COMPETENCY MAPPING OF HOSPITAL MANAGERS' IN SELECTED HEALTHCARE FACILITIES AND ITS IMPACT ON CURRENT OUTCOMES OF HOSPITAL AND HEALTHCARE MANAGEMENT PROGRAMS

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Abstract: The Indian healthcare industry is experiencing rapid growth encompassing hospitals, medical infrastructure, medical devices, clinical trials, outsourcing, telemedicine, health insurance, and medical equipment. The hospital and healthcare sector in India is currently in a phase of evolving maturity, characterized by the swift emergence of hospital complexes that employ numerous physicians and healthcare personnel. In this context, the need to establish effective methods for assessing personnel with appropriate competencies becomes crucial. Here, "competency" pertains to an individual's possession of requisite abilities or qualities to perform specific functions. Competency-Based Education (CBE) is widely practiced in healthcare management institutes across the United States, yet this concept remains unimplemented in India. This study explores the feasibility of developing and implementing a competency-based education model in healthcare management within the Indian context.

Index terms: Hospital management, Hospital Health care, CBE

I. INTRODUCTION

The Indian healthcare industry encompasses hospitals, medical infrastructure, medical devices, clinical trials, outsourcing, telemedicine, health insurance, and medical equipment. This industry is poised for rapid expansion and is projected to reach a market value of US$ 280 billion by 2020. It stands as one of the most robust and multifaceted industries worldwide, consequently fueling the need for leaders possessing both business acumen and an exceptional understanding of its intricacies. The healthcare landscape remains in a constant state of flux due to economic liberalization and a shift from a collectivized model to a blend of public and private enterprises.
As outlined in the report titled "Indian Medical Device Market Outlook to 2017" by RNCOS, a prominent business research and consultancy firm, the hospital services sector is anticipated to reach a value of US$ 81.2 billion by 2015, spanning various industry verticals such as healthcare, retail, energy, information technology, and telecom. In 2012, the Indian hospital services sector yielded revenue exceeding US$ 45 billion, projected to maintain a Compound Annual Growth Rate (CAGR) of 20 percent during 2012-2017. With hospitals contributing significantly to the healthcare market, substantial opportunities abound.

The hospital and healthcare sector in India is in a state of progressive maturation, evidenced by the rapid emergence of hospital complexes that employ numerous physicians and healthcare professionals. In this context, it becomes crucial to establish robust methods for assessing personnel possessing suitable competencies. Here, "competency" denotes an individual's possession of necessary abilities or qualities to execute specific functions. Similar to any well-managed business, healthcare organizations also require proficient managers to ensure seamless operations. The utilization of job competencies to select employees who can confer competitive advantage is a significant aspect of human resource practices globally, and this holds true for healthcare as well.

To bridge the gap between the demand and supply of competent, industry-ready graduates in the healthcare domain, this study aims to delve into the aspects concerning competent professionals available for middle-level managerial positions within this sector.

II EVOLVING LANDSCAPE OF HEALTHCARE

As articulated by Thomas C. Dolan, President & Chief Executive Officer of the American College of Healthcare Executives, the healthcare sector is undergoing rapid transformation, outpacing changes in almost any other field. This transformation can be attributed to several factors:

Informed Patient Demands for High-Quality Care:

As patients gain access to a plethora of information through various sources, including print and electronic media, their expectations for high-quality healthcare services have escalated. This heightened awareness empowers patients to make informed treatment decisions, turning them into proactive participants and self-managers of their health needs. This places pressure on healthcare facilities to meet these heightened demands, necessitating a qualified, educated, and well-trained staff capable of fulfilling patient expectations.

Pressure from Various Stakeholders to Control Costs and Demonstrate Value:

Given the intricacies of healthcare services and systems, stakeholders such as government officials, insurers, providers, and consumers are driven to monitor and regulate costs and to showcase the value of services provided. In India, this involves studying and interpreting the utilization, quality, accessibility, delivery, organization, financing, and outcomes of healthcare services, including public-private partnerships, through the lens of healthcare IT systems. The dimensions of quality—structure, process, and outcome—are influenced by both internal and external factors. The dynamic changes occurring in the macro and micro environments, affecting service delivery, mandate that healthcare managers adeptly navigate these changes and contribute effectively. Consequently, these issues need to be incorporated into educational curricula.

