

Artificial intelligence has increasingly transformed hospital management by improving operational efficiency, managerial decision-making, and resource allocation through automation and data-driven analytics (Belciug, 2025; Alves et al., 2024; Kumar, 2021). AI supports functions such as bed management, staff scheduling, supply chains, electronic health records, and equipment maintenance, contributing to cost reduction and better patient outcomes, though challenges related to data integration and privacy persist (Belciug, 2025; Alves et al., 2024). Adoption is also shaped by ethical concerns, workforce readiness, regulatory gaps, and mixed

physician perceptions regarding job displacement and reliance on AI (Zhou et al., 2025). Scholars emphasize AI's potential to enhance sustainability and efficiency in hospital management while underscoring the need for interdisciplinary training and long-term empirical evaluation (Rathore & Singh, 2025; Ccosi Paucar et al., 2025).

Table 1: Literature Review on Shaping the Future of Healthcare by Examining the Role of Artificial Intelligence in Transforming Hospital Management Practices

Sr. No.	Focus of the Study	Author(s)
1	Examined how artificial intelligence enhances hospital operational efficiency through predictive scheduling, automated resource allocation, and reduced administrative burden.	Davenport, T. H., & Kalakota (2019)
2	Analysed the role of AI-driven hospital information systems in improving managerial decision-making, cost control, and workflow optimization.	Reddy, S., Fox, J., & Purohit (2019)
3	Studied the impact of machine learning and predictive analytics on hospital capacity planning and demand forecasting.	Rajkomar, A., Dean, J., & Kohane (2019)
4	Investigated AI-based decision support systems for hospital administrators, highlighting improvements in strategic planning and performance monitoring.	Topol (2019)
5	Evaluated the effectiveness of AI-enabled dashboards and real-time analytics in reducing operational delays and improving financial outcomes in hospitals.	Krittanawong et al. (2017)
6	Explored how AI-supported hospital management systems contribute to improved quality of care, patient flow, and administrative transparency.	Jiang, Jiang, Zhi, et al. (2017)
7	Analysed the adoption of artificial intelligence in hospital management and identified challenges related to data integration, ethics, and staff training.	Amato, López, Peña-Méndez, et al. (2013)
8	Examined the economic impact of AI adoption in hospital administration, reporting cost reduction, improved efficiency, and better utilization of resources.	Chen, Chen, & Lin (2020)
9	Studied the role of AI and big data analytics in enhancing hospital governance, accountability, and performance evaluation.	Shaban-Nejad, Michalowski, & Buckeridge (2018)
10	Investigated hospital managers' and clinicians' perceptions of AI-based management tools, emphasizing acceptance, trust, and organizational readiness.	Longoni, Bonezzi, & Morewedge (2019)
11	Evaluated how AI-supported clinical and administrative integration improves hospital sustainability and long-term operational resilience.	Secinaro, Calandra, Secinaro, et al. (2021)
12	Proposed an AI-enabled framework for smart hospital management, demonstrating improvements in decision-making accuracy and system responsiveness.	Palan et al.(2020)

Research Gap:

Although AI research in healthcare is extensive, most studies focus on clinical applications, with limited attention to hospital management and administrative practices (Bhagat et al., 2024). Empirical evidence on AI's impact on managerial decision-making, workflow optimization, and operational efficiency remains limited, while organizational and human factors such as employee perceptions, readiness, and resistance are underexplored (Malik et al., 2024). Prior research is largely technology-centric and lacks longitudinal, outcome-based evidence linking AI adoption to sustained hospital performance, cost efficiency, and patient experience. These gaps are especially pronounced in diverse and resource-constrained healthcare settings, highlighting the need for an integrated socio-technical approach to AI in hospital management (Zhou et al., 2025).

Objectives

The precise objectives of the present study are as follows:

To examine the extent and nature of artificial intelligence adoption in hospital management and administrative practices.

