

Review of Manpower Management in Healthcare System: Strategies, Challenges, and Innovations

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Background: Hospital manpower management (HRM) is vital for effective healthcare delivery. Unique challenges, such as managing diverse staff, ensuring clear communication, and optimizing resources, complicate HRM. Rising operational costs, workforce shortages, and employee burnout necessitate strategic approaches to manpower management. This review aims to provide a comprehensive understanding of manpower management in hospitals, focusing on identifying core components and discussing innovative strategies to address current challenges, particularly those related to workforce shortages. A literature review was conducted using databases such as PubMed, Scopus, and Google Scholar. Key terms included “hospital manpower management”, “HRM challenges in healthcare”, and “workforce shortages”, selected for their relevance to the core focus of this review. Relevant articles published from 2019 to 2023 were selected for analysis. The review identified core components of manpower management: recruitment and staffing, workforce planning, training and development, performance management, and compensation and benefits. Strategies to address workforce shortages included strategic hiring and enhancing employee engagement. The integration of technology and ongoing training emerged as critical for maintaining high-quality patient care. Effective manpower management is essential for the sustainability of healthcare systems. This review highlighted the importance of innovative HRM strategies to tackle workforce shortages and improve employee satisfaction. By focusing on comprehensive HRM practices, healthcare organizations could enhance workforce efficiency and provide better patient care. Future research should explore the long-term impacts of these strategies on healthcare.

Keywords: hospital manpower management, workforce shortages, HRM challenges in healthcare, workforce planning

Introduction

Hospital manpower management (HRM) is one of the most challenging areas in the healthcare sector globally. The healthcare organization is one of the most complex and dynamic organizations in society, therefore, complete management is essential to achieve excellence and efficiency. Some of the interrelated variables that characterize hospital manpower management include increasing healthcare costs, the burden of chronic diseases, and the need for seamless integration of sophisticated technologies.¹ Conventional management approaches may not be able to support the demands of today's healthcare landscape.² It is becoming more and more important for hospitals' manpower management to adopt creative solutions as they work to provide the best treatment possible while overcoming these obstacles. This would require effective management of the varied elements such as organizational structure, patient care delivery, operational processes, financial administration, human resource considerations, information technology infrastructure, facility management, environmental factors, and resultant outcomes.³ Therefore, much attention has been required to Human resource management challenges related to workforce shortages. In addition to this, Human resource management calibrates the strategic management of people to their performance and productivity toward the achievement of an organization's goal.⁴ Manpower Management (MPM) is one of the most important parts of HRM within the healthcare sector. It comprises staff performance concerning the care, safety, and satisfaction of patients and the cost efficiency towards them. MPM manages individual and organizational growth. It deals with job analysis, workforce utilization,

performance measurement, reward systems, professional development, and workforce maintenance of the whole process.^{4,5} Despite its importance, only a few studies have been reported to assess the impact of MPM on healthcare quality, thus slowing down progress and healthcare organizational effectiveness.⁵ In addition to this, HR managers in the healthcare industry have particular challenges in considering rising cost demands and maintaining a safe workplace for both employees and patients.⁶ Hence, the current review article provides a comprehensive understanding of hospital manpower management and its core components. In addition to this manpower management strategies, challenges, and innovations to guide future healthcare industry developments were also elucidated. A thorough literature search was conducted using databases such as PubMed and Google Scholar. The search included relevant keywords related to hospital manpower management, HRM challenges in healthcare, and workforce shortages. We identified 56 articles that met the inclusion criteria and were analysed to provide a balanced overview of the current understanding of the topic.

Historical Perspective on Hospital Manpower Management

Historical eras have had an impact on the development of human resource management (HRM). The eras comprised of the Industrial Revolution, Scientific Management, Trade Union Movement, Behavioural Science, Social Responsibility, Human Relations, Systems, and Contingency Approach are identified. The development of Human Resource Management can be associated with various historical phases that transformed the field into its current form such as early philosophy, the Efficiency & productivity movement, welfarism & industrial psychology, human relations, and modern time.^{7,8} The concept of “human manpower management” has gained widespread usage during the past ten to fifteen years. The field of work was formerly referred to as “personnel administration”. The main reason for the name changes over time was the economic and social activity development. One of these modifications was the adoption of an asset-based perspective towards workers. The term comprises talent management, organizational management, personnel management, and other facts of workforce management.