Continuous Quality Improvement Initiatives Modeled after Other Industries:

The demand for enhanced performance has emerged as a central concern within the healthcare system, driven by the need to manage healthcare costs, mitigate risks, ensure care quality, and meet patient expectations. For instance, principles borrowed from the Toyota Production System, which revolutionized car manufacturing, have been applied to healthcare processes, leading to increased efficiency and cost reduction. Techniques like root cause analysis (RCA), akin to those used in engineering, and Failure Modes and Effects Analysis (FMEA), utilized by NASA, have been adopted in healthcare settings to proactively manage risk and prevent harm to patients. Amidst these transformative facets, healthcare management is entering a stimulating era, necessitating
capable individuals who can adeptly introduce and manage rapid changes. Healthcare executives play a pivotal role in enhancing the health of the communities they serve. Consequently, as the healthcare landscape evolves, executive roles become more diverse and challenging. Opportunities for healthcare executives now span a wide range of Indian settings, including corporate hospitals, healthcare consultancy services, research and development organizations, the public sector, healthcare insurance, and the burgeoning wellness and indigenous medical equipment industry. Technological advancements and expanding global and national markets have led to the emergence of new verticals, intensifying the demand for qualified healthcare management professionals. With heightened competition across all professional stages, many roles that previously required a bachelor's degree now mandate a master's degree. Every year, around 2500 qualified professionals enter the field of Health Management/Administration, considering the annual intake of institutes in India offering graduate and postgraduate degrees in hospital management, health management, or administration.

Graduates embarking on careers in healthcare management can begin at various stages, ranging from entry-level to mid-level management positions in specialized areas such as:

- Government relations
- Human resources
- Information systems
- Marketing and public affairs
- Materials management (equipment and supplies procurement)
- Medical staff relations
- Nursing administration
- Patient care services
- Planning and development

**III. INTEGRATING MANAGEMENT WITH HOSPITAL & HEALTHCARE**

Healthcare executives/managers commence their careers at mid-level managerial positions and gradually progress to higher management roles. In the context of the hospital sector, these graduates often begin as management trainees or assistant hospital administrators. With gained experience and expertise, they may advance to roles such as hospital managers, Senior Relationship Officers, heads of Out-Patient Departments (OPDs), and operations heads. While terminologies may vary across different settings, the fundamental concept of proficiently overseeing activities remains constant.

Management can be defined as the process of designing and maintaining an environment wherein individuals collaboratively work in groups to effectively achieve specific objectives. Management stands as the primary activity that significantly influences how well organizations cater to the needs of those relying on them. The accomplishment of organizational objectives hinges to a large extent on its managers. Their effective performance contributes to an organization's attainment of its goals. This introduces the concepts of managerial performance and organizational performance, with the former evaluating how efficiently and effectively a manager operates and the latter gauging the efficiency and effectiveness of an organization in realizing its appropriate objectives. Both concepts are pivotal for overall organizational and individual performance. Assessment of contribution is possible through performance evaluation, encompassing efficiency and effectiveness.

Recruitment for positions at this level necessitates the evaluation of desired competencies, making competency mapping indispensable. Competency mapping identifies an individual's strengths and areas for improvement. It aids in enhancing self-awareness and directing career development efforts. This process involves recognizing an individual's job-related skills and
strengths, including teamwork, leadership, and decision-making. The skills and behavioral patterns to be cultivated or honed are integral components of various subjects covered in management curricula at numerous Higher Education Institutes (HEIs).

Both Bachelor's and Master's degree programs in India adhere to curricula and quality standards sanctioned by the University Grants Commission (UGC) in most disciplines. For professional domains such as Engineering, Medicine, Pharmacy, and Management, curricula and program quality are subject to endorsement by apex regulatory bodies or councils sanctioned by the Central Government. However, the present landscape reveals a stark disparity, as numerous higher education institutes offer graduate and post-graduate management programs without the formal approval of these authorized governmental agencies/bodies.

IV. COMPETENCY MAPPING IN HOSPITALS AND ITS CHALLENGES

Competency mapping serves to identify crucial attributes such as knowledge, skills, and behavioral traits necessary for proficiently executing job roles or designated processes. This process aids in evaluating individual strengths and areas needing improvement, guiding career development endeavors. A comprehensive competency model generally encompasses competency titles, their definitions, and key behavioral indicators. The notion that individual competencies closely align with organizational strategies and overall success has gained significant attention within professional and academic domains. Mapping employees' competencies necessitates the prior definition of hospital job roles.

