T2O
INDONESIA
2022 THINK

DIGITAL TRANSFORMATION IN HEALTH CARE—REACH THE UN-REACH AT A REDUCED COST

Task Force 6
Global Health Security and Covid 19

.

Purnawan Junadi (ATENSI, Indonesian Telemedicine Alliance)

Revi Renita (ATENSI, Indonesian Telemedicine Alliance)

Irwan Haryanto (ATENSI, Indonesian Telemedicine Alliance)

Rosmala Rosadi (ATENSI, Indonesian Telemedicine Alliance)

.

Abstract

The Covid-19 pandemic, which has had devastating impacts on health systems around the world, paradoxically, forced the health care system to change the service delivery model. Healthcare systems are turning to cloud computing, 5G telecommunications, artificial intelligence (AI), and interoperable data and analytics to address today's challenges and build digitally powered care delivery models

Digital Transformation also provides new opportunities to achieve the 17 Sustainable Development Goals, although it requires political commitment, making it a more integrated yet simpler system, and choosing appropriate and contextually affordable digital technologies for each country.

The Lancet commission, which explores how uneven achievement of UHC from the digital health perspective, found that the reasons lie in the exclusion of young people in developing the health system, ignorance of solidarity and digital determinant of health, and not considering enough health equity.

During the pandemic, tele information and teleconsultation services have proven to be the main feature when conventional systems are paralyzed or focused on tackling the pandemic, and greatly helped millions of mild COVID-19 sufferers who do not yet require treatment, thereby greatly reducing the burden on hospitals. Along with that, telemedicine platforms are growing rapidly. It seems that patients who seek treatment during the pandemic will continue to use telemedicine in the future because they feel safer, more comfortable, and in terms of cost and time, cheaper.

To make digital transformation of effective in achieving better health for all people at affordable cost, that Governments should play a more active role in shaping the process, preparing digitalization in a broader term, from education, through financial and regulatory preconditions, to implementation of monitoring systems to monitor its effects on health system performance.

.

Challenges

The Covid-19 pandemic, which has lasted more than two years, has had devastating impacts on health systems around the world. The skyrocketing number of patients causes acute bed shortages, lockdowns, travel bans, and the threat of increased mortality for elderly health workers, causing available health workers to work overtime to overcome the shortage of manpower. Supply chain disruptions, scarcity of equipment, and inadequate facilities, especially for crucial ones, such as ventilators, oxygen supply, and personal protective equipment make the service situation even more worrying at the time.

Paradoxically, the storm of recession and rising service costs forced the health care system to change various elements—from the infrastructure model to the service delivery model—to continue to meet quality and access targets but with attention to how to reduce costs due to limited resources.

One solution lies in the digital transformation and convergence of healthcare delivery models — a trend that is becoming much more acceptable during the pandemic. Social distancing has forced many providers to use virtual care technology for scheduled outpatient appointments. Healthcare systems are turning to cloud computing, 5G telecommunications, artificial intelligence (AI), and interoperable data and analytics to address today's challenges and build digitally powered care delivery models (Deloitte, 2022)

Digital Transformation also provides new opportunities to achieve the 17 Sustainable Development Goals and is an important enabling factor to ensure that 1 billion more people benefit from universal health coverage, that 1 billion more people are better protected from health emergencies, and that Over 1 billion people enjoy better health and well-being (WHO: Global strategy for digital health 2020-2025). To make a successful digital transformation successful, it requires political commitment to overcome the main obstacles faced by the countries, that the transformation should make the system more integrated yet simpler, and how to choose appropriate and contextually affordable digital technologies for each country.