Employee consciousness increased over time, and trade unions were formed as a means of organizing collective action. Despite initial legal difficulties, early labour movements changed the dynamic between employers and employees. Workplace rights and working conditions were enhanced by labour laws, which were influenced by socialist concepts, democratic values, and the rise of welfare states.⁹ Global Hospital workforce management from 2023–2030 (Research, Hospital workforce management software market to exhibit a remarkable CAGR of 13.4% by 2030, size, share, trends, key drivers, demand, Opportunity Analysis and competitive outlook 2024 shown in Figure 1.

A historical perspective on the management of hospital manpower provides essential insights into the challenges and strategies that have characterized their respective healthcare environments. Hospital management innovation has become

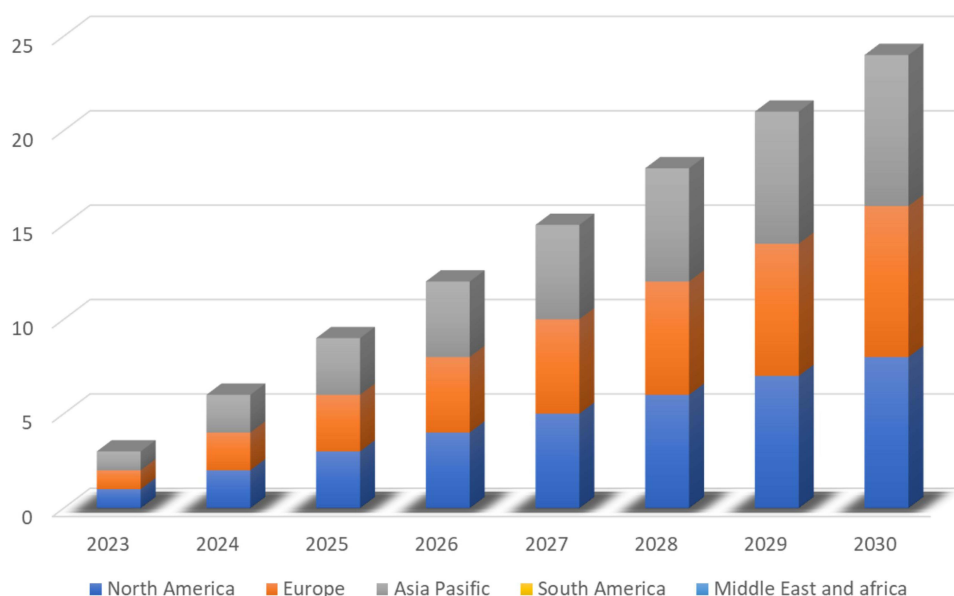


Figure 1 Global Hospital Workforce Management Software Market is expected to Account for USD 4,689,356 Thousands by 2030.

essential to improving efficiency, improving patient care, and increasing overall healthcare results in the quickly changing healthcare environment. Hospital settings require proactive management methods due to the constantly changing nature of healthcare concerns and the continuous improvements in technology.^{4,10}

Core Components of Manpower Management in Hospitals

The core element of manpower management in hospitals encompasses Recruitment and Staffing, Workforce Planning and Scheduling, Training and Development, Performance Management and Appraisal, compensation and benefits⁸ represented in Figure 2.

Recruitment and Staffing

Employees who work directly with people, handling and producing medical equipment and medications, providing treatment and care, etc., are a part of the healthcare industry and hospital organizations. Finding and recruiting qualified candidates is crucial for various public service areas. The HR department of the companies must fully carry out their obligations. Given that the HR department handles hiring clinical and non-clinical personnel, it is imperative to guarantee that the staff members receive comprehensive training from the professionals.¹¹

Workforce Planning and Scheduling

The primary responsibility of manpower management is manpower planning. The first step is to analyse the hospital's goals and future needs. It establishes the organizational structure as well as the roles that need to be filled and the necessary skills for them. Planning for promotions falls under short-term manpower planning. The most crucial planning is long-term planning, which is done five or ten years in advance.¹² The fundamental issues of goals, organizational structure, and employee age distribution must be taken into account in manpower planning. Consequently, in order to understand the demands of health workers both today and in the future, personnel planning is crucial. According to research, the migration patterns of healthcare workers closely resemble those of other professionals. Since all nations have a similar internal labour force mobility to urban areas. Increased labour mobility may result in further imbalances,