However, defining hospital job roles is intricate due to the inherent complexity of healthcare facilities. Complexity arises from diverse patient demands for healthcare services. In the healthcare industry, the establishment of a competency model is uncommon, and the approaches taken often involve: 1) adopting an existing model from the same or a similar company, and 2) creating a model through consultant-led focus groups, surveys, or interviews to pinpoint requisite competencies. Nevertheless, utilizing an existing model has limitations as each company possesses unique challenges and characteristics, rendering a one-size-fits-all model inadequate for similar companies.

A poorly constructed model could result in competencies that do not effectively align with desired outcomes, leading to wastage of resources on developing unnecessary employee skills. The Indian hospital industry has yet to fully embrace a comprehensive competency mapping approach to address its diverse manpower requirements. Presently, there is a dearth of documented evidence explaining the competency mapping processes implemented within Indian hospitals. Nevertheless, the following flowchart illustrates a step-by-step process that can be adopted for devising a competency model, thereby facilitating competency mapping within hospitals:

The assessment of individual or group competencies employs various tools, including Self and Superior Assessment, 360-degree feedback, Assessment Centers, Psychometric tests, Interviews, Leaderless Group Discussions (LGD), In-basket exercises, Management Games, Role plays, Case studies, Scenario discussions, and Portfolio presentations. Currently, the responsibility for executing the competency mapping process largely rests with the HR manager and the recruitment team. However, a more comprehensive model can ideally be formulated with inputs from top-level management and department heads. This model could then be adapted to align with the organization's mission and vision. Ultimately, Competency mapping endeavors to furnish organizations with a comprehensive understanding of the necessary competencies required to achieve organizational targets, encompassing the organizational business plan, project requirements, group needs, and job role specifications.
V. COMPETENCY-BASED EDUCATION IN HOSPITAL & HEALTHCARE MANAGEMENT

Competency-based education (CBE) is rooted in the broader concept of outcomes-based education (OBE), a familiar framework for many postsecondary institutions and a foundation for numerous contemporary instructional design methodologies. CBE constitutes a subset of OBE, with a narrower focus on outcomes closely linked to job-specific skills or employment demands, often utilizing self-paced learning methods. This educational approach is widely adopted and practiced within healthcare management education institutes across the United States, yet it remains largely absent from the Indian context. Researchers are exploring the feasibility of implementing CBE models within healthcare management education.

But what exactly is competency-based education (CBE)? The terms "learning outcomes" and "outcomes-based education" are often used interchangeably with CBE. However, "competencies" tend to carry a more comprehensive, conceptual implication of what learners can accomplish as a result of their education, while "outcomes" typically refer to performance in examinations and other metrics that document acquired learning. CBE often entails more intricate assessment methods such as portfolios, experiential learning, and diverse demonstration techniques across various scenarios. A competency-based program involves offering learning opportunities through a curriculum that facilitates competency development. Additionally, it assesses candidates for the competence they acquire as part of their training program.

As Deborah Seymour points out, "Hundreds of institutions are developing CBE programs, and while there are some shared practices, these programs vary dramatically based on the goals of the institution and the students they serve. The diversity of approaches is making it hard for those who are new to CBE to understand how to get started."
Large skill sets are deconstructed into specific competencies, which may have varying levels of mastery. Competencies may demand different combinations of skills, knowledge, and attitudes within different contexts. The challenge lies in determining how to group competencies effectively to optimize task performance. Another challenge involves designing learning experiences that enable students to practice and apply these competencies across diverse contexts. Continuous refinement of defined competencies is vital to assessing enhanced performance in a range of situations. However, not enough faculty members are trained to develop assessments with the necessary rigor and consistency to effectively allow students to demonstrate these competencies.

Better communication between the education and business communities is required to identify what students need to succeed in the workforce. Resources must be reallocated to support individual learning. Competencies within distinct settings may necessitate varied combinations of skills, knowledge, and attitudes. Transitioning to a competency-based system entails a significant educational process involving parents, teachers, community and business leaders, and students. Competencies must be defined, and appropriate assessments must follow. The role of educators must be redefined, and credentialing for these roles should be integrated into the Indian education system. Thus, in addition to aligning educational outcomes with workforce needs and expectations, competencies are crucial for linking the course learning objectives of healthcare management programs offered by various institutions in India.