The WHO report on UHC in 2021 stated that variations in access to required health services without sustaining financial hardship (UHC) led to differences in the achievement of SDG 3 (Good Health and Wellbeing), both between and within countries (WHO, 2021). The Lancet and

Financial Times commission, which was formed to explore this issue from the digital health perspective, found several interesting things. The first is that young people often do not get enough attention to developing the health system, even though they are interested in the digital environment in health services, although they are also worried about data privacy. Second, the concepts of data solidarity and digital determinant of health have not been included in the agenda for developing digital transformation of health services, even though both are important in realizing the benefits of this transformation. Third, strategies developed have not considered all the important factors for health equity, even though they are important in achieving UHC (Lancet Commission, 2022)

In almost half of the G20 countries, the main challenge in starting to build digital transformation is that most health care facilities are currently untouched by digital technology, with fragmented and scattered data in hundreds of varied health sector applications, as well as regulatory limitations in terms of standardization and data exchange. The impact is that future health policies will find it difficult to rely on data and health services will also become fragmented. Digital transformation allows data to be more integrated, enabling more comprehensive decision-making, and enabling sustainable health care delivery.

On the other hand, along with the development of digital-based health services, the threat of cyber security is also playing a big role. It is estimated that Healthcare Industry Cyberattacks Increased by 45%, due to various driving factors because healthcare information needs to be open and shareable so that the theft of the information takes much longer to be noticed, variety of medical devices are an easy entry point for attackers. In addition, many healthcare staffs are not educated in online risks, and yet many times they must access data remotely. Finally, the relatively high value of the stolen healthcare information makes it even more targeted for ransomware (Rudiantara, 2021)

The pandemic is also a blessing in disguise for the development of telemedicine and telehealth. Tele information and teleconsultation services have proven to be the main feature when conventional systems are paralyzed or focused on tackling the pandemic, helping millions of people suffering from non-covid diseases who have difficulty accessing conventional health services. A previous RAND survey found that 40% of Americans with chronic health conditions had used telehealth by the spring of 2020 (Rand,2021).

This telemedicine has also greatly helped millions of mild COVID-19 sufferers who do not yet require treatment, thereby greatly reducing the burden on hospitals. Along with that,

.

telemedicine platforms are growing rapidly. It seems that patients who seek treatment during the pandemic will continue to use telemedicine in the future because they feel safer, more comfortable, and in terms of cost and time, cheaper. The survey by McKinsey.com (2021) found that Telehealth utilization has stabilized at levels 38X higher than before the pandemic. Similarly, consumer and provider attitudes toward telehealth have improved since the pre-COVID-19 era. Perceptions and usage have dropped slightly since the peak in spring 2020. Some barriers—such as perceptions of technology security—remain to be addressed to sustain consumer and provider virtual health adoption, and models are likely to evolve to optimize hybrid virtual and in-person care delivery (Oleg Bestsennyy,2021)

In the industrialized world, telemedicine will likely continue to move healthcare delivery from the hospital or clinic to the home. In the developing world or regions with limited infrastructure, telemedicine will mainly be used in applications that link providers based at health centers, referral hospitals, and tertiary centers (Heinzelmann, 2005). The challenge ahead is how to answer issues regarding data security and confidentiality, patient safety, and the quality of virtual visits.

.

Recommendations

Today, digitization has touched every part of our lives, influencing the way we work, shop, travel, educate, manage, and live. Digital transformation brings people, business, and technology together, enabling organizations to effectively change business dynamically to achieve goals more efficiently (SAS, 2022). The issue is not transformation or not, because it will happen, but whether we will be pioneers or imitators. Instead, we need to be involved in the development of digital technology, such as 5G, artificial intelligence (AI), cloud computing, and the internet of things (IoT), so that it can be directed to the benefit of the health of the population, not just for business.

Expert Panel on effective ways of investing in Health of European Commission, on assessing the impact of digital transformation of health services, stated that Governments should play a more active role in shaping the process, preparing digitalization in a broader term, from education, through financial and regulatory preconditions, to implementation of monitoring systems to monitor its effects on health system performance (EXPH).

