Committee: World Health Organization

Issue: The importance of digital platforms and additional services in supervising and guiding patients during health crises.

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INTRODUCTION

Dear delegates,

WHO's first topic is one of the most relevant issues of our era. Amidst the pandemic and lockdowns, inability to visit medical professionals while in health crisis, begged the following question: "Is it possible to guide and monitor patients on health issues via digital platforms?"

We hope that this study guide will be useful as the primary source of information for your understanding of this matter. However, it is extremely important that you do your own research as well, regarding your country's policy.

Should you have any questions on the topic or the conference in general, please contact us via email (nikki.drakopoulou@gmail.com, dionysiamei@gmail.com, gbakalis17@gmail.com), Instagram (@nikki_dra, @_dionysia.mei_, @b1k1l1s) or Facebook (Dion Meimar, Nikki Drakopoulou).

We trust this conference will be helpful and enlightening! Looking forward to meeting and working with you all!

Kind regards,

Dionysia Meimaroglou,

Nikki Drakopoulou,

George Bakalis

DEFINITION OF KEY TERMS

Digital Platforms

Digital platforms are internet and web-based virtual spaces that are based on some kind of unique business models in order to exchange, information, knowledge, goods, ideas, or services, etc, either with financial or nonfinancial returns.[1] A digital platform gets its value form the users; such a platform without a crowd is useless.

Digital Healthcare / Telehealth / eHealth Services

Digital health is a broad, multidisciplinary concept that includes concepts from an intersection between technology and healthcare. Digital health applies digital transformation to the healthcare field, incorporating software, hardware and services. Under its umbrella, digital health includes mobile health (mHealth) apps, electronic health records (EHRs), electronic medical records (EMRs), wearable devices, telehealth and telemedicine, as well as personalized medicine.[2]

Interoperability

Interoperability is the basic ability of computerized products or systems to easily connect in order to exchange or cross-reference information with each other, without restrictions on implementation or access.[3]

Artificial Intelligence (AI)

Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence[4]. The term can also be applied to any system that exhibits characteristics related to human thinking, such as learning and problem-solving.

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[1] *What are digital platforms.* IGI Global. (n.d.). Retrieved September 18, 2021, from https://www.igi-global.com/dictionary/digital-platforms/78668.
[2] Bernstein, C. (2021, March 11). *What is digital health (digital healthcare) and why is it important?* SearchHealthIT. Retrieved September 18, 2021, from https://searchhealthit.techtarget.com/definition/digital-health-digital-healthcare.
[3] *What is Interoperability? Definition and FAQs*. OmniSci. (n.d.). Retrieved September 18, 2021, from https://www.omnisci.com/technical-glossary/interoperability.
[4] *Artificial intelligence.* BuiltIn. (n.d.). Retrieved September 18, 2021, from https://builtin.com/artificial-intelligence .

Health crisis / Public health care crisis

A difficult situation or a health threat that affects humans in one or more geographic areas, from specific locations to the entire planet, usually challenging the stability of health care systems.[5]

Limited Liability Company (LLC)

A limited liability company (LLC) is a business structure for private companies in the United States, one that combines aspects of partnerships and corporations. Limited liability companies benefit from the flexibility and flow-through taxation of partnerships and sole proprietorships, while maintaining the limited liability status of corporations.[6]

Inc.

Inc. is the short form of incorporate, which is used in the names of United states companies that are legally established, like Facebook, Twitter etc. [7]

BACKGROUND INFORMATION

Healthcare systems constantly have to adjust their nursing plans according to the specific needs of each patient and era. Changes in the way health care is delivered during a health care crisis (such as this pandemic) are needed, in order to reduce staff exposure to patients and minimize the risk of transmission of viruses. Telehealth services proved to be the fittest solution since in-person services were largely not an option.