VI. THE STAFFING CHALLENGES

Hospitals have been grappling with persistent workforce shortages over the past several years, and these staffing issues are not isolated to specific healthcare professions. It’s not just frontline clinicians that pose challenges for hiring and retaining; even hospital executive positions exhibit high turnover rates. With evolving organizational structures, hospitals are experimenting with different models aimed at identifying best practices, encouraging innovation and collaboration, enhancing patient outcomes, boosting operational efficiency and standardization, and ensuring coordinated care across services. According to an American Hospital Association survey, executives with expertise in community and population health management, along with change management experts, are particularly challenging to find within the healthcare sector.

The dilemma of hiring and retaining skilled individuals plagues healthcare organizations, compounded by demand far surpassing supply and intense competition. This issue is especially critical in healthcare due to the vast need for workers that continues to grow. The demand for top health care talent has surged with aging populations, increasing rates of chronic diseases, and shrinking public budgets, making it increasingly challenging for facilities to recruit and train adequate personnel. Moreover, advancements in medical technologies necessitate continuous skills updates among the healthcare workforce. The healthcare system finds itself in a state of crisis-level demand. The current narrative for the negative jobs gap either attributes it to workers lacking the sought-after skills or employers failing to offer competitive compensation.

Improved training and educational opportunities would benefit both employees and businesses. Management education has witnessed exponential growth in India, with the number of MBA colleges increasing from around 200 in the early nineties to approximately 3300 today, offering multiple degrees in general management. However, determining the exact count of institutes offering degrees in Hospital & Healthcare Management is challenging due to numerous organizations operating these programs without proper approval or affiliations. This underscores the growing importance of education in healthcare management. As the need for more employable candidates arises, attention is now shifting towards building capacity in management education across various specialized fields, including hospital & healthcare management.
Nonetheless, employability among management students remains below 10% for roles in Human Resources, Marketing, or Finance. For roles involving sales and client servicing, the employability rate ranges between 10-20%. As the healthcare industry expands in response to demographic shifts and other trends, opportunities for well-prepared healthcare executives are on the rise. While the industry's growth and insurers' demand for greater efficiency will enhance the overall demand for managers, the emphasis on electronic medical records, the shift of services from hospitals to clinics, and the growing complexity of hospitals will create additional administrative opportunities. As the healthcare system evolves, competent managers become even more crucial, overseeing the delivery of services and ensuring quality healthcare.

Health service management is a knowledge- and skills-based process that requires intensive learning. Without formal management education, many health managers struggle to develop the essential knowledge and skills to address productivity, expenditures, accessibility, and quality of care challenges, as well as patient expectations. This underscores the necessity to update curricula and modules for graduates pursuing healthcare management programs. With looming staffing shortages in future hospitals, these facilities may need to achieve more with fewer healthcare professionals. Healthcare professionals must value and demonstrate desired skill sets, making the knowledge of competencies necessary for key managerial capabilities an integral part of healthcare management education. Healthcare managers bear the significant responsibility of overseeing services provided by medical professionals, from doctors and nurses to technicians. Their roles encompass various healthcare establishments, ranging from small nursing homes to corporate-level specialized medical centers.

Each operation within these establishments requires vigilance to track ever-changing industry trends and maintain a competitive edge. Among the numerous tools that elevate organizational performance, education and training are crucial for developing core managerial competencies. The assessment parameters focus on functional and applied knowledge, and self-assessment by learners is crucial to gauge competency levels acquired during the program. The challenge, therefore, extends beyond merely addressing the manpower gap; it also entails bridging the gap in healthcare management education. While health managers play a pivotal role in surmounting challenges in healthcare delivery in India, there is a lack of comprehensive evaluation of the capacity of hospital managers/administrators. Moreover, future training needs for healthcare managers are often inadequately determined, and addressing this gap could bolster the robustness of the healthcare system. The focus must shift towards training and development to achieve excellence in healthcare delivery, accomplished by altering the training and grooming of future healthcare leaders.

VII. BACKGROUND AND PROBLEM STATEMENT

The healthcare industry is undergoing profound transformations due to new technologies and population growth, leading to a substantial surge in the demand for higher education in hospital and healthcare management. The competition in educating the workforce has intensified and will continue to escalate alongside further advancements. A deficiency in management capacity has been identified as a hindrance to the transformation and reconfiguration of healthcare delivery systems into more effective, efficient, and responsive entities. As part of the broader management development process, this study seeks to identify the crucial skills for hospital administrators and assess the current curriculum's effectiveness in imparting the necessary knowledge in this specialized domain. Competency mapping's significance in the hospital sector can be reinforced by leveraging tools from other industries, which are employed for entry-level education, mentoring, mid-career formal education, and senior management programs.
In India, much like in developed countries, healthcare organizations are gravitating towards candidates with advanced capabilities to meet the diverse demands of healthcare roles at various levels and settings. Competency mapping is especially relevant among hospital professionals, considering the evolution from government and private practice to corporate setups. This shift has underscored the application of management knowledge, operational strategies, and ethical considerations for successful healthcare administration. Given that higher education plays a pivotal role in professional development, it becomes even more essential to conduct an educational needs assessment alongside evaluating the learning achievements of current students enrolled in the curriculum. This evaluation can be extended to their performance in the workforce after graduation.

This paper aims to initiate the establishment of benchmarks for healthcare management graduates concerning the essential competencies for successful professional performance. Achieving this goal involves introducing standardized curricula across higher education institutes offering postgraduate degrees in hospital and healthcare management. Furthermore, the program structure throughout the duration of the course and the eligibility criteria for candidates must also be regulated and standardized by competent authorities within the higher education sector, both of which fall under the scope of this study. While numerous institutes in India offer programs in Hospital & Healthcare Administration/Management, there remains a perceived gap between the required skills and the quality of preparedness of graduates at both the undergraduate and postgraduate levels. Therefore, this study strives to lay the foundation for a unified curriculum tailored to this specialized field.

Considering the interrelation between learning content and outcomes, as well as knowledge, attitude, and skills acquired, higher education institutes and employers should collaboratively develop comprehensive syllabi based on competency models. The value of competency mapping is evident as many organizations are now utilizing it for their hiring and selection processes. Competency mapping assists in identifying anticipated performance indicators crucial for specific job profiles. A study from 2004 highlighted that competency models can aid educators and trainers in creating curricula aligned with employer needs. As existing Indian studies often overlook the importance of competency mapping, particularly for mid-level hospital managers, this research serves to evaluate current performance and future developmental requirements. By examining competencies’ various levels and their practical applications, this study contributes to assessing the educational needs of an evolving Indian healthcare system. Overall, this paper seeks to establish a foundation for competency-based healthcare management education in India.

CONCLUSION

This study endeavors to underscore the knowledge, skills, and attitudes required for mid-level managers in Indian hospitals. Numerous factors relevant to job positions have been identified. With the demand for courses in Hospital & Healthcare Management rapidly rising in India, identifying competencies based on industry needs will undoubtedly facilitate dialogue among segments and organizations providing training to prospective hospital managers and healthcare executives. As corporate culture takes hold of the hospital industry, the need for specialists equipped with management tools and techniques tailored to the sector becomes imperative. With emerging job roles, the program extends beyond medical graduates and reaches non-medical graduates as well. Findings from responses of first and second-year students suggest a shift from conventional teaching methods and examination patterns towards more informal, objective approaches to discourage rote learning.

Responses from alumni and industry experts highlight gaps in management capacity in specific areas concerning knowledge, skills, and attitudes necessary for enhanced healthcare performance. Competency mapping is integral for organizational development and employee growth, necessitating organizations to optimize these talents for competitive advantage. Faculty members play a significant role in driving this change by fostering skill acquisition among students. As
aptly noted by a respondent in an open-ended comment, the essence of the study lies in the idea that managers must lead with both their intellect and emotions. This balanced approach is pivotal in maintaining cohesion, and it is crucial to instill this mindset in the younger generation, encouraging logical, practical, and empathetic thinking. India, as a developing nation, grapples with affordability issues; thus, a mere business-centric concept is inadequate. Instead, ethics, altruism, and philanthropy must be integrated strongly to serve the broader societal interest.

REFERENCES:


