Review Article

Digital Innovation in Health Care: A Review Article

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Abstract

Introduction: Introducing how digital innovation in healthcare system has changed the lifestyle. The important goals of innovating the healthcare system digitally are to simplify physicians' work, improving patient outcomes, reducing human error, and lowering costs through amazing web and mobile experiences. Innovation is the change made in an existing product or idea or field. It is the introduction of something new from the old one. In a number of nations around the world, digital health innovation is at the heart of attempts to modernize health care. Despite some evidence of influence on quality and efficiency, its implementation in practice has been described as a plague of pilots, with innovations failing to become standard practice because to a lack of money or the inability to expand to other parts of the health-care system. Despite the growing quantity of information about the elements that underpin success and failure, translating evidence into practice remains a difficulty. **Conclusion:** Digital innovation van takes the health care system to different level where patients can be treated conveniently. These findings and recommendations might be reflected on by health care systems and stakeholders around the world to examine their utility in furthering local health innovation agendas. Evaluations of digital health innovations should focus on understanding the characteristics that impact adoption of a specific innovation, in order to promote the development beyond the pilot stage to broader adoption, in order to support policy efforts.

Keywords

Digital; Innovation; Health care; Artificial intelligence

Introduction

Innovation is the change made in an existing product or idea or field. It is the introduction of something new from the old one.

The important goals of innovating the healthcare system digitally are to simplify physicians' work, improving patient outcomes, reducing human error, and lowering costs through amazing web and mobile experiences.

The most important motto is to prevent diseases and encourage a healthy lifestyle. Nowadays artificial intelligence is been used in every field.

Artificial intelligence in healthcare can help to lower the costs of health operations and impact the quality of care for patients everywhere.

AI can also improve patient outcomes by diagnosing the diseases as early. Artificial intelligence may prove a good way to innovate the health care system digitally.

[1] Digital transformation in health care can have a positive impact on technology in healthcare.

Technological advancements and innovation have played a big role in connecting people to healthcare professionals, allowing them to get the healthcare attention they need, especially during the COVID-19 pandemic.

Digital healthcare has taken the forefront since the COVID-19 pandemic hit the world. Most of us have been avoiding a visit to the hospital or just stepping out of the house unless necessary. However, that doesn't mean we haven't required medical attention or our prescription medication. Technological advancements and innovation have played a big role in connecting people to healthcare professionals, allowing them to get the healthcare attention

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they need. And, digital healthcare has been the go-to tool for all those individuals in need of health services.

Healthy Lifestyle

Telemedicine, on-demand physical and mental healthcare, online workouts, customized nutrition plans, and accessibility to wellness products have paved a roadmap to better health for the entire nation. [2] Growing demand for digital healthcare facilities is driven by lifestyle diseases, the aging population, rising income levels, rising insurance coverage, and growing health awareness.

Convenience

Patients need such a health care system that works according to their needs and according to their convenience, their time, and wherever they are because of their busy schedule.

Virtual Treatment

If we had told people ten years ago that they could decrease their pain with a device that looked like a video game, they would have laughed at us. Virtual Reality (VR) has, however, altered the paradigm of digital transformation in healthcare in 2018. It has a significant impact on how patients are handled. [3]

Discussion

Before on-demand healthcare services became popular, as most people would either have to visit the hospital or call a professional home. But now digital healthcare platforms can connect patients and health practitioners through virtual appointments and video calls at any time.

Patients can seek medical advice online from specialist doctors registered on such platforms and later decide to meet them personally, only if they need it.

Physical health: Nowadays weight gain, obesity, sedentary lifestyle, and unhealthy food habits are common. While it is a rising problem among the Indian youth due to their fast-paced and stressful work-life. There is also a growing awareness about fitness to lead a healthy life.

Going and visiting a nutritionist, or going out to a fitness centre takes up more time, innovative platforms are bringing together trained professionals to help people achieve their health goals by assisting them to eat and exercise from their homes themselves.

Similarly, multiple applications offer yoga as the best solution for health and well-being, along with weight management. This has allowed many individuals to examine this area of healthcare through a digital medium with certified yoga professionals. [2,3]

Mental health: mental health has finally become part of our conversation in today's time. As socializing is being cessed in 2020, caring for our mental health became equally important to taking care of physical health.

Seeking help from mental health practitioners similar to physical health professionals is now made available on-demand through digitization. From online self-help portals to e-therapy with certified professionals has helped many overcome their mental health issues. [4]

Artificial Intelligence

Artificial Intelligence (AI), which encompasses machine learning, natural language processing, and robotics, may be used in practically any sector of medicine, and its potential contributions to biological research, medical education, and health-care delivery appear infinite. It is the system that, in its ideal state, thinks and acts intelligently. [5]

Telemedicine, medical devices provided with intelligence, and electronic health records are just a few examples of how the digital transformation of health care completely changes the way we communicate with health professionals, how our data is shared among providers, and that treatment plans and health outcomes are determined. [6]

Wearable Devices

Companies that collect health data from medical devices, especially wearable technologies, are another process of digital transformation in health care. Health care organizations are taking steps to protect themselves by investing in wearable technology devices that can make real-time employment of high-risk patients predict the likelihood of a major medical event.

Some of the most common features of these devices include:

- Sensors for measuring heart rate
- Fitness trackers
- Diabetics utilise sweat metres to keep track of their blood sugar levels.
- Oximeters are devices that measure the quantity of oxygen in the blood and are commonly used by people who have respiratory disorders like COPD or asthma.

Virtual Reality

Virtual Reality (VR) and Augmented Reality (AR) are widely used now for training purposes of medical professionals, which are helping save time training surgeons and are making them tech-enabled to perform precise operations and procedures. With various advanced equipment as part of the healthcare system, it has also reduced the risk of error, and thus, complications through and post surgeries. Not only true truth is used to treat pain, but also anxiety, post-traumatic stress disorder, and stroke. Virtual headsets can also encourage users to use and help children with autism learn to navigate the workplace. [7]

Conclusion

The rapidly growing digital interruption in the healthcare sector has opened doors for healthcare service providers,

manufacturers, and distributors across the country created new ways to explore the digital health space in the coming years.

With the advent of our digital strategy, we are not only looking at the current health crisis, but also ensuring that the country is ready for future emergencies such as the Covid-19. Several initiatives are developing strategies to ensure that the COVID-19 vaccine is available to individuals across the country. The epidemic has severely damaged the health system in India, but it has also opened the way for new ideas and solutions that could transform the sector.

References

1. https://www.digitalauthority.me/resources/state-of-digital-transformation-healthcare/
2. https://yourstory.com/2021/04/innovations-digital-health-opening-new-doors-healthcare/amp
3. Rigby MJ. Ethical dimensions of using artificial intelligence in health care. AMA J Ethics. 2019;21:121-124.
4. Pacifico Silva H, Lehoux P, Miller FA, Denis JL. Introducing responsible innovation in health: A policy-oriented framework. Health Res Policy Syst. 2018;16:1-13.
5. Bhaskar S, Bradley S, Chattu VK, Adisesh A, Nurtazina A, Kyrykbayeva S, et al. Telemedicine as the new outpatient clinic gone digital: Position paper from the pandemic health system REsilience PROGRAM (REPROGRAM) international consortium (Part 2). Front Public Health. 2020;8:1-16.
6. Lu L, Zhang J, Xie Y, Gao F, Xu S, Wu X, et al. Wearable health devices in health care: Narrative systematic review. JMIR Mhealth Uhealth. 2020;8: 1-15.
7. https://yourstory.com/2021/02/tiecon-digitisation-healthcare-amid-pandemic-helped-improving- quality/amp