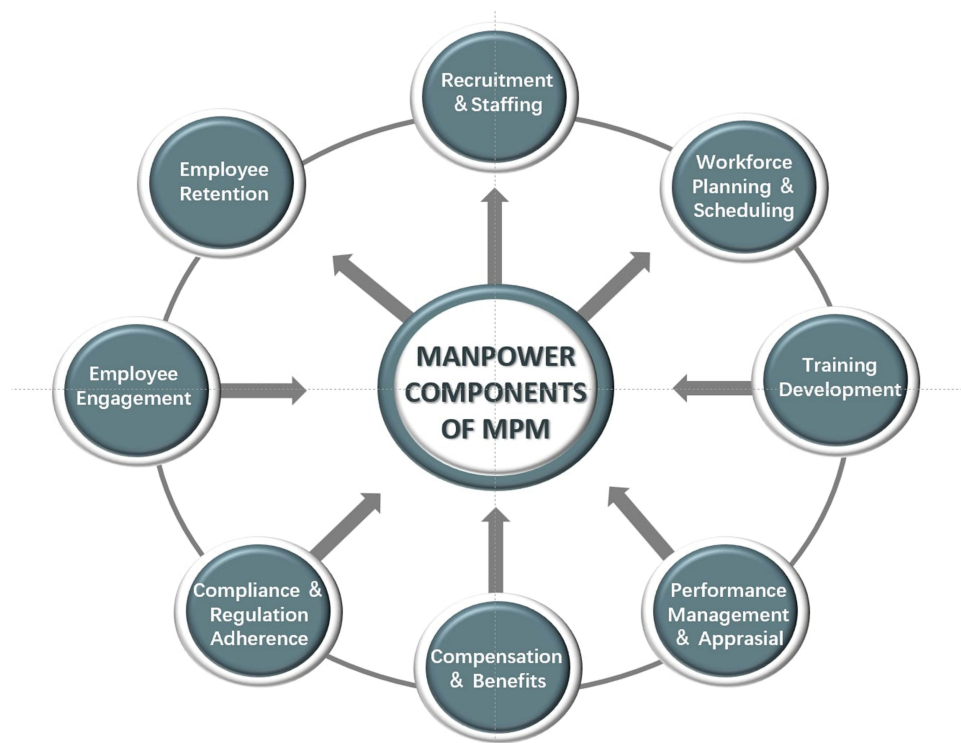


Figure 2 Components of Manpower Management in the healthcare system.

necessitating greater workforce planning, consideration of issues related to compensation and benefits, and enhanced workforce management in general.¹³

Training and Development

The other critical consideration is the training of the workforce. Human resources professionals should be well endowed with the levels of competence and training of the health workforce when making decisions. As one realizes that the workforce understands and meets a country's current and future needs, there is a need for new opportunities in the education and in-service training of healthcare workers. Without an adequate and competent workforce that is well-trained, there cannot be an excellent healthcare system.¹⁴

Performance Management and Appraisal

Generally, there are many ways of performance appraisal. There are three types of major appraisals: confidential appraisal in which the appraisee is not told about the outcome of the assessment and strengths and weaknesses of the individual. Employees do not participate in the process of evaluation.¹⁵ Semi-open and semi-secret appraisal: the aspect of performance evaluation is made public first and then kept secret. For example, the appraisees fill out an assessment form, which is then assessed by their superior and returned for signature. The results of their performance would not be communicated to the subordinates. Lastly, in the open evaluation method, the appraisees are thoroughly transparent throughout the process, and the employees are aware of their strengths and shortcomings.¹⁶ Self-awareness would be revealed and instigated through this system. The performance of employees in a modern workplace may be said to have been assessed based on his or her good contribution to the achievement of the organization's objectives, and hence company strategies and goals are said to be attached to performance evaluation.^{14,16}

Compensation and Benefits

When it comes to encouraging employees, enhancing their interpersonal and communication skills, interacting with them, and addressing and elevating issues, HRM is crucial. Indeed, they serve as a liaison between the workforce and management. Effective ways to assist are regular evaluations, reviews, resolving flaws, and selecting standards for employee awards and appraisals. Design and development of more straightforward standards are required by HRM. HRM should ignore issues like shortages in the workforce, poor communication, and a lack of teamwork to provide high-quality healthcare.⁶

