Emerging Trends in Healthcare 4.0: An Indian Perspective

Sushil Kumar
Operations Management Group, Indian Institute of Management Lucknow
Lucknow 226013, India
sk@iiml.ac.in

Abstract

The industrial sector globally is at the cusp of fourth industrial revolution. "Industry 4.0" first introduced in 2013, focuses on the concept of smart factory and cyber physical systems thus integrating advanced technologies such as automation, cloud computing, internet of things, 3-D printing, blockchain and big data analytics. As its extension in one of the prominent service sectors, the soul of "Healthcare 4.0" lies in the integration and convergence of real and virtual worlds, wherein manual appointments, in-person examinations and treatment systems can be integrated with software, algorithms and people. Emerging technology applications such as wearables coupled with the artificial intelligence and predictive diagnostics capabilities have already started getting traction, globally. However, the policy interventions by governments to adapt the structure of medical policies in view of evolving technologies and data security concerns are still lacking. The need of the policy alignment becomes imperative especially in case of India, which is emerging as a medical tourism hub. This paper presents a concept note while capturing the emerging trends in Healthcare 4.0 from an Indian perspective. Also, the mapping of possible health applications till date has been done to analyze the evolution of the area across multiple disciplines. Current research issues and challenges for the implementation are further highlighted. The research trend in this domain is expected to increase at least for the next decade.

Keywords
Healthcare 4.0, Digital Transformation, Industry 4.0, Medical Tourism, and Predictive Diagnostics.

Biographies

Sushil Kumar is Professor in the Operations Management Group at IIM Lucknow.