

Innovation: Future of Health

Futurist Paper

- Sowmiya Kanagaraj

Telehealth

Digitization has been the game changer in the contemporary world, even in the health sector; healthcare continues to revolutionize since the introduction of telehealth, which took the wave during the peak of the COVID-19 pandemic. Telehealth refers to the utilization of digital gadgets such as mobile phones, computers, smartwatches, and many more as a means of communication to manage diseases, resolve healthcare concerns, and receive healthcare services remotely at any given time. This technology utilizes telemedicine tools such as digital stethoscopes and audio-visual recording devices for disease management, especially for chronically ill patients who require frequent monitoring to enhance their health (Cenaj et al., 2022). The discovery of telemedicine has elevated health delivery to a higher notch in that the patient longer has to struggle to rush to the hospital for simple health follow-ups; the patient or client can contact any provided hotline from the comfort of their homes and enquire about any health concern provided there is access to internet connectivity, plus a digital gadget availability. The purpose of this paper is to scrutinize telehealth Trends-Assumptions-Implications (TAI) analysis and give future projections on telemedicine.

Telemedicine Trends

Telemedicine technology continues to be renowned globally each new day, whereby telehealth usage accelerated rapidly in 2020 as opposed to its market penetration earlier on in 2019, according to the Centers for Disease Control and Prevention (CDC) data. There were approximately 1.6 million visits to the telehealth sites reported, which indicated a 50%

increment in the number of people visiting eHealth in the same period a year earlier (Sahoo et al., 2023). Telehealth here proved to be of significant importance in moments of a health pandemic in the planning and response segment. According to health researchers, telehealth serves as a crucial means for consistent supply and promotion of health services accessibility in such moments of health emergencies. In addition, utilization of telemedicine currently continues to rise albeit sluggishly as compared to the abrupt rise of usage during the peak of the COVID-19 pandemic (Bingham et al. 2022). Telemedicine trends remain a crucial part of the health system data in order to help in the area of health policy-making and decision-making. Similarly, the percentage of insured individuals who accessed healthcare via telehealth was higher in comparison to the uninsured who utilized telehealth. Also, telemedicine continues to attract fewer persons aged between 24 years old to 18 years old. Marginalized groups such as Hispanics, Blacks, Asians, or Latinos embrace this technology via the audio-only eHealth services better than whites. These same groups did not prefer audio-visual, probably due to fear of identity reveal that would attract racial or ethnic health disparities.

Assumptions Regarding Telemedicine Technology

The assumptions of telemedicine include the provision of non-exhaustive medical professionals, assumptions that internet speed will always be favorable to necessitate communicating and that everyone who accesses telehealth understands English, thus leaving out the most vulnerable users sidelined. Telemedicine has no particular guidelines to govern its operations; hence, it becomes a challenge to know which health specialty can serve and which health specialty can't serve health services remotely (de Vere Hunt et al., 2022). As a result, you find that some particular professionals are used to providing remote health services, such as psychotherapists for mental health and nutritionists who offer diet advice. Further, the lack of regulations regarding internet speed used during communication between health providers

and clients interferes with telehealth services consistency (Krzysiński 2023). Telemedicine has only adopted the English language in its day-to-day doctor-patient interaction, making it culturally incompetent, assuming every client will manage to communicate in English. It is necessary to have a culturally congruent digital health system to prevent health disparities such as race or ethnicity and create all-rounded customer inclusivity.

Project Telemedicine's Development for the Year 2025

Based on the current telehealth patterns, by the year 2025, we can already expect increased utilization of eHealth by patients, enhanced chronic health management, better-managed health conditions, modified user experience, and assimilated data allotment. Additionally, telehealth rapid growth is already predicting enhanced data security, embedded health monitoring systems, remote-based pediatric care systems, and more funds redirection toward eHealth technology (Esposito et al. 2023). The future of telehealth is bright in that the global population realizes that this technology has more pros than cons. The pros of telehealth include convenience, affordable healthcare, and speed of service, as well as that the marginalized groups feel at ease seeking medical assistance without discrimination or harassment by authorities (Curioso et al., 2023). Consequently, with all these system enhancements and more adjustments now and then, the future of our healthcare system is promising, with reduced health challenges and fewer chronic ailments.