Manpower Management Strategies

Healthcare providers must implement more strategic and innovative approaches to employee retention in this highly competitive job market. Several manpower management strategies (Figure 3) were reported that improve the manpower



Figure 3 Strategies of Manpower Management in the Healthcare System.

workforce such as Leadership & Human Resource Management, Employee Engagement, Retention Strategies, Diversity & Inclusion in the Healthcare Workforce, Talent Management, and Succession Planning.^{2,12}

Leadership and Human Resource Management

Leadership is one of the most significant and extensively researched aspects of human behaviour in recent years. There are five leadership styles were described democratic, laissez-faire, charismatic, bureaucratic, and autocratic. The majority of leadership theories were developed to help businesses accomplish both their goals and their organizational objectives.¹⁷ The theories emphasize characteristics, governing behaviours, and environmental factors. Transformational leadership is a relatively new development in leadership styles and is best suited for the modern day. The situational, behavioural, and characteristic approaches are integrated into transformational leadership.¹²

Employee Engagement and Retention Strategies

Retention rates may also be impacted by the demanding nature of the healthcare industry, marked by prolonged working hours and emotional strain. Furthermore, possibilities for career progression and management support are important factors in keeping employees on board. To achieve work-life balance, flexible schedule options, competitive pay, benefits, friendly and encouraging work environment are all recommended practices for medical staff retention.¹⁸ Creating a welcoming and encouraging work environment, giving competitive pay and benefits, and providing flexible scheduling options to enhance work-life balance are all examples of best practices for healthcare staff retention. Other strategies to improve work happiness and loyalty include implementing mentorship programs, ongoing training, and professional development opportunities. Issues can be recognized and resolved before they result in turnover with regular feedback and open lines of communication between employees and management.²

Diversity and Inclusion in Healthcare Workforce

When addressing the delivery of high-quality healthcare services, diversity and inclusion are two essential components that frequently come up. Although the phrases “diversity” and “inclusion” have been used extensively in many different contexts, the healthcare industry has only just begun to explore them. To provide the best treatment possible to our various patient populations, the healthcare staff must reflect the diversity of our communities in terms of race/ethnicity, gender, sexual orientation, immigrant status, physical handicap status, and socioeconomic status. Maintaining employee engagement and enhancing patient satisfaction requires diversity and inclusion.^{19,20}

Talent Management and Succession Planning

The foundation of talent management is the idea that “talent” must be recognized, nurtured, and managed uniquely. This is achieved through the potential-based hiring and placement of staff, which directly affects organizational performance.²¹ One popular method for methodically identifying talent is a two-dimensional matrix called the nine-box grid. Future leaders’ development programs are implemented and talent conditions are mapped using the Nine Box Talent Matrix. A person in the “Star talent box” has excellent performance and potential and is qualified for promotion or retention. Succession planning defines as the process of assigning qualified applicants to managing or leadership roles. A single person cannot always be the leader of an organization. Thus, in order to prevent conflict, leadership transfers must be handled carefully.^{22,23}

Challenges in Hospital Manpower Management

The most valuable resource in the healthcare industry is its workforce. Yet, it also confronts several obstacles which include Workforce Shortages and High Turnover Rates, Balancing Workload and Preventing Burnout, Regulatory and Compliance Issues, Managing Interdisciplinary Teams, and the Impact of Technological Changes on Workforce Needs.

Workforce Shortages and High Turnover Rates

Severe turnover of nurses and doctors causes great financial as well as non-financial costs to healthcare organizations. Several studies have found a link between nurse staff turnover with patient outcomes, including the health of the patients,

long stay in hospital, quality of treatment, etc.²⁴ A high rate of staff turnover not only might lead to a financial crisis but also low job satisfaction which usually results in the quitting of employees. This process also causes a loss of skills and experience in the profession. It was estimated that in America, the cost of recruiting a nurse may be anywhere from 10,000 dollars to 88,000 dollars. The cost required for hiring physicians can be an estimated amount ranging from 88,000 dollars to 1,000,000 dollars per physician vacancy²⁵.

