

SHORT COMMUNICATION**An Emerging Health Care Trend: Mobile Health**

MUNAZZA SALEEM

*Liaquat University of Medical and Health Sciences/Athabasca University*Email: munazza.saleem86@gmail.com**ABSTRACT**

The health care industry is extremely competitive, and to satisfy patients' expectations and streamline hospital functioning, mobile health (mHealth) is an adequate tool. From easy appointment scheduling to reducing unnecessary emergency visits and uncomplicated billing to active health promotion, mobile health can help patients meet their requirements, boost hospital productivity, and enhance patients' health outcomes. A literature search was carried out to identify referenced content and gather relevant articles as the knowledge foundation to develop this paper. This article intends to reflect on the various aspects of mHealth. This paper begins with an overview of mHealth, followed by the recent literature analysis, advantages and challenges associated with this new trend, and a prediction of the future of mHealth. It is the opinion of this paper that mHealth is the future tool for the provision of better healthcare and that it will revolutionize the way healthcare is delivered.

Keywords: Mobile health, healthcare, trend

Healthcare organizations around the world are experiencing several challenges, including population longevity, monitoring chronic patients with severe comorbidities, and an increasing number of patients who need comprehensive personal care. Mobile health (mHealth) is an emerging trend that answers all the calls effectively in a low-cost and engaging manner. Mobile health is an aspect of eHealth and refers to the use of mobile phones, multitudes of apps, and wireless technologies for efficient healthcare delivery, to improve workflow in medical practices and enhance patient care outcomes⁶.

Mobile health is not a new trend. It has been growing and propagating since the 1980s, with the introduction of the first cell phones. However, when Apple launched the first smartphone in 2007, technology and healthcare experienced a rapid progression, and mobile phones grew to be a common phenomenon [4]. This transformation stimulated the development of mobile health applications for consumers worldwide and revolutionized the healthcare field⁶.

In this era of digital growth, technology has had a significant impact on healthcare. It is evident from recent literature that mobile health has been an exceptionally important resource for communication-based healthcare, collaboration, and engagement between patients and providers. An outpatient questionnaire survey was conducted in China to ensure the patient's positive experience with the adoption of mobile health apps for delivering care to patients. A sample of 300 outpatients was randomly selected from three different tertiary care hospitals, and a comparison was made between mobile health app users and non-users. The study found evidence that the utilization of mobile health yields better patient experience and satisfaction, principally due to convenient physician-patient communication and easy access to health records².

mHealth integration made the lives of healthcare professionals convenient and enabled them to enhance their: 1) clinical practice efficiency (communication, clinical treatment guidelines, disease diagnosis aids), 2) medical education (e-learning and teaching, skill assessment tests, case studies), 3) improved accuracy and efficiency (scheduling appointments and meetings), 4) data maintenance (organize information and images, write notes, access cloud services), and 5) accessibility (access diagnostic images and scans, electronic prescribing, coding, and billing). Healthcare professionals aren't the only ones that benefit from mHealth. The integration of mobile health empowered hospitals to have hassle-free appointment booking, convenient billing, and paperless information⁵. With all these advantages, mobile health aids in the provision of health services in underserved areas, serving health care to those who avoid seeking assistance due to lack of resources, stigma or other obscure reasons. Wearable technology is a popular and technologically sophisticated aspect of mHealth that empowers ordinary people to manage their health⁵. Continuous glucose monitors (CGMs), fit

bits, and cardiac monitors are some of the most talked-about wearables that encourage proactive healthcare by monitoring vulnerable patients' physical activities, sleep patterns, diet management, heart rate, etc⁶.

Aside from the numerous advantages and benefits, there are also significant challenges and downsides involved with the application of mHealth technology. The reliability of any instrument is essential for the consistency of results, functioning and success. Due to interoperability (network connectivity that can support multiple kinds of devices) and the value of the content programmed in the apps, reliability and usability is considered significant concerns associated with mobile health. One of the other challenges worth mentioning here is data security and privacy issues. The lack of knowledge to deal with technology, ill-trained users, and the use of unsecured wireless networks can be the reason for the threat to the privacy and security of personal data. Many individuals choose to rely on them in their daily lives because it is more convenient than getting professional help. Incorrect or inadequate information can cause delays, worsen the patient's condition, or even endanger them. The availability of the internet, network speed, and quality of the internet are a few other concerns that need to be addressed to elicit the best outcomes from mobile health implementation¹.

Despite the recognition of the mHealth application in the healthcare industry, limited research has been conducted on the effectiveness of healthcare in various health conditions and the processes of health care service delivery. Therefore, further development of evidence-based research is necessary with expanding financial support. Studies are needed on a much larger scale to evidence the impact and effectiveness of mobile health on the positive outcomes for patients [3]. Additionally, future research efforts should mainly focus on developing nations where the health needs are greatest, as most of the research until now has been conducted in developed countries³.

Mobile health has already been proven to be the future of health care in the form of wearable gadgets and apps used by healthcare professionals. The future predicts that mHealth will be swiftly penetrating developing countries on a broader scale to reduce the burden of disease. Besides that, by efficiently caring for and monitoring patients with severe comorbidities, mHealth will transform the system by making it more economically convenient¹.

It is anticipated that there will be a potential transformation of mHealth from a consumer-grade device to a medical-grade intervention with devices that are reliable, accurate, and consistent. Digital technology is an integral part of people's lives and health. It is apparent that mobile health is here to stay and will continue to expand over the coming years. Mobile health will keep growing as the old version will lose relevance and be phased out in favour of newer and novel interventions⁶.

Mobile health is the definite future of health care and is already helping with population health management at several

levels. The paper has shed light on several aspects of mobile health technology, and it is the opinion of this paper that efforts for the long-term sustainability of mHealth will outweigh the associated challenges. The idea of using digital interventions is to monitor and improve patient outcomes and empower people in the community to manage their health and wellness. The goal isn't to eliminate human interaction, but to improve patient participation and make the healthcare process operate more smoothly. Recognizing the barriers and focusing on the strengths will provide evidence-based information that can assist in magnifying the usability and practicability, and it will facilitate mobile health to groove the impression and rule healthcare.

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Please find the details of my contribution below to this article.

- Original Idea.
- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;
- Drafting the work or revising it critically for important intellectual content;
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