National Institute of Technology Rourkela

Registration Seminar

Seminar Title : Strategic Integration of Digital Innovations in Cancer Healthcare Organizations: A study of Digital Transformation on

Enhancing Efficiency, Patient Outcomes, and Competitiveness

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Venue : Conference Hall

Date and Time : 12 Sep 2025 (11:00 AM)

Abstract : Cancer is still a major challenge worldwide. This calls for new v

: Cancer is still a major challenge worldwide. This calls for new ways to think about treatment. Digital transformation is crucial for improving the efficiency of healthcare services, focusing on patients, and staying competitive. This study looks at strategic views on digital transformation in cancer care. Its goal is to find out how healthcare organizations can use digital technologies to improve their operations, achieve better clinical results, and maintain an advantage in a quickly changing healthcare environment. The main objective of this study is to examine the strategic role of digital transformation in cancer care services. It aims to identify effective practices and those that are not successful, ultimately leading to the development of a strategic framework that enhances value and creates a competitive advantage. Treating cancer is a multifaceted challenge that requires the collaboration of multidisciplinary teams, long-term care pathways, and access to real- time data. Digital innovations such as electronic patient records (EPRs), telemedicine, mobile health (mHealth), artificial intelligence (AI), machine learning (ML), precision medicine platforms, and advanced analytics can significantly enhance cancer care. However, successfully implementing these technologies demands more than technical expertise it also requires effective change management, an understanding of organizational culture, and alignment with the organizations objectives. This research employs a multifaceted approach, combining both quantitative and qualitative methodologies. It includes a quantitative analysis of cancer care performance indicators before and after implementing digital technologies in several healthcare facilities, alongside qualitative interviews with IT specialists, oncologists, and healthcare professionals. The study incorporates strategic management and digital transformation frameworks such as the Diffusion of Innovation (DOI), Resource-Based View (RBV), and Technology Acceptance Model. It aims to explore the key factors that drive, impede, and support digital innovation in cancer treatment. This work contributes to academic and practical knowledge by outlining a strategic plan for transforming cancer care through digital technology. It highlights the importance of ensuring that digital initiatives align with the organizations vision, the role of leadership in cultivating a culture of innovation, and the need for ongoing evaluation of the impact of technology on clinical and operational performance. The insights garnered from this study will provide valuable guidance for policymakers, hospital administrators, and healthcare strategists in crafting evidence-based strategies to advance digital innovations while maintaining a focus on value-based care.

Key Words: Digital Transformation, Cancer Care, Strategic Management, Healthcare Innovation, Patient Outcomes, Operational Efficiency, Competitive Advantage, Sustainability.