To analyse the impact of artificial intelligence on managerial decision-making, workflow efficiency, and resource utilization in hospitals.

To assess the perceptions, readiness, and acceptance of hospital administrators and healthcare professionals toward the use of artificial intelligence in management functions.

Scope of the Study

The scope of this study was limited to examining the role of AI in **hospital management and administrative practices**, with a focus beyond clinical applications. It investigated how AI influences managerial decision-making, workflow efficiency, and resource utilization in hospitals (Bhagat et al., 2024). The study also considered the **organizational and human aspects** of AI adoption by assessing the perceptions and readiness of hospital administrators and healthcare professionals (Zhou et al., 2025). There were investigations for the enhancements in service quality and operational performance that are driven by AI which affects contemporary hospital management (Malik & Solaiman, 2024).

Conceptual Framework

Based on the research gap, this study conceptualizes AI adoption in hospital management as a strategic socio-technical driver influencing hospital performance. AI-enabled management practices (independent variable) enhance managerial decision-making, workflow efficiency, and resource utilization, while organizational and human factors such as perceptions, readiness, and acceptance act as key mediators (Malik & Solaiman, 2024; Bhagat et al., 2024). The framework positions AI as an integrated socio-technical system linking technology, people, and processes to improve operational performance, cost efficiency, and service quality, addressing limitations of purely technology-centric approaches (Zhou et al., 2025).

Figure 4: Conceptual Model Framework

Table 2: Variables and Measurement Scales

Variable Type	Variable	Dimensions / Indicators	Measurement Scale
Independent Variable	Artificial Intelligence Adoption in Hospital Management	AI-based scheduling, decision-support systems, automation of administrative tasks, data analytics usage	5-point Likert scale (1 = Very Low to 5 = Very High)
Mediating Variables	Organizational & Human Factors	Perceived usefulness, perceived ease of use, readiness for AI, acceptance, resistance to change	5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)
Dependent Variables	Managerial Decision-Making Effectiveness	Speed, accuracy, data-driven decisions, predictive capability	5-point Likert scale
	Workflow Efficiency	Process automation, reduced delays, coordination improvement	5-point Likert scale
	Resource Utilization	Staff optimization, bed utilization, cost control	5-point Likert scale
Outcome Variables	Hospital Performance Outcomes	Operational performance, cost efficiency, service quality, patient experience	5-point Likert scale
Control Variables	Hospital Characteristics	Hospital type, size, ownership, years of operation	Nominal / Categorical

Table 2 presents the key constructs of the study and their operationalization. It categorizes variables into independent, mediating, dependent, outcome, and control variables, outlining their respective dimensions and indicators. The table also specifies the measurement scales used, primarily Likert-type scales for perceptual and behavioural variables and nominal or categorical scales for control variables, ensuring clarity, consistency, and suitability for quantitative analysis of AI's role in transforming hospital management practices.

Methodology

This section outlines the research methodology adopted in the study as shown below:

Research Question

Established on the study's objectives, the primary research question framed is as follows:

RQ1: "Do AI-enabled systems in hospital administration and operations have a positive impact on managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality, thereby contributing to shaping the future of healthcare?"

6.2 Research Design

The study employed a quantitative, descriptive, and exploratory research design to examine AI adoption in hospital management. The exploratory design provided initial insights into the extent and nature of AI adoption in hospital administration, while the descriptive design examined the relationships between AI-enabled practices, managerial decision-making, workflow efficiency, resource utilization, and hospital performance outcomes. A sample of 250 respondents was selected using convenience sampling, and primary data were collected through a digitally distributed structured questionnaire using a five-point Likert scale. The design enabled analysis of AI adoption levels and their relationships with managerial decision-making, workflow efficiency, resource utilization, and hospital performance, supported by secondary data from peer-reviewed journals, books, and credible reports.

6.3 Population Sample & Sampling

Population: The study population consisted of hospital administrators, department heads, finance and accounts professionals, IT and health informatics staff, clinical leaders with administrative roles, and policy and quality management personnel.

Sample: A sample of 300 respondents was selected from public, private, trust-based, and corporate hospitals.

Sampling technique: Sample was selected using the convenience sampling technique based on practical considerations of accessibility, time, and resource availability, and was deemed suitable for examining AI adoption in hospital management practices.

6.4 Hypotheses

The following hypothesis was developed for the current investigation:

H_0: *"The use of AI-enabled systems in hospital administration and operations does not have a significant impact on managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality, thereby not contributing to shaping the future of healthcare."*

H_1: *"The use of AI-enabled systems in hospital administration and operations has a significant positive impact on managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality, thereby contributing to shaping the future of healthcare."*

6.5 Statistical Techniques

Data were analysed using percentages and tabular and graphical methods, with multiple regression analysis and ANOVA applied to test the hypotheses. Microsoft Excel was used for data collection and analysis, and pie charts and bar graphs were used for data presentation.

Data Analysis and Interpretation

7.1 Testing of Hypothesis

The hypothesis testing for the present study is as follows:

Table 3: Linear Multivariate Regression Model Summary (N = 250)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.214[a]	0.046	0.038	7.62

Predictors: (Constant), VAR (AI-enabled systems in hospital administration and operations)

Dependent Variable: VAR (Managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality)

Table 3 shows that AI-enabled systems in hospital administration have a positive relationship with managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality. The regression results indicate a modest but meaningful association ($R = 0.214$), with AI explaining about 4.6% of the variance in hospital performance outcomes ($R^2 = 0.046$; Adjusted $R^2 = 0.038$). The standard error of 7.62 indicates that actual hospital performance outcomes deviate moderately from predicted values, reflecting an acceptable level of prediction accuracy for behavioural and organisational research. The model demonstrates acceptable predictive accuracy, suggesting that AI-enabled hospital management practices contribute positively to key administrative and operational performance indicators.

Table 4: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	872.45	5	174.49	3.01	0.011
Residual	13,916.30	244	57.05		
Total	14,788.75	249			

Table 4 shows that the regression model is statistically significant ($F = 3.01$, $p = 0.011 < 0.05$), indicating that AI-enabled systems collectively explain a significant portion of variance in hospital performance outcomes. The ANOVA results confirm that the observed relationship is not due to chance, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. Overall, the findings provide empirical evidence that AI-enabled hospital management systems significantly and positively influence managerial decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality.

Analysis based on Questionnaire

Section A: Demographic Profile of the Respondents

Table 5: Demographic Profile of the Respondents

Demographic Variables	Category	Number of Respondents	Percentage (%)
Gender	Male	148	59.20%
	Female	98	39.20%
	Other	4	1.60%
	Total	**250**	**100.00%**
Age (in years)	Below 30	42	16.80%
	30–39	78	31.20%
	40–49	69	27.60%
	50–59	45	18.00%
	60 and above	16	6.40%
	Total	**250**	**100.00%**
Designation	Hospital Administrator	62	24.80%
	Medical Superintendent	38	15.20%
	Department Head	54	21.60%
	Senior Medical Officer	56	22.40%
	IT / Health Informatics Manager	40	16.00%
	Total	**250**	**100.00%**
Type of Hospital	Public (Government)	68	27.20%
	Private	74	29.60%
	Teaching / Academic	42	16.80%
	Corporate / Multi-specialty	46	18.40%
	Trust / Charitable	20	8.00%
	Total	**250**	**100.00%**
Ownership of Hospital	Central Government	32	12.80%
	State Government	36	14.40%
	Private (Individual / Partnership)	71	28.40%
	Corporate Group	66	26.40%
	Trust / NGO	45	18.00%
	Total	**250**	**100.00%**
Hospital Size (No. of Beds)	Less than 100	34	13.60%
	100–299	61	24.40%
	300–499	59	23.60%
	500–999	57	22.80%
	1000 and above	39	15.60%
	Total	**250**	**100.00%**
Years of Operation	Less than 5 years	28	11.20%
	5–10 years	49	19.60%
	11–20 years	71	28.40%
	21–30 years	56	22.40%
	More than 30 years	46	18.40%
	Total	**250**	**100.00%**
Work Experience	Less than 5 years	41	16.40%
	5–10 years	64	25.60%
	11–15 years	53	21.20%
	16–20 years	48	19.20%
	More than 20 years	44	17.60%
	Total	**250**	**100.00%**

