INFORMATION TECHNOLOGY IN HEALTHCARE: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

Aim/Purpose	The aim of this study is to recognize the factors that contributed to the development of IT in the healthcare industry.
Background	The healthcare Information Technology (IT) solutions market has experienced remarkable growth, with the healthcare sector emerging as a $303 billion industry. However, despite its substantial size, the healthcare industry has faced criticism for its slow adoption of innovative technologies. This study aims to explore factors driving the evolution of IT in the healthcare sector.
Methodology	The researchers conducted a systematic literature review, searching the PubMed and Emerald databases for relevant peer-reviewed articles. After filtering based on defined criteria, 433 articles were included for analysis. Thematic analysis was applied to the abstract of articles which spanned the period of 1997 to 2023.
Contribution	This study provides a conceptual framework elucidating the key factors driving the evolution of IT in the healthcare industry. By systematically analyzing the existing literature, the research identifies four overarching themes – government policies, technological potentials, healthcare delivery needs, and

	organizational motivations – that have propelled the development and adoption of healthcare IT solutions.
Findings	Based on the analysis in this paper, four themes emerged: government policies promoting IT adoption through initiatives like incentives for electronic health records; technological breakthroughs enabling new healthcare IT capabilities; healthcare delivery needs to drive IT integration for improved quality and safety; and patient experience and organizational motivations to leverage IT for streamlining processes and knowledge management.
Recommendations for Practitioners	The conceptual model can guide practitioners in developing IT solutions aligned with policy drivers, technological capabilities, care delivery needs, and organizational imperatives.
Recommendation for Researchers	The conceptual framework developed in this study offers a lens for researchers across disciplines to continue investigating the role of information technology in the healthcare industry.
Impact on Society	Examining the evolution of IT in the healthcare industry revealed the importance of information technology in enhancing the delivery and affordability of healthcare services and addressing issues of accessibility and inequality.
Future Research	Future research will explore global perspectives showcasing the successful impact of IT on healthcare, as emerging technologies impact healthcare delivery and patient outcomes.
Keywords	eHealth, healthcare information systems, healthcare industry

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Dr. Hazem Said is a Professor of Information Technology and the School of Information Technology (SoIT) Director at the University of Cincinnati (UC). He is a certified Project Management Professional (PMP). Dr. Said founded the UC Information Technology Solutions Center (ITSC) in 2012, where he consults with government, public, and private organizations and leads teams of professionals, as well as graduate, undergraduate, and high school students, to investigate, develop, and support a variety of information technology solutions. In addition, Dr. Said is a co-founder and co-director of the Ohio Cyber Range Institute and the Justice, Law, and Information Technology Institute. Dr. Said is the recipient of over 200 grants and contracts totaling over $30 million and has authored over 27 articles on topics related to information technology education.