Balancing Workload and Preventing Burnout

Workload management continues to be one of the crucial challenges in healthcare; because of its influence, health professionals are affected not only in their physical, mental, and sociological well-being but also by reduced job satisfaction. Burnout has far-reaching effects that impact patients beyond healthcare providers.²⁶ Several studies indicate that the ratio of healthcare workers to patients is unreliable in assessing staffing levels or workload. This is because these indicators fail to take into consideration the differences in patient needs and training and experience levels of healthcare workers. This may lead to lower quality of service, more medical errors, and less patient satisfaction. It can also result in low productivity, absenteeism, problems with mental and physical health, impaired social relationships, and reduced job satisfaction among healthcare workers.²⁷

Regulatory and Compliance Issues

A priority of health systems around the world is to deliver quality health care. In light of the intricacy and the need of contemporary health care systems, there is a rising need for services that are not only quality assurance but also appeal to ethical and legal principles. Usually, an organization does not have an ideal understanding of the regulatory expectations imposed on it. As such, it is significant that they understand what regulations apply to their organizations and what are the implications of those regulations. The major areas of concern in regulation are the structural, procedural, and outcome-related elements of services.²⁸

Managing Interdisciplinary Teams

Teams are commonly formed in the healthcare industry to handle complex clinical concerns by offering novel solutions. The Organisation for Economic Co-operation and Development (OECD) has conducted an analysis indicates that in the coming years, the capacity to establish clear goals for collaboration in multidisciplinary teams, discover fresh prospects, and define solutions for intricate issues will become increasingly crucial.²⁹ Research indicates that implementing interdisciplinary teams promotes cooperation and decreases the frequency of complications in internal medicine departments. Therefore, the team's decisions and activities should successfully resolve multifaceted difficulties, which serve as the underpinning logic.³⁰

Impact of Technological Changes on Workforce Needs

Technology can be utilized in order to enhance patients' health, quality of life as well as their general wellness. Incorporation of technology into healthcare can assist in raising standards regarding health and the services that are provided for patients. Health information technology offers plenty of opportunities that can be used to improve and transform healthcare such as decreases in human error, improvement of clinical outcomes, coordination of care being facilitated, improved practice efficiencies as well as long-term data tracking. Besides, it can also facilitate an appropriate use of technological tools that may create a safe and highly productive workplace for medical practitioners.^{3,31}

Innovations in Hospital Manpower Management

One of the company outcomes that has been associated with different practices of HRM is organizational innovation. According to the healthcare industry, innovation is "those changes that promote healthcare workers to focus on the patient by enabling them to work more efficiently, effectively, quickly, and affordably".²³ There are several obscurities noticed, including the Use of Artificial Intelligence in workforce planning, Telehealth, and Remote workforce management, Data-driven decision-making in Human Resources, Flexible work arrangements and Job design, Continuous learning, and Professional development.

Use of Artificial Intelligence in Workforce Planning

AI systems in health organizations will fundamentally alter the patients' experience. The World Economic Forum estimated that by 2025, approximately 85 million jobs might get disrupted, and at the same time, 97 million additional employments could emerge. Organizations are changing their way of recruitment, workforce management, and engagement due to the integration of artificial intelligence into HRM functions.³² Most of the companies face a shortage of nurses, staff, health workers, and doctors. Consequently, due to such shortages, workload and burnout of employees take place.²⁶ Artificial intelligence is granting the ability to robots to make more effective decisions based on available data sets and behavioural patterns as compared to those made by health workers. It is expected that AI will have a profoundly multilayered effect on health services, both in potential benefits and the challenges to be overcome in the years ahead. AI ensures technology complements, not leads, the crucial work of human therapists and provides the appropriate training and support.³³

Telehealth and Remote Workforce Management

Telemedicine is a method of practicing medicine where communication technologies enable patient-provider or provider-to-provider contact. Clinical information may be transferred asynchronously or synchronously, often with real-time two-way video communication. Beyond communication, telemedicine might include health information gathered remotely from medical equipment or personal mobile devices. This information may serve to track, monitor, or alter patients' behaviour.³⁴ Medical devices at the patient's bedside ventilators, IV pumps, and patient monitors automatically send data to systems called patient data management systems. The data is then reorganized and summarized to help healthcare providers interpret it. Recent advances in integration technology have enabled integrations with clinical decision support and the patient's electronic medical record.³⁵

Data-Driven Decision-Making in Human Resources

Data-driven decision-making evaluates all available sources of information to comprehend problems with health services, create remedies, and conduct follow-ups. Data from the district-level Health Management Information System are underutilized, but they have a lot of potential when it comes to the six essential elements of the health system: personnel, medical supplies, governance, information, and finance.³⁶ Healthcare professionals can enhance patient outcomes and lower the likelihood of complications by creating individual therapies that are informed by patient data. Additionally, doctors can find areas where patient care can be improved, leading to better results and higher patient satisfaction, by examining data on medication adherence and preventative care.²¹

Flexible Work Arrangements and Job Design

Flexible work arrangements, or FWAs, refer to organizational policies and practices that give workers some degree of choice and flexibility in when, where, and/or how much they work over and above the fixed regular hours. Such an arrangement will keep the employers and the employees benefiting at the same time. The employees have to agree on the when, where, and how of employment in order to meet the needs of the organizational goal. Previous studies have documented that FWA avails employees of an opportunity to make some adjustments in their work design to help influence organizational flexibility, work-life balance, and performance. Also, Healthcare organizations around the world today are adopting FWAs as policies that reduce the spread of infections, improve performance, reduce burnout, and improve productivity performance.³⁷

Continuous Learning and Professional Development

Continuous professional development (CPD) is a new concept that adds other significant elements including Continuous Education. Because CPD is learner-driven, it enables professional training to meet each person's requirements. CPD builds on a wider range of theories and employs a wider range of instructional techniques than Continuous Education. It is entirely focused on encouraging effective practice. Additionally, it incorporates instructional design and content for specific practitioners within the practice context.³⁸

Case Studies in Effective Manpower Management

The quick adoption of digital technology in the workplace is changing how human resources are used by organizations. The current pandemic demonstrated how technology may enhance healthcare by solving numerous problems. The pandemic has altered the work patterns, work-life balance, and physical, mental, and financial well-being of healthcare professionals. The terrible deaths of health professionals have left many of those who survived working in non-healthcare industries because they were suffering from mental illness.⁶ Talent management is necessary to ensure that there are enough skilled and motivated healthcare workers in India due to the country's scarcity of healthcare staff. This chapter covers issues about the pandemic's effect on the evolving healthcare landscape, challenges in retaining a trained workforce, and the growing use of digital technology to support HR managers in developing comprehensive talent management in the upcoming year.¹

Successful Recruitment and Retention Programs

In one US study, 22% of practitioners left a primary care cancer prevention trial after consenting to participate for five months. The MRC General Practice Research Framework (MRC-GPRF), was established in 1973 for an MRC-funded trial of a therapy for moderate hypertension. It was the first primary care research network in the United Kingdom. Effective communication between the practice and researchers, simple techniques for gathering data, and remuneration upon reaching predetermined goals all seemed to play a significant role in keeping procedures in place. It is necessary to conduct experimental research to evaluate how well these elements support recruitment and retention.³⁹ The study conducted by Scarbrough et al, 2016 shows various initiatives that target retaining healthcare workers by using the National Health Service Corps. Their study was considered to be the best recruitment method in addition to the Loan Repayment Program and scholarships. The respondents' top preferences, expressed as percentages, were: professional growth (70%), favourable compensation (88%), knowledgeable support staff (59%), and professional support (58%). Although Scarbrough and her colleagues acknowledged the value of professional assistance options in recruiting, they pointed out that these opportunities were not included in the amenities provided in the clinical settings under study.⁴⁰

Innovations in Workforce Training and Development

The combination of the innovation's characteristics, the adopters, and the environment will determine whether it is widely adopted. The innovation must have certain essential characteristics to be adopted, such as a perceived relative advantage, compatibility with accepted needs, values, and norms, simplicity, testability, observability of benefits, and potential for reinvention or adaptation to local conditions. According to Greenhalgh et al, innovation has a better chance of being adopted if it aligns with the organization's current work practices, norms, and values. If those who support it are more numerous and positioned strategically than its detractors.³⁸

Best Practices in Managing Healthcare Teams

A patient-centred collaborative approach and concurrent professional development in healthcare are vital due to advancements in the healthcare sector and the worldwide need for high-quality patient care. According to one study, fundamental abilities are needed for entry-level jobs in any business. The top management roles demand intellectual skills, whereas mid-level ones require human knowledge. Studies have indicated that in order to influence the effectiveness and quality of healthcare organizations, efforts to develop leadership should have a strong emphasis on enhancing employee quality and advancing the efficacy of companies' training and development initiatives.⁴¹

Future Trends in Hospital Manpower Management

Technology's rapid growth is anticipated to greatly transform HR practices within the healthcare sector, offering both opportunities and challenges in workforce management. Future trends in hospital workforce management are likely to involve increased reliance on artificial intelligence (AI) for predictive workforce planning, which could improve staffing models by analyzing patient volume trends, seasonal demands, and workforce attrition rates. Emerging roles within the healthcare workforce, such as telemedicine facilitators and digital health coordinators, will support the shift

toward more remote and tech-integrated patient care. Additionally, global trends in healthcare, including the rise of mobile health solutions and international staffing collaborations, may broaden the talent pool but require adapting to diverse regulatory standards and cultural competencies. Preparing for future pandemics will also drive changes in workforce management, with a focus on flexible staffing strategies, cross-training programs, and comprehensive disaster-preparedness frameworks. These efforts will aim to build resilience and adaptability, ensuring that healthcare facilities are equipped to manage sudden surges in demand. Furthermore, advancements in workforce well-being technology, such as mental health apps and digital support systems, could become integral to reducing burnout and enhancing job satisfaction among healthcare workers. By embracing these innovations, hospital manpower management is set to play a crucial role in building a robust, adaptable, and well-supported workforce prepared to face future healthcare challenges.

Impact of Technological Advancements on Workforce Needs

Technological development is the outcome of gradual evolution and innovation. In the fields of science and engineering that has resulted in the formation of new techniques, processes, and systems to enhance human ability and productivity in various sectors. This includes one of the major components of technological breakthroughs, which is the development of AI and automation. That revolutionizes industries by automating tasks while improving human decision-making processes.³⁰ AI and machine learning developments paved the way for intelligent automation systems that could now perform complex cognitive activities earlier reserved for humans. Applications make use of large data sets to analyze, predict, and even automate decisions across varied industry segments like marketing, healthcare, and finance.²⁹

Emerging Roles in Healthcare Workforce

Healthcare professionals are taking on new responsibilities to assist patients in managing their care and navigating the rapidly evolving and more complex healthcare system. The competencies required of healthcare workers and how their roles may change to accomplish these tasks are not conveyed by job titles alone. The most important new role in health and healthcare will be played by knowledgeable, involved, and motivated consumers who actively pursue their desired resilience and states of health. To enhance care and save costs, new team-based care models demand the emergence of new roles and the adjustment of current ones.¹

Preparing for Workforce Challenges in Future Pandemics

Elevating the amount of attention that healthcare leadership pays to pandemic planning and response will require a new global tool to break the cycle of “fear and neglect”. Even when the threat of a pandemic is passed, healthcare executives need to stay involved and dedicated to preparedness. Participants in a new agreement must be specifically called upon, global healthcare leaders remain vigilant in their response to epidemics, and periodical evaluations encourage improved compliance.⁴² Facilitating multidisciplinary cooperation and coherence is the main responsibility of healthcare leaders. In order to prevent future pandemics, multilateral coordination is lacking. What is needed is a cohesive structure that unites all healthcare leaders with their important healthcare institutions and organizations.⁴³

Global Trends in Healthcare Workforce Management

The Syntellis Performance Solutions report from 2022 made clear that Hospital systems in the United States are greatly impacted by the countrywide workforce shortages. These companies battled to overcome staffing gaps, dealt with higher labour expenses, and saw a negative impact on patient care throughout the year.⁶ As per the Future Market Insights (FMI) market analysis report, 10.6% compound annual growth rate (CAGR) is predicted for hospital workforce management (between 2023 and 2033) in the global market. It is anticipated that this projection will support industry market expansion.⁴⁴ Furthermore, the development and integration of new technologies, such as cloud computing and artificial intelligence (AI), is booming in the healthcare workforce management industry. Healthcare facilities can manage multi-care hospitals more effectively due to process automation.⁷

Conclusion

The present evaluation offers an extensive comprehension of hospital manpower management tactics, obstacles, and advancements, including contemporary literature to guide forthcoming advancements in the healthcare sector. Hospitals must keep embracing technology, plan for emerging roles, and be ready for pandemics and other global emergencies. Through this approach, they can maintain their resilience and ensure that their workforce is prepared to handle the constantly evolving demands of the healthcare industry. Innovation in workforce development, flexibility, and ongoing learning will be critical components of hospital manpower management in the future.

Author contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

The authors declare no conflicts of interest in this work.

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