

A Survey of Digital Health Companies: Opportunities and Business Model Challenges

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Abstract : The global digital health market reached 175 billion U.S. dollars in 2019, and is expected to grow at about 25% CAGR to over 650 billion USD by 2025. Different terms such as digital health, e-health, mHealth, telehealth have been used in the field, which can sometimes cause confusion. The term digital health was originally introduced to refer specifically to the use of interactive media, tools, platforms, applications, and solutions that are connected to the Internet to address health concerns of providers as well as consumers. While mHealth emphasizes the use of mobile phones in healthcare, telehealth means using technology to remotely deliver clinical health services to patients. According to FDA, “the broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, telehealth and telemedicine, and personalized medicine.” Some researchers believe that digital health is nothing else but the cultural transformation healthcare has been going through in the 21st century because of digital health technologies that provide data to both patients and medical professionals. As digital health is burgeoning, but research in the area is still inadequate, our paper aims to clear the definition confusion and provide an overall picture of digital health companies. We further investigate how business models are designed and differentiated in the emerging digital health sector. Both quantitative and qualitative methods are adopted in the research. For the quantitative analysis, our research data came from two databases Crunchbase and CBInsights, which are well-recognized information sources for researchers, entrepreneurs, managers, and investors. We searched a few keywords in the Crunchbase database based on companies’ self-description: digital health, e-health, and telehealth. A search of “digital health” returned 941 unique results, “e-health” returned 167 companies, while “telehealth” 427. We also searched the CBInsights database for similar information. After merging and removing duplicate ones and cleaning up the database, we came up with a list of 1464 companies as digital health companies. A qualitative method will be used to complement the quantitative analysis. We will do an in-depth case analysis of three successful unicorn digital health companies to understand how business models evolve and discuss the challenges faced in this sector. Our research returned some interesting findings. For instance, we found that 86% of the digital health startups were founded in the recent decade since 2010. 75% of the digital health companies have less than 50 employees, and almost 50% with less than 10 employees. This shows that digital health companies are relatively young and small in scale. On the business model analysis, while traditional healthcare businesses emphasize the so-called “3P”—patient, physicians, and payer, digital health companies extend to “5p” by adding patents, which is the result of technology requirements (such as the development of artificial intelligence models), and platform, which is an effective value creation approach to bring the stakeholders together. Our case analysis will detail the 5p framework and contribute to the extant knowledge on business models in the healthcare industry.

Keywords : digital health, business models, entrepreneurship opportunities, healthcare

Conference Title : ICDHR 2022 : International Conference on Digital Healthcare Research

Conference Location : Montreal, Canada

Conference Dates : May 23-24, 2022