Historical background

One of the earliest and most famous uses of telemedicine in hospitals was in the late 1950s and 1960s, when a closed-circuit television (CCTV) connection was established between

[5] Wikimedia Foundation. (2021, May 29). *Health crisis*. Wikipedia. Retrieved September 18, 2021, from https://en.wikipedia.org/wiki/Health_crisis
[6] *Limited liability Company (LLC)*. Corporate Finance Institute. (2020, July 4). Retrieved September 18, 2021, from https://corporatefinanceinstitute.com/resources/knowledge/strategy/limited-liability-company-llc/
[7] *Inc.* Cambridge Dictionary. (n.d.). Retrieved September 18, 2021, from https://dictionary.cambridge.org/dictionary/english/inc.

the Nebraska Psychiatric Institute and Norfolk State Hospital for psychiatric counselling. It was the beginning.

Massachusetts General Hospital (MGH) – Logan Airport

In 1962, a terrible accident occurred in Logan airport, luring hundreds of spectators and radio broadcasters to the scene. The resulting traffic prevented emergency vehicles from reaching the airport. Therefore, many of the injured patients, who could have been rescued, were not. As a result of the tragedy, a new medical facility was contracted in Logan Airport by MGH. During his time at the facility, Dr. Kenneth Bird was inspired to set up a live television interconnection in order to be able to diagnose patients from afar ("tele-diagnosis"). This was implemented in three locations in Massachusetts.

STARPAHC – NASA's contribution

An early telemedicine project led by NASA, the Papago Tribe (now the Tohono O'odham Indian Nation), the Lockheed Missile and Space Company, the Indian Health Service and the Department of Health, Education and Welfare attempted to use technology in order to provide improved health care to an isolated population in southern Arizona. The project, called STARPAHC (Space Technology Applied to Rural Papago Advanced Health Care), was carried out in the 1970s and demonstrated the viability of a group of public and private partners working together to provide medical care to remote populations via telecommunication.

Applications of Telehealth

Some of the most important applications of telehealth are:

- Surveillance systems in order to supervise and evaluate health practitioners.
- Evidence-based digital tools in order to support patient diagnosis and treatment.
- Messaging platforms allowing for direct patient-doctor communication at all times.

All of the above can potentially offer effective alternatives to certain face-to-face interactions with providers when such are not absolutely necessary.

Misuse of Telehealth

Some of the major issues that rise when one is introduced to eHealth services regard the possibility of data breaches, such as unauthorized use of patient data and copyright infringements. This can be easily avoided by health care practitioners being compliant to all applicable regulations, as well as being transparent with the patient and receiving consent when needed.

Impact of COVID-19

The COVID-19 pandemic posed an enormous challenge to the global health care community, which led to the rise of telehealth. Through the use of these systems during this health crisis, well-suited solutions were provided for all kinds of health emergencies (covid-related or otherwise). Even though this pandemic will come to an end, these tools have proved to be important and will be used, even when they are not absolutely necessary, since they have made the health care world more easily accessible for people unable to have in-person consultations or check-ups regularly.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

United States of America

The United States have been a juggernaut in all matters related to the Internet ever since its invention and its popularization during the 20th century. It's where the majority of widely used social media and private medical websites are based and have played a significant role in their worldwide spread. As with much of the country's healthcare system, telehealth options are privatized and many hospitals, as well as private companies, offer telehealth services to citizens.

United Kingdom

Similarly, to the United States, the United Kingdom offers a variety of digital health platforms, most notably the National Health Service and BCC websites, which are very widely used and trusted worldwide. Additionally, the UK is believed to have a very established telehealth market, as its utilization and support of platforms such as Babylon and Push Doctor had managed to create a mature environment able to foster and grow a fruitful telehealth market, even before the COVID-19 pandemic.

Canada

Canada is one of the pioneers in digital healthcare. In 2001, the federal government of Canada established Canada Health Infoway, a government funded, non-profit organization dedicated to offering easily accessible digital health through means such as e-prescriptions, information, and research.

Estonia

Estonia has been praised as being one of the most digitally advanced countries in the world and their healthcare system is no exception. As a part of their digital healthcare policy, nearly all their health data and prescriptions are digital. This however extends beyond just data and prescriptions, as the existence of an online database of health records allows doctors and citizens alike to access vital information about a patient (blood type, preexisting conditions etc.), as well as contact emergency services using the patient's personal ID code and the e-Patient portal.

Sri Lanka

During the COVID-19 pandemic, Sri Lankan initiatives in telemedicine have established the practice in the country and have marginally increased patient confidence in remote consultations. Examples include the Sri Lankan Association of Community Ophthalmologists (SLACO) Facebook page, where patients were able to consult doctors of the association, as well as telehealth startups such as oDoc (largest telemedicine company in Sri Lanka) and Maya, which were able to secure millions in funding.

World Health Organization

The WHO's strategy on digital health is based on 3 separate pillars:

- ✓ Policymakers – Support decision-makers at the local, regional and national level to ensure the sustainable, safe and ethical use of technology.
- ✓ Practitioners – Facilitate the capacity for practitioners to use digital technologies to deliver healthcare benefits effectively.
- ✓ Population – Improve the health and well-being of people, with the interventions of digital health. [8]

The goal of this strategy is to help all countries to adopt and benefit from a functional and innovative public digital healthcare system, to achieve health and well-being related Sustainable Development Goals (SDGs), as well as create equality in healthcare and ensure everyone has access to healthcare.

[8] World Health Organization. (n.d.). *Digital health*. World Health Organization. Retrieved September 18, 2021, from https://www.who.int/health-topics/digital-health#tab=tab_2

Canada Health Infoway

As mentioned above, Canada Health Infoway is a non-profit organization established and funded by the Canadian government established in 2001 with the purpose of digitalizing healthcare and expanding the accessibility of healthcare. Their business model is built on the fact that "patient-centered'' care is directly related to improved quality and safety, lower health care costs and the enhanced performance of providers" and that the Internet provides the tools needed to achieve such care nation-wide

Google LLC

Google LLC is a multinational technology company founded in 1998 by Larry Page and Sergey Brin. Originally starting as a search engine made to simplify information on the internet, Google has expanded greatly into various sectors such as technology, services, and communications. However, their Google Search engine remains the most used search engine in the world. It is through Google that most people will access health services worldwide.

Facebook Inc.

Facebook Inc. is a social communications company founded by Mark Zuckerberg on the 29th of July 2004. It specializes in developing technologies related to information and media sharing and operating their own social networking website as well as their various acquisitions, such as Instagram and WhatsApp. In recent years, Facebook has become infamous for being the breeding grounds for medical misinformation, most notably the anti-vaccine movement.

Twitter, Inc.

Twitter, Inc is a social communications company founded on the 21st of March 2006 by Jack Dorsey. The website is based on short text and media posts called Tweets and has played a substantial role in the information of people around the world and facilitating conversation on various social, political and cultural topics, especially in recent years. It is undoubtedly one of the first websites people are going to learn about medical news, telehealth services and possibly even contact doctors and pharmacists.

TIMELINE OF EVENTS

Date	Description of Event
1940s	First electronic medical record transfer is completed via telephone line.
1964	First two-way television established between the Nebraska Psychiatric Institute and Norfolk State Hospital.
1967	Installations linking the Logan Airport in Boston and Massachusetts General Hospital confirmed the possibility of remote diagnosis using interactive television.
Late 1960s – Early 1970s	The United States invest in various telehealth programs, such as INTERACT, which linked multiple universities and hospitals, as well as STARPAHC, a collaborative project between NASA and the Tohono O'odham Indian Nation, then called the Papago Tribe.
1998	Google is founded.
2001	Establishment of Canada Health Infoway.
2005	Facebook is founded.
2005	The World Health Assembly adopts resolution WHA58.28, which establishes a global eHealth strategy for WHO. Launch of WHO's Global Observatory for eHealth. Twitter is founded.
2005	WHO launched the Global Observatory for eHealth (GOe)
2008	Launch of the Estonian National Health Information System.
27 May 2013	The Sixty-sixth World Health Assembly passed resolution WHA66.24 on eHealth standardization and interoperability.
March 2019	The consultative process for the development of the Global Strategy on Digital Health 2020-2025 was launched.
13 November 2020	The Seventy-third Session of the World Health Assembly endorsed the Global Strategy on Digital Health 2020-2025.

UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES AND EVENTS

➢ Resolution WHA 58.28

The Resolution WHA 58.28 was adopted on 25 May 2005 by the Fifty-eighth World Health Assembly. It proposes a strategic plan by WHO for the development and empowerment of eHealth services as well as the creation of infrastructure for information and communication technologies. It is a very important resolution since it is one of the first attempts to establish eHealth.

➢ Resolution WHA66.24

"In 2005, in the midst of the Internet's rise, the World Health Assembly recognized the potential of eHealth to strengthen health systems and improve quality, safety and access to care, and encouraged Member States to take action to incorporate eHealth into health systems and services."[9]

➢ Report EB139/8

In this report published in 2013, the World Health Assembly outlines the benefits and setbacks of eHealth and specifically mobile health services. Particularly, they note the popularity of mobile health applications, how it increases access to health services. Additionally, they list factors which prevent governments from implementing such services, most notably the absence of the appropriate standards, tools and communication between ministries of health and ministries of information and communication technologies

➢ Resolution WHA71.7

This resolution serves as an update to Report EB139/8, this time urging Member States to focus on assessing, developing and optimizing their digital health services, as well as requesting a shift in the WHO's strategy, as to elevate the Organizations ability to assist Member States in the implementation of Digital Health Services.

[9] World Health Organization. (n.d.). *Global Observatory for eHealth*. World Health Organization. Retrieved September 18, 2021, from https://www.who.int/observatories/global-observatory-for-ehealth.

➢ Global Strategy on Digital Health 2020-2025

In accordance with Resolutions WHA 58.28, 66.24 and 71.1, the preparation of the Global Strategy on Digital Health 2020-2025 was initiated in March 2019. Then, the strategy was endorsed by the Seventy-third Session of the World Health Assembly (decision WHA 73(28)). The vision of this strategy is to improve health for everybody no matter where they are by developing and adopting appropriate person-centered health solutions so as to prevent, detect and respond to epidemics and pandemics, create infrastructure and useful applications. Its purpose is to empower health systems using digital health technologies.

➢ Global Observatory for eHealth (GOe)

The Global Observatory for eHealth is an initiative launched by WHO in 2005 dedicated to studying the evolution and impact of eHealth in countries. Its goals are:

a) provide evidence and information so that improved policies are established

b) increase awareness so as to fund eHealth

c) provide knowledge that will enable the improvement of eHealth through the use of Information and Communication Technology (ICT)

d) gather authorized information on eHealth

It is under the scope of the GOe that all above mentioned resolutions were published and signed.[10]

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

➢ Code of Practice on Disinformation

The Code of Practice on Disinformation was the first time worldwide that online platforms, leading social networks and advertisers from all over the world voluntarily agreed on self-regulatory standards in order to fight disinformation. The aim has been to achieve the objectives presented in April 2018 by the Commission's Communication, such as demonetization of purveyors of

[10] WHO, Global observatory for eHealth?
https://www.who.int/observatories/global-observatory-for-ehealth

disinformation and transparency in political advertising to the closure of fake accounts. The code of Practice was signed by the online platforms Google, Mozilla, Facebook and Twitter, as well as by advertisers and parts of the advertising industry in October 2018 with Microsoft and TikTok joining in 2019 and 2020 accordingly. Since then, its implementation has been monitored closely revealing that comprehensive efforts have been made, whereas further action needs to be taken. The strengthened Code of Practice in 2021 will strive to achieve a co-regulatory instrument in accordance with the model presented by the Digital Services Act.[11]

➢ European Commission's Digital Strategy

The European Commission's Digital Strategy[12][13] during the Covid-19 pandemic has used digital tools to:

a) monitor the spread of coronavirus,
b) research and develop diagnostics, treatments and vaccines,
c) ensure the safety and connection online.

More specifically, they have used e-Health[14] to maintain public healthcare services and national contact tracing and warning apps[15] to let users know if they have come in contact with a Covid-19 patient. What is more, artificial intelligence (AI)[16], high performance computing and more than thirty satellites have helped detect patterns in the spread of corona virus, in order for health sectors to monitor it and effectively form response strategies. Additionally, three supercomputing centers[17] study and develop vaccines, treatments and

[11] *Code of practice on disinformation*. Shaping Europe's digital future. (n.d.). Retrieved September 18, 2021, from https://digital-strategy.ec.europa.eu/en/policies/code-practice-disinformation.
[12] https://wayback.archive-it.org/12090/20210727035513/https://ec.europa.eu/digital-single-market/en/content/european-digital-strategy
[13] European Commission. "A Europe Fit for the Digital Age." European Commission, 3 Feb. 2021, www.ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en.
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[16] ---. "A European Approach to Artificial Intelligence." European Commission, 23 June 2021, www.digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence.
[17] ---. "Using European Supercomputing to Treat the Coronavirus | Shaping Europe's Digital Future." European Commission, www.digital-strategy.ec.europa.eu/en/news/using-european-supercomputing-treat-coronavirus. Accessed 14 Aug. 2021.

diagnostics. They have also cooperated with telecom operators to ensure connectivity and network. Last but not least, in dialogue with the signatories of the EU's Code of Practice on Disinformation[18] they are ensuring the objective information of citizens on coronavirus.

POSSIBLE SOLUTIONS

The two main concerns during a health crisis are maintaining health services while dealing with the crisis itself.

Maintaining health services

In order for pre-existing services to be sustained digital platforms should be established by the public healthcare systems, making use of telemedicine solutions such as clinical consultations via video or text messaging, e-pharmacies and mobile clinics, etc.

Dealing with the health crisis

The aforementioned platforms could be used for the crisis itself as well, but it is important that additional services are authorized to further cover the specific needs of the crisis. A clear illustration of that are Covid-19 tracking apps and patient monitoring apps.

Supervising patients in LEDCs

It goes without saying that the task of patient supervision and guidance during a health crisis is even more arduous in LEDCs where internet access is not given and the healthcare sector lacks funding. Thus, in order to achieve the aforementioned, alterations need to be made to the solutions that mostly regard MEDCs. For instance, electronic devices could be donated to underprivileged households. What is more, in order for them to be accessible, network and connectivity should be made certain for everyone, as well as training and guidance for both patients and physicians.

Functionality of the platforms

However, solutions should be focused on some specific aspects of these platforms as well. First and foremost, personal information protection should be

[18] ---. "Code of Practice on Disinformation." European Commission, www.digital-strategy.ec.europa.eu/en/policies/code-practice-disinformation. Accessed 14 Aug. 2021.

ensured in alignment with each country's regulations. Furthermore, monitoring mechanisms should be put in place in order to secure the functioning of the platforms.

Ensuring objective information of citizens

In the era of technology where it takes seconds for a piece of information to conquer the internet and anything can be posted on social media platforms where minimal inspection is imposed it is very easy that wrong information is spread. During a health crisis it is exceptionally important that people are correctly informed in order to be able to protect themselves and others. Hence, the responsible authorities need to provide objective information to citizens through their official websites and social media profiles. At the same time, it is substantial that misinformation and disinformation are eliminated by ways such as monitoring information provided on the internet and requiting that people who share information are identified so as to ensure some sort of accountability.

USEFUL LINKS

- European Commission's Digital Solutions During the Pandemic
- Telemedicine | Johns Hopkins Medicine
- Pandemic brings telehealth to the forefront
- Practical Applications of Modern Telemedicine

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Finding Telehealth Options

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Uk Found To Be Most Established Market For Telemedicine

https://www.pharmaceutical-technology.com/surveys/uk-found-to-be-most-established-market-for-telemedicine-among-five-eu-countries/

Sri Lanka: Riding the Telemedicine Wave

https://www.ha-asia.com/sri-lanka-riding-the-telemedicine-wave/

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