

## SUSTAINABLE HEALTHCARE, PUBLIC HEALTH AND MANAGEMENT: BUILDING RESILIENCE THROUGH AI AND INNOVATION

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*This paper will examine the resilience of the healthcare system in the face of increasing global health challenges through sustainable healthcare, the role of the public health management, and artificial intelligence (AI). The cost of healthcare has hit a US 9.3 trillion and the sector forms 4.4% of global emissions making sustainability an issue of strategic concern. The innovations led by AI that include predictive analytics, telehealth, disease surveillance, and workflow automation are assisting in minimizing operational waste, increasing diagnostic accuracy, and enhancing outbreak preparedness. It has been demonstrated that AI has the capability to reduce hospital energy consumption by 812, reduce waste in medical supplies by 20 percent, and identify outbreaks sooner than human systems. The results indicate that the combination of sustainability principles and AI and effective public-health management is key in the development of efficient, equitable, and future-focused healthcare systems.*

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