The government of Indonesia, which is carrying out digital transformation in the health sector, offers 3 recommendations that can be generic solutions for many countries. The first is Health Data Integration and Development Its name implied Health Data System Integration and Health Big Data Analytics System Development. This activity will improve the quality of health policies based on accurate, up-to-date, and complete data. The second is integrating various health services and developing Health Service Applications, which improve the efficiency of health services in health facilities on every line. The third part is Health Technology Ecosystem Development, which consists of Telemedicine Technology Expansion, Health Technology Innovation Product Ecosystem Development, and Health Biotechnology Research Integration. Its output is to create collaborations and an ecosystem of digital health innovations between governments, universities, industry, and the public (MOH, 2021)

In this regard, The Lancet Commission delivered four key recommendations to best harness the potential of digital transformation to benefit health and achieve UHC by 2030. First, to acknowledge and recognize digital technology and transformation as new determinants of health. Second, to build up public trust in digital transformations of health by safeguarding health data, protecting young and vulnerable populations from online harms, promoting transparency

.

and accountability for health applications, regulating businesses and practices that contribute to health misinformation, and integrating digital health literacy into basic education curricula. Third, to apply the concept of data solidarity in approaching health data governance, by ensuring individuals have control over their health data, channeling health data for the public good, and building a culture of data justice and equity. Fourth, to Invest in the enablers of digital transformation and UHC (the Lancet Commission)

As for telemedicine or telehealth, The Information Technology and Innovation Foundation, a District of Columbia-based think tank, in recognizing that licensing and regulation have not kept pace with the growth of telemedicine applications, offers five recommendations for the successful adoption of telehealth, which can be generalized to other countries. First, the adoption of a standard definition for telehealth, and an option to impose penalties if they do not adopt such standards within two years. Second, the establishment of a single, national instead of regional license for telehealth providers, to provide services to beneficiaries at the country level. Third, the creation of technology- and location-neutral insurance policies. The country needs to modify its national insurance to accommodate telemedicine/telehealth services. Fourth, collaborate with the government prescription drug monitoring program. A national telehealth system would need these programs to communicate with each other, which would require format standardization. Lastly, develop a common technical standard to allow prescription drug monitoring programs to share data with health IT tools used by providers for clinical decision support (Terry, 2014).

Finally, realizing the potential of digital transformation for health depends on 3 aspects of a country's digital readiness. First, does the entire population have consistent access to affordable electricity, connectivity, and data? Second, are important digital tools such as smartphones accessible and affordable? Lastly, is the population literate in basic digital health concepts? The more readiness the country is, the better the chance. (The Lancet Commission)

.

References

Deloitte: Digital Transformation and Health Care Delivery Model Convergence, https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-digital-transformation.pdf, assessed on August 19, 2022.

EXPH-European Commission: Assessing The Impact Of Digital Transformation Of Health Services, Report of the Expert Panel on effective ways of investing in Health (EXPH), https://www.researchgate.net/publication/331589543_EXPH_Assessing_the_impact_of_digital_transformation_of_health_services, Assessed on August 20, 2022

Heinzelmann PJ, Lugn NE, Kvedar JC. Telemedicine in the future. J Telemed Telecare. 2005;11(8):384-90. doi: 10.1177/1357633X0501100802. PMID: 16356311.

Oleg Bestsennyy, Greg Gilbert, Alex Harris, and Jennifer Rost : Telehealth: A quarter-trillion-dollar post- COVID-19 reality? June 9, 2021. The article was downloaded from https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/telehealth-a-quarter-trillion-dollar-post-covid-19-reality on 20th August 2022

Ministry of Health (MOH): The Blueprint, The Strategy of Health Digital Transformation-2024, 2021.

Rudiantara: Digital Technology and Personal Data Privacy in Indonesia Telemedicine, Paper presented on Deloitte and ATENSI Webinar on Utilization of Information and Telecommunications Technology in the world of Health in Telemedicine services, 26th November 2021

Terry, Mark: 5 recommendations for telehealth success, https://www.fiercehealthcare.com/it/5-recommendations-for-telehealth-success, assessed on August 20, 2022

The Lancet and Financial Times commission on governing health futures 2030: growing up in a digital world, https://thepublichealthinsight.com/un-sustainable-development-goal-3-achieving-universal-health-coverage-through-digital-transformation/, Assessed on August 21, 2022

.