

Digital Skills and Research Methods

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Lecture Code: LCHS4002

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- **The use of digital literacy for employee well-being and their professional career development (Teaching, e-learning and self-development)**

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- **The use of digital communication, collaboration, and participation.**

The use of contemporary technology in health care (Diagnostic, administrative and care support)

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Purpose and Scope of the Review

- **What is the contemporary technology in healthcare system**
- **How the contemporary technology is transforming healthcare system.**
- **How the public and healthcare system uses the contemporary technology.**
- **What are the benefit of contemporary technology in healthcare system**



Advantages

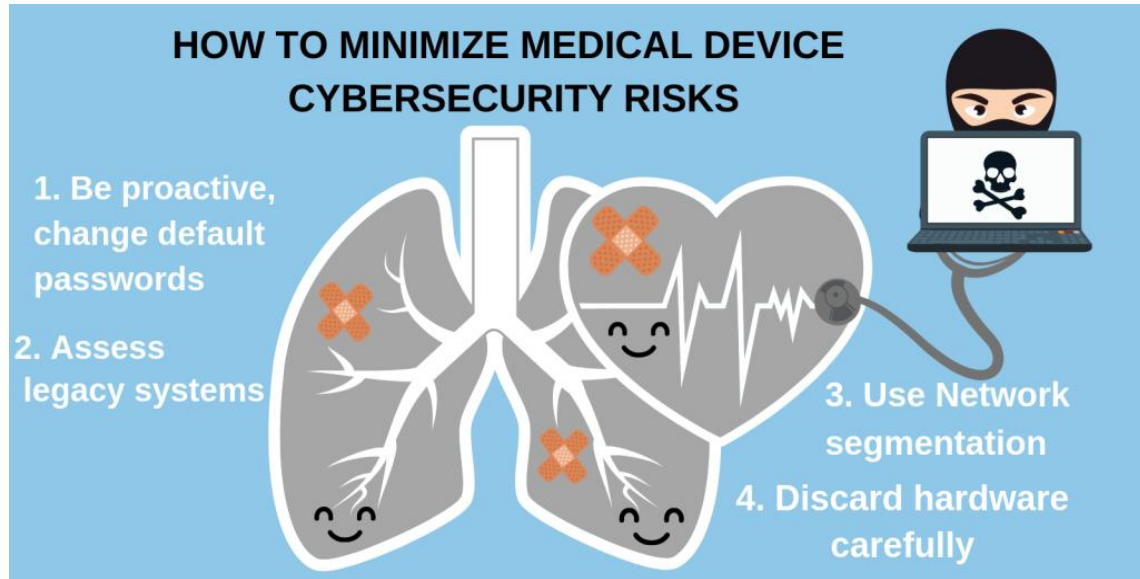


- Improve the quality of the health services
- More complex and sensitive surgeries can be performed more successfully.
- Capturing and comparing data, as well as sharing good practice with peers

- New software increased disease control
- Enhancing the care and treatment providers can offer



Disadvantages



- Doctors missing visual cues or misinterpreting messages that could aid in a diagnosis.
- A mistake due to the surgeon not physically being able to feel what they are doing when using robotic aids.

- An overreliance on technology which may reduce staff's practical clinical skills.
- An increase in the risk of cyber attacks and data theft.



Future benefits of contemporary technology in healthcare



- ▶ **Artificial intelligence in healthcare**
- ▶ **Integrating Data and Predictive Analysis**
- ▶ **Remote Patient Monitoring & Virtual Care**

- ▶ **Wearables in Healthcare**
- ▶ **Augmented & Virtual Reality in Healthcare**

References

- ▶ <https://knowhow.distrelec.com/medical-healthcare/top-10-healthcare-technology-trends/>
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- ▶ <https://www.forbes.com/sites/forbestechcouncil/2022/01/11/the-future-of-healthcare-technology/?sh=43ca76f14750>
- ▶ <https://www.highspeedtraining.co.uk/hub/technology-in-health-and-social-care/#:~:text=There%20are%20many%20benefits%20of,sharing%20good%20practice%20with%20peers>
- ▶ <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/digital-inclusion/digital-inclusion-in-health-and-social-care>



USE OF TECHNOLOGY DURING COVID-19 IN HEALTH CARE

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INTRODUCTION



- Worldwide healthcare systems have experienced a unique and difficult time during the COVID-19 pandemic.
- Hospitals were overcrowded, and healthcare workers were struggling to keep up with the demand for medical care, stretching healthcare providers to their breaking point.
- However, technology has been a vital tool in aiding medical professionals in their fight against the pandemic.
- This presentation talks about how technology was used in healthcare during the COVID-19 pandemic.

Technical proficiency during COVID

TELEMEDICINE

- ▶ Healthcare providers depend heavily on telemedicine, or remote medical consultation, to communicate with their patients.
- ▶ Doctors and other medical professionals can now diagnose and treat patients from a distance thanks to telemedicine. Without having to physically visit the clinic or hospital, patients can now consult with doctors via video or phone calls and get prescriptions.

REMOTE PATIENT MONITORING

- ▶ Utilizing wearable technology, such as smartwatches and fitness trackers, to monitor patients' vital signs and health information is known as remote patient monitoring.
- ▶ Remote patient health monitoring allows medical professionals to keep an eye on their condition and act if anything seems off. For COVID-19 patients

