Chapter 17
The Future of Risk Management in Healthcare:
The Role of Artificial Intelligence

L. Ganesh
https://orcid.org/0000-0003-1114-2461
Christ University, India

ABSTRACT

Though a lot in being written about AI and its potential in prediction, prevention, screening, diagnosis and its treatment. It has shown a tremendous benefit in improving health care. Because of complex and unstructured data, dataset has been a challenge for researchers and policy makers. This led to the investigation field of analyzing various factors that harm the life of patients and the probability of the disease impact. Hence there is a mandatory requirement of regulatory measures or guidelines for the further usage of AI in health care. This raises many doubts about the transparency, its accountability and risk associated with the use of AI in health care. This chapter explores about the risk of AI in health and its ethical consideration in implementation of AI. This chapter also throws insights about the future potential benefit to economy with standard ethical consideration.

INTRODUCTION

One of the most successful milestones of AI is the healthcare industry. The digital health revolution is an emerging trend in the health sector influenced by AI. Early detection of diseases and predicting outcomes, curable solutions without going to

DOI: 10.4018/979-8-3693-6215-0.ch017

hospitals (Bajwa et al., 2022), supply chain innovations of medicines in reaching the beneficiaries on time (Kumar A et al 2022) scanning without human intervention are some of the prosperous improvement with AI-enabled assistance. Irrespective of the industries, AI has now firmly placed its leg and promises its potentiality for the country's economic growth, social development, human well-being, and safety improvement.

AI in Healthcare

The use of AI is substituting traditional habits in everyday life because of its accuracy and ease in detecting irregularities even not observed by human radiologists (Boeken T, et al., 2022). This diagnostic importance is very crucial in emergencies and critical care situations. Early detection of diseases, and tracking the vital signs using AI-powered wearable devices enhances the success rate of treatment (Bayoumy, K. et al., 2021) and also reduces the spending of healthcare costs. This digital transformation improves healthcare diagnosis and treatment (Hameed, K et al., 2024) in a cost-effective measure which increases the potentiality of quality health care (Abu-Elezz I et al, 2020). AI is still in the nascent stage of medical sciences. A deep understanding of AI and medicine is compulsory for developing algorithms. Even though AI outperforms human doctors in image sensing (Killock, D. 2020), it cannot match human-level accuracy in medical decision-making (Peters, U 2023).

Potential Benefits of AI in Healthcare

The usage of AI in Healthcare firms progresses the effectiveness from administration to patient care.

Accelerating Boundaries of Human Performance

A program, developed by Google Health, predicts the kidney problem before it occurs (Nenad Tomašev et al 2019). The growing prevalence rate of long-term diseases like diabetes, heart disease, epilepsy, and cancer, joined with elderly problems, has amplified the emergency for remote and continuous health monitoring (Baig, M.M et al, 2017; Sempionatto, J.R et al, 2022) which in turn paves the way for innovative artificial intelligence (AI)-based wearable sensors which reduce the patient's risk (Yu, K.H.et al., 2018; Zheng, Y.et al 2021).

It now become a non-invasive and convenient means of monitoring patient health. The wearables (Figure 1) can track various health parameters, physical activities, and various health level indicators like glucose, cortisol, lactates, electrolytes, and blood pressure. Fitness trackers like Jabra Elite 3 (wireless earbuds for Heart rate