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# Guest editorial: Digital health and governance: implications and challenges

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Welcome to the Special Section of *IJHG Vol.28 Issue 3* on “Digital Health and Governance: Implications and Challenges.” We live in a time when technological advancements are revolutionizing healthcare, which presents significant implications for the governance of health systems globally.

This issue embarks on a journey exploring these intersections of digital health and governance. We traverse the global landscape of digital health governance models, delve into the intricacies of regulatory mechanisms, grapple with the challenges of data governance and ethics, and glean valuable lessons from the COVID-19 pandemic, all while keeping our eyes firmly on the horizon of the future of this critical field.

While preparing this Special Section, one of the most challenging and promising instruments was introduced – integrating Artificial Intelligence (AI) chat-bots into healthcare. Everything in this field changes so fast that even new publications cannot always keep up with the changes, but we have tried to cover the other aspects of Digital Health Governance.

The term “digital health” encompasses a wide range of applications in which information and communications technologies (ICTs) are meant to enhance healthcare system performance. This can range from the efficient collection and transfer of patient data through electronic health record and provider payment systems to the delivery of telehealth consultation services to patients in remote settings. In their 2020 review Fatehi *et al.* found and analyzed 95 definitions of digital health and summarized these definitions as follows: “Digital health is about the proper use of technology for improving the health and wellbeing of people at individual and population levels, as well as enhancing the care of patients through intelligent processing of clinical and genetic data” (Fatehi *et al.*, 2020, p. 71). In digital health the end goal is improvement in the efficiency and performance of healthcare while technology is seen as a tool toward achieving that end.

Digital health can catalyze health system reforms that lead to higher quality, more efficient patient care. For various reasons, however, the transformative potential of information technology has been less pronounced than in many other sectors (such as finance, business and science), and this is in large part due to the relative lag in the development of the necessary governance frameworks (Asian Development Bank *et al.*, 2018). In a 2018 working paper, the Asian Development Bank describes good governance as the government structures, policies, processes and standards that guide the implementation of digital health solutions. They further describe the elements of a strong governance framework, which is one that identifies and defines the roles and responsibilities of all actors in the digital health environment, ensures that legislation and policies are in place and applied consistently, and establishes mechanisms for effective coordination and decision-making along with incentives to apply digital health solutions (Asian Development Bank *et al.*, 2018, p. 3).

This involves the development of organizational capacity and policy infrastructure to address topics such as data privacy, security, accountability and oversight, data management and interoperability, public trust and standards and training strategies for ICT skills acquisitions by providers and patients using various digital health applications. As demonstrated by recent studies, digital health governance presents numerous challenges



International Journal of Health  
Governance  
Vol. 28 No. 3, 2023  
pp. 213-215  
© Emerald Publishing Limited  
2059-4631  
DOI 10.1108/IJHG-09-2023-158

for both high-income and lower- and middle-income countries (HICs and LMICs) (Bloom *et al.*, 2023; Chen *et al.*, 2023; Shaw and Sekalala, 2023; Haig *et al.*, 2022; Huang *et al.*, 2017).

In the USA and many other HICs, for example, the electronic health record (EHR) environment infrastructure consists of a plethora of legacy systems created within a decades-old competitive market of technology vendors, coupled with evolving federal government mandates that incentivize increasing system interoperability. Updating EHR systems that public and private health and hospital systems have previously invested in so that they meet minimum interoperability standards to interface with government and private payment systems can represent a monumental additional cost that they may not be in a position to afford. At the same time, political interests concerned about government infringement on individual liberty have forbidden the government's creation of unique personal identifiers for American citizens for over two decades (VanHouten and Brandt, 2021).

To help guide its member states in the continued development of national and regional digital health systems and governance frameworks, WHO has continued to provide guidelines, recommendations and toolkits (World Health Organization and International Telecommunication Union, 2012; World Health Organization, 2019, 2021), which seek to provide a step-by-step rubric along with the evidence of efficacy for many digital health system components. In addition, case study examples from both HICs and LMICs can be found in the literature. What is unclear is if these tools are sufficient for most LMICs to develop the capacity necessary to develop effective national ecosystems of digital health governance.

As Guest Editors of this *IJHG* special section, we hope readers will be prompted to think about helping to identify and document the multiple pathways toward effective digital health governance from the multiple perspectives and baseline capacities of LMICs in particular.

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