Implications of eHealth for the Organization and Healthcare Service Delivery

E-health is bound to impact health organizations and healthcare service delivery in a significant positive direction in that it helps decongest large public hospitals, will eventually trigger lowered health costs because many people will opt for telehealth, and will reduce waiting queues in the hospital waiting bays. Instead of traveling to a queue at the hospital,

patients will opt to consult health specialists through telehealth tools and only visit the hospital after agreeing on the date and timing for the medical visit (Iyanna et al., 2022). On the other hand, the health organization, since they will be less flocked, will strive to provide top-notch personalized care health services as a way of maintaining a competitive edge. Regina Herzlinger's 3-types of innovation are proposed to make healthcare better and affordable for all (Das & Sengar 2022). This healthcare model focuses on maintaining patient-centered care, technology-oriented care, and integration of all communication and information for health service harmony.

How Existing Healthcare Providers will be Impacted and New/Emerging Health Delivery Approaches

With the dynamism in technological growth, digitization, and embracement of telehealth by the general public, the possible implications for healthcare providers are experiencing insufficient walk-in patient traffic to sustain the healthcare business, and the emerging health approaches include hospitals delivering hospital services to the patient's doorsteps. Also, with the rising rates of inflation globally, everyone else is striving to cut down on domestic and overall expenditure; hence, the hospitals will have to provide healthcare services at the doorsteps of patients as well as install home monitoring machines remotely for patient accessibility (Kim et al. 2023). The driving force for people's choice to visit hospitals is not only to look for affordable health solutions but also to enjoy convenience, as technology has made it possible for health and all other services to stay available only a phone call away (Yu et al. 2023). Consequently, there will be fewer people suffering from chronic ailments due to health promotion and community awareness of lifestyle changes to maintain long, quality, and healthy lives. Behold, even nursing homes might be in low demand since families may seek home-hired nurses to take care of their elderly family members following the high rate of

elderly fatalities at nursing homes during the peak of COVID-19 as telehealth will make it even more convenient to monitor their health remotely (Chopade et al. 2023). It is prudent to pursue digital competence to remain relevant in order to get along with the spiraling digitization trend in the healthcare industry alongside the incoming of artificial intelligence to simplify health delivery.

Conclusion

Altogether, the purpose of this paper is to explore telemedicine Trends-Assumptions-Implications (TAI) analysis and give future projections on eHealth. Telehealth technology is spiraling daily, whereby telehealth usage accelerated rapidly in 2020 as opposed to its market penetration earlier in 2019, according to the Centers for Disease Control and Prevention (CDC) data. The assumptions of telemedicine include the provision of non-exhaustive medical professionals, assumptions that internet speed will always be favorable to necessitate communicating, and that everyone who accesses telehealth understands English, thus leaving out the most vulnerable users sidelined. Based on the current telehealth patterns, by the year 2025, we can already expect higher utilization of eHealth by patients, enhanced chronic health management, better-managed health conditions, modified user experience, and assimilated data allotment. E-health is bound to impact health organizations and healthcare service delivery in a significant massive way in that it will assist in decongesting large community health centers, will eventually trigger lowered health costs because many people will opt for telehealth, and will reduce waiting queues in the hospital waiting bays. With the dynamism in technological growth, digitization, and embracement of telehealth by the general public, the possible implications for healthcare providers are experiencing insufficient walk-in patient traffic to sustain the healthcare business, and the emerging health approaches include hospitals delivering hospital services to the patient's doorsteps. There is, therefore, a need for thorough

training in digital learning space in order to get along with the spiraling digitization trend in the healthcare industry alongside the incoming of artificial intelligence to simplify health delivery.

References

- Bingham, J. M., Rossi, M. A., & Truong, H. A. (2022). Addressing the need for a telehealth readiness assessment tool as a digital health strategy. *Journal of the American Pharmacists Association*, 62(5), 1524-1527.
<https://www.sciencedirect.com/science/article/pii/S1544319122001340>
- Cenaj, T., Lavin, L. M., Erickson, B. J., Farraj, R., Otto, F., Hercules, W. J., & Philip, A. C. (2022). Telehealth and Medicine Today 2022 Market Predictions. *Telehealth and Medicine Today*.
<https://telehealthandmedicinetoday.com/index.php/journal/article/view/312>
- Chopade, S. S., Gupta, H. P., & Dutta, T. (2023). Survey on Sensors and Smart Devices for IoT Enabled Intelligent Healthcare System. *Wireless Personal Communications*, 1-39.
<https://link.springer.com/article/10.1007/s11277-023-10528-8>
- Curioso, W. H., Coronel-Chucos, L. G., & Henríquez-Suarez, M. (2023). Integrating Telehealth for Strengthening Health Systems in the Context of the COVID-19 Pandemic: A Perspective from Peru. *International Journal of Environmental Research and Public Health*, 20(11), 5980. <https://www.mdpi.com/1660-4601/20/11/5980>
- Das, D., & Sengar, A. (2022). A fuzzy analytic hierarchy process-based analysis for prioritization of barriers to the adoption of eHealth in India. *International Journal of Medical Informatics*, 165, 104830.
<https://www.sciencedirect.com/science/article/pii/S1386505622001447>
- De Vere Hunt, I., van Egmond, S., Nava, V., Khodosh, R., Lester, J., Chiou, A. S., & Linos, E. (2022). Telehealth for older adults with skin disease: a qualitative exploration of dermatologists' experiences and recommendations for improving care. *British Journal of Dermatology*, 186(4), 731-733. <https://academic.oup.com/bjd/article-abstract/186/4/731/6705676>

Esposito, S., Rosafio, C., Antodaro, F., Argentiero, A., Bassi, M., Becherucci, P., & Gaddi, A.

V. (2023). Use of Telemedicine Healthcare Systems in Pediatric Assistance at Territorial Level: Consensus Document of the Italian Society of Telemedicine (SIT), of the Italian Society of Preventive and Social Pediatrics (SIPPS), of the Italian Society of Pediatric Primary Care (SICuPP), of the Italian Federation of Pediatric Doctors (FIMP) and of the Syndicate of Family Pediatrician Doctors (SIMPeF). *Journal of Personalized Medicine*, 13(2), 198.

<https://www.mdpi.com/2075-4426/13/2/198>

Iyanna, S., Kaur, P., Ractham, P., Talwar, S., & Islam, A. N. (2022). Digital transformation of the healthcare sector. What is impeding the adoption and continued usage of technology-driven innovations by end users? *Journal of Business Research*, 153, 150-161. <https://www.sciencedirect.com/science/article/pii/S0148296322006907>

Kim, Y., Shin, J. M., Yoo, S. H., & Keam, B. (2023, February). Challenges in Care for Non-COVID-19 Patients with Severe Chronic Illnesses during COVID-19 Pandemic: A Qualitative Study of Healthcare Providers Working around Acute Care Hospitals in South Korea. In *Healthcare* (Vol. 11, No. 4, p. 611). MDPI.

<https://www.mdpi.com/2227-9032/11/4/611>

Krzesiński, P. (2023). Digital health technologies for post-discharge care after heart failure hospitalization to relieve symptoms and improve clinical outcomes. *Journal of Clinical Medicine*, 12(6), 2373. <https://www.mdpi.com/2077-0383/12/6/2373>

Sahoo, S., Sahoo, J., Kumar, S., Lim, W. M., & Ameen, N. (2023). Distance is no longer a barrier to healthcare services: current state and future trends of telehealth research. *Internet Research*, 33(3), 890-944.

<https://www.emerald.com/insight/content/doi/10.1108/INTR-10-2021-0774/full/html>

Yu, T. W., Kingsmore, S. F., Green, R. C., MacKenzie, T., Wasserstein, M., Caggana, M., & Urv, T. K. (2023, March). Are we prepared to deliver gene-targeted therapies for rare diseases? In *American Journal of Medical Genetics Part C: Seminars in Medical Genetics* (Vol. 193, No. 1, pp. 7-12). Hoboken, USA: John Wiley & Sons, Inc..
<https://onlinelibrary.wiley.com/doi/abs/10.1002/ajmg.c.32029>