Systematic Insights into Digital Transformation in Healthcare: A Comprehensive Review of Reviews

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Introduction: Digital transformation (DT) is reshaping how society addresses new challenges and opportunities (Kraus et al., 2021; Schiavone et al., 2021). The pandemic has accelerated DT in the public sector, ensuring the continued provision of services through non-physical means. DT is defined as "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies" (Vial, 2019). Recently, there has been a growing body of research on DT. While some has focused on the conceptual and terminological aspects of DT (Dal Mas et al., 2023), practical implications, particularly in the healthcare sector, remain underexplored. Given this shift and the emphasis on new paradigms, there is a pressing need to systematize and organize the existing literature on DT in healthcare. This is essential to understand the uses and applications of digital health initiatives that are transforming and redesigning healthcare processes. In order to fill this gap, this study employs a review of reviews and examines the practical implications and adaptation of digital transformation in healthcare by analyzing the current state of reviews on DT in healthcare, in the context of the European Union. Objectives and Research questions: At the current stage of this research, our aim is to answer the following key questions: (i) What is the current stage of research in the field of DT in healthcare reviews? (ii) What are the types of innovations, units of analysis, and practical applications DT in the healthcare sector? To address these questions, we conducted an extensive review of reviews by performing a literature search to gather all relevant literature on our topic. We then organized our findings into relevant categories, providing a snapshot of the major trends, gaps, and barriers in the practical applications of DT that are transforming the healthcare sector. Methodology: A review of reviews was conducted and presented following PRISMA methodology. The databases Scopus and Web of Science were searched for original publications in English between the 1st of January 2010 and 30th of May 2024. Studies were included for title and abstract screening if they were review article published in English discussing digital transformation in healthcare. A categorization of selected article was determined on several attributes, namely: innovation type; unit of analysis; sub-unit of analysis; contextual framework; gaps; barriers; dimension under study; Preliminary findings: The search yielded a total of 1319 articles. After duplicate removal and title/abstract screening, at the actual stage 16 review studies were included, meanwhile, another 49 articles are still being reviewed by the authors to determine whether to include them in the study. Of the included papers, four reported on the use of digital health technology among practitioners and two reported on the use of digital health technology among patients. Three studies analyzed the role of digital health literacy in the digital health transformation. Other studies analyzed the implementation of electronic patient records in hospitals or the implementation of specific devices in healthcare. Discussion and implications: Our

preliminary findings revealed both promising implications and noticeable gaps. Many studies have analyzed the role of practitioners and their involvement in new models of health service deployment. Patients are also well-represented in research, highlighting their fundamental role in DT initiatives. However, not all stakeholders within the healthcare system, such as nurses, are adequately represented. This creates opportunities for further research and the need for deeper analysis. An emphasis on digital methods for learning and training healthcare staff has emerged, highlighting the importance of developing innovative approaches to address the new challenges arising from the diffusion of DT. At the current stage of research, this study aims to contribute to scholars, practitioners, and managers alike. For scholars, it offers a valuable systematization of existing research, outlining the current state of the field and paving the way for future studies. Practitioners can gain clear insights into practical examples of digital innovations in healthcare, enhancing their understanding of digital technology trends and their application in realworld contexts. Finally, the study provides managers with summarized directions and suggestions for future practical tools, aiding in the design of organizational change to ensure the successful implementation of digital transformation initiatives. Keywords digital transformation; review; healthcare management; health system; digital health