Table 5 reveals that most respondents were male (59.20%), followed by females (39.20%) and others

(1.60%). A majority belonged to the 30–39 age group (31.20%), followed by 40–49 years (27.60%) and 50–59 years (18.00%), reflecting a predominantly mid-career workforce. Hospital administrators formed the largest designation group (24.80%), followed by senior medical officers (22.40%) and department heads (21.60%). Private hospitals constituted the highest share of institutions (29.60%), followed by public hospitals (27.20%) and corporate multi-specialty hospitals (18.40%). In terms of ownership, privately owned hospitals (28.40%) and corporate groups (26.40%) were more represented than government and trust-run hospitals. Medium-sized hospitals with 100–299 beds (24.40%) and 300–499 beds (23.60%) dominated the sample. Most hospitals had been operating for 11–20 years (28.40%) and 21–30 years (22.40%). Regarding work experience, respondents with 5–10 years (25.60%) and 11–15 years (21.20%) formed the largest groups, indicating a well-experienced sample for examining AI adoption in hospital management.

Section B: Artificial Intelligence Adoption in Hospital Management

Q. 6. To what extent has your hospital adopted AI-enabled systems in administrative and operational management?

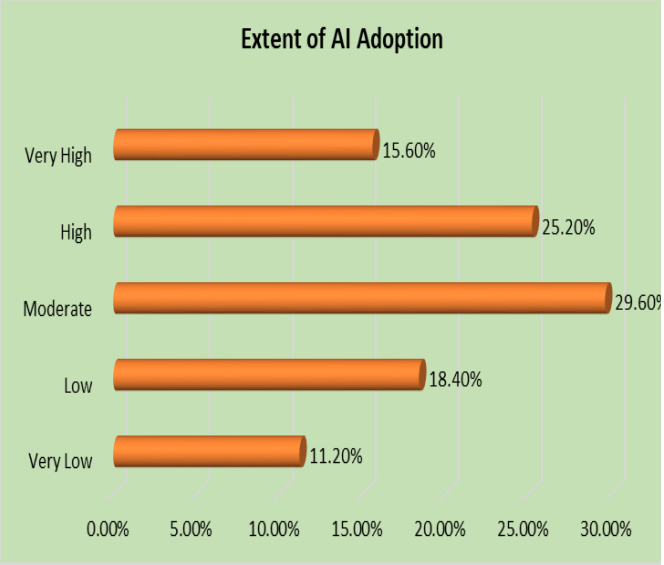

Figure 5: Extent of AI Adoption

Figure 5 indicates that AI adoption in hospital management was mainly moderate (29.60%), followed by high (25.20%) and very high levels (15.60%). However, a notable share of respondents reported low (18.40%) and very low adoption (11.20%), reflecting variability in AI integration across hospitals.

Section C: Organizational & Human Factors

Q. 7. Employees in my hospital are adequately trained and supportive of using AI-enabled systems.

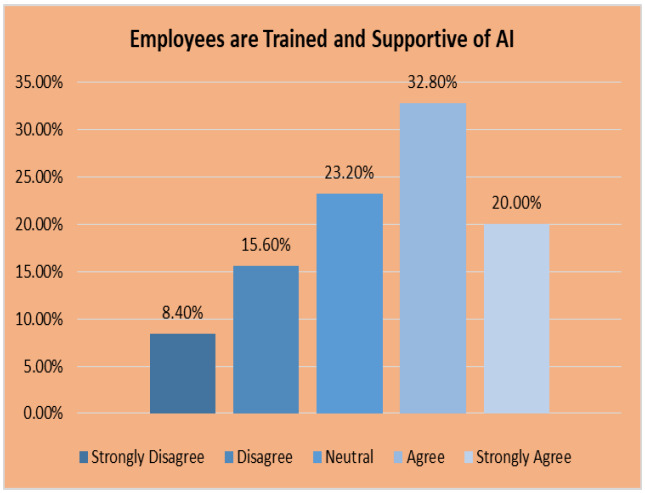

Figure 6: Employees are Trained and Supportive of AI

Figure 6 indicates generally favourable organizational and human factors toward AI adoption, with 52.8% of respondents agreeing or strongly agreeing that employees were trained and supportive, 23.2% remaining neutral, and 24% expressing disagreement, reflecting mixed levels of readiness and support.

Section D: Managerial Decision-Making Effectiveness

Q. 8. How effective are AI-enabled systems in improving managerial decision-making in your hospital?

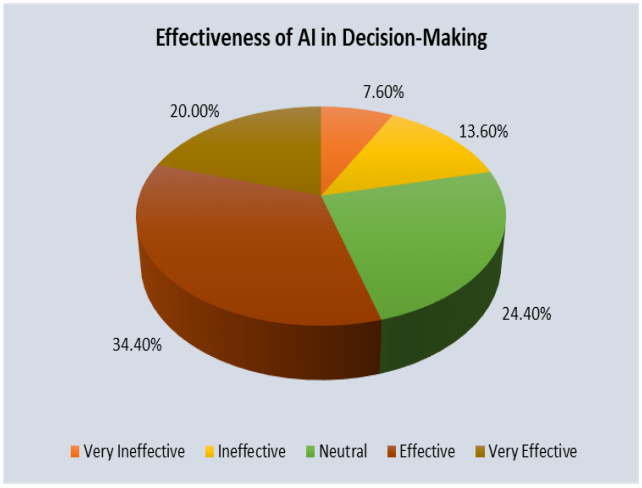

Figure 7: Effectiveness of AI in Decision-Making

Figure 7 indicates that AI positively influenced managerial decision-making, with 34.40% rating it effective and 20.00% very effective. In contrast, 24.4% of respondents expressed neutrality, while 13.6% rated it as ineffective and 7.6% as very ineffective, indicating differing views.

Section E: Workflow Efficiency

Q. 9. To what extent has workflow efficiency changed due to the use of AI-enabled systems in hospital operations?

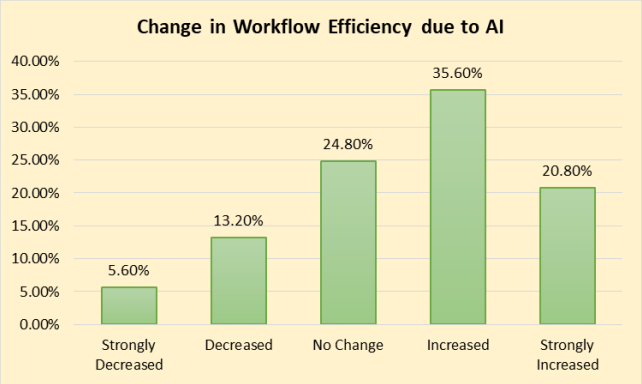

Figure 8: Change in Workflow Efficiency due to AI

Figure 8 shows that workflow efficiency generally improved with AI adoption, as 35.60% reported increased and 20.80% strongly increased efficiency. In contrast, 24.80% observed no change, while 13.20% and 5.60% reported decreased and strongly decreased efficiency, indicating mixed operational effects.

Findings

The study findings showed that a majority of respondents (about 54.40%–56.40%) perceived AI-enabled systems as having a positive and statistically significant impact on managerial decision-making, workflow efficiency, and resource utilization, leading to the acceptance of the alternative hypothesis. Regression results further confirmed a positive relationship between AI-enabled hospital management practices and overall hospital performance. Most respondents were mid-career professionals with over five years of experience, providing informed perspectives on AI adoption. Around 70.40% reported moderate to very high levels of AI integration, while 29.60% indicated low adoption, reflecting variability across hospitals. Organizational and human factors were generally favourable, with 52.80% agreeing that employees were trained and supportive, despite some neutrality and resistance. AI was perceived to improve decision-making effectiveness (54.40%), workflow efficiency (56.40%), and resource utilization (55.20%) for a majority of respondents. Overall hospital performance improved for most hospitals, confirming that AI-enabled management systems play a key role in enhancing administrative effectiveness and operational performance and in shaping the future of healthcare delivery.

On the basis of objectives, AI adoption in hospital management is increasing, with 70.4% reporting moderate to very high usage. It improved managerial and operational processes, with 54.4% noting effective decision-making, 56.4% better workflow efficiency, and 55.2% enhanced resource utilization. Employee readiness was generally positive, with 52.8% acknowledging staff training, while 24% disagreed and 23.2% remained neutral. Hospital performance showed notable improvement, with 50% of respondents reporting high to very high gains and 28.4% indicating moderate progress. More than half observed positive results across AI adoption, organizational support, and performance, while 50–56% highlighted strategic enhancements, emphasizing AI's growing role in healthcare transformation.

CONCLUSION

Artificial intelligence (AI) has emerged as a key driver of transformation in healthcare management, enhancing administrative decision-making, operational efficiency, and resource optimization. Based on the findings of the study, it can be concluded that AI-enabled systems have emerged as a significant driver of transformation in hospital administration and operations. A majority of hospital management professionals consistently reported positive outcomes across key managerial and operational dimensions, including decision-making, workflow efficiency, resource utilization, cost efficiency, and service quality.

The demographic composition dominated by mid-career and experienced hospital management professionals reflected informed, experience-based, and practice-oriented perspectives. The level of AI adoption was found to be predominantly moderate to high, indicating that AI integration is gaining momentum across hospitals. Organizational readiness and human factors were generally positive, with many professionals noting employee training and institutional support for AI systems. However, neutral and negative perceptions indicate the need for targeted capacity-building, change management, and continuous skill development to ensure effective AI adoption. The study concludes that AI-enabled hospital management systems are increasingly strategic, enhancing efficiency, service quality, and operational performance. Success depends on aligning technological adoption with human and organizational readiness for sustainable, effective transformation..

REFERENCES

1. Alpaydin, E. (2020). Introduction to machine learning (4th Ed.). MIT Press.
2. Alves, M., Seringa, J., Silvestre, T., & Magalhães, T. (2024). Use of artificial intelligence tools in supporting decision-making in hospital management. BMC Health Services Research. https://doi.org/10.1186/s12913-024-11602-y
3. Amato, F., López, A., Peña-Méndez, E. M., Vaňhara, P., Hampl, A., & Havel, J. (2013). Artificial neural networks in medical diagnosis. Journal of Applied Biomedicine, 11(2), 47–58. https://doi.org/10.2478/v10136-012-0031-x
4. Bajwa, J., Munir, U., Nori, A., & Williams, B. (2021). Artificial intelligence in healthcare: Transforming the practice of medicine. Future Healthcare Journal, 8(2), e188–e194.
5. Belciug, S. (2025). The hospital manager's guide to artificial intelligence: Concepts, methods, and techniques. Intelligent Systems Reference Library. Springer. https://doi.org/10.1007/978-3-031-80314-7
6. Bhagat, S. V., & Kanyal, D. (2024). Navigating the future: The transformative impact of artificial intelligence on hospital management: A comprehensive review. Cureus, 16(2), e54518.

https://doi.org/10.7759/cureus.54518
7. Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. W. W. Norton & Company.
8. Ccosi Paucar, E. W., Ccosi Paucar, H. Z., Ccosi Paucar, D. R., Ccosi Paucar, G. V., & Medina Sotelo, C. G. (2025). Artificial intelligence as an innovation tool in hospital management: A study based on the SDGs. Journal of Lifestyle and SDGs Review. https://doi.org/10.37497/sdgs.v12i1.4089
9. Chen, M., Chen, Y., & Lin, H. (2020). Artificial intelligence in healthcare: An essential guide for health leaders. Healthcare Management Review. https://doi.org/10.1097/HMR.0000000000000288
10. Cortez, N. (2018). Digital health: Scaling healthcare to the world (pp. 249–269). Springer.
11. Davenport, T. H. (2018). The AI advantage: How to put the artificial intelligence revolution to work. MIT Press.
12. Davenport, T. H., & Kalakota, R. (2019). The potential for artificial intelligence in healthcare. Future Healthcare Journal, 6(2), 94–98. https://doi.org/10.7861/fhj.2019-0015
13. DuBois, K. N. (2019). Deep medicine: how artificial intelligence can make healthcare human again. Perspectives on Science and Christian Faith, 71(3), 199-201.
14. Gao, X., He, P., Zhou, Y., & Qin, X. (2024). Artificial intelligence applications in smart healthcare: A survey. Future Internet, 16(8), 308.
15. Jiang, F., Jiang, Y., Zhi, H., Dong, Y., Li, H., Ma, S., Wang, Y., Dong, Q., Shen, H., & Wang, Y. (2017). Artificial intelligence in healthcare: Past, present and future. Stroke and Vascular Neurology, 2(4), 230–243. https://doi.org/10.1136/svn-2017-000101
16. Kaur, S., Singla, J., Nkenyereye, L., Jha, S., Prashar, D., Joshi, G. P., El-Sappagh, S., Islam, M. S., & Islam, S. R. (2020). Medical diagnostic systems using artificial intelligence algorithms: Principles and perspectives. IEEE Access, 8, 228049–228069.
17. Krittanawong, C., Zhang, H., Wang, Z., Aydar, M., & Kitai, T. (2017). Artificial intelligence in precision cardiovascular medicine. Journal of the American College of Cardiology, 69(21), 2657–2664. https://doi.org/10.1016/j.jacc.2017.03.571
18. Kumar, D. (2021). Artificial intelligence in hospital management. Bodhi International Journal of Research in Humanities, Arts and Science. https://doi.org/10.13140/RG.2.2.19586.50880
19. LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. Nature, 521(7553), 436–444.
20. Loh, E. (2018). Medicine and the rise of the robots: A qualitative review of recent advances of artificial intelligence in health. BMJ Leader, 2(2), 59–63.
21. Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance to medical artificial intelligence. Journal of Consumer Research, 46(4), 629–650. https://doi.org/10.1093/jcr/ucz013
22. Malik, A., & Solaiman, B. (2024). AI in hospital administration and management: Ethical and legal implications. In Research handbook on health, AI and the law (pp. 20–40). Edward Elgar Publishing. https://doi.org/10.4337/9781802205657.ch02
23. McCorduck, P. (2004). Machines who think: A personal inquiry into the history and prospects of artificial intelligence (2nd Ed.). CRC Press.
24. Olawade, D. B., David-Olawade, A. C., Wada, O. Z., Asaolu, A. J., Adereni, T., & Ling, J. (2024). Artificial intelligence in healthcare delivery: Prospects and pitfalls. Journal of Medical, Surgical and Public Health, 3, 100108.
25. Palan, A., Nadoda, M., & Sajwan, P. (2025). A comprehensive framework for smart hospitals using IoT and artificial intelligence. International Journal of Advanced Research in Computer and Communication Engineering, 14(12). https://doi.org/10.17148/IJARCCE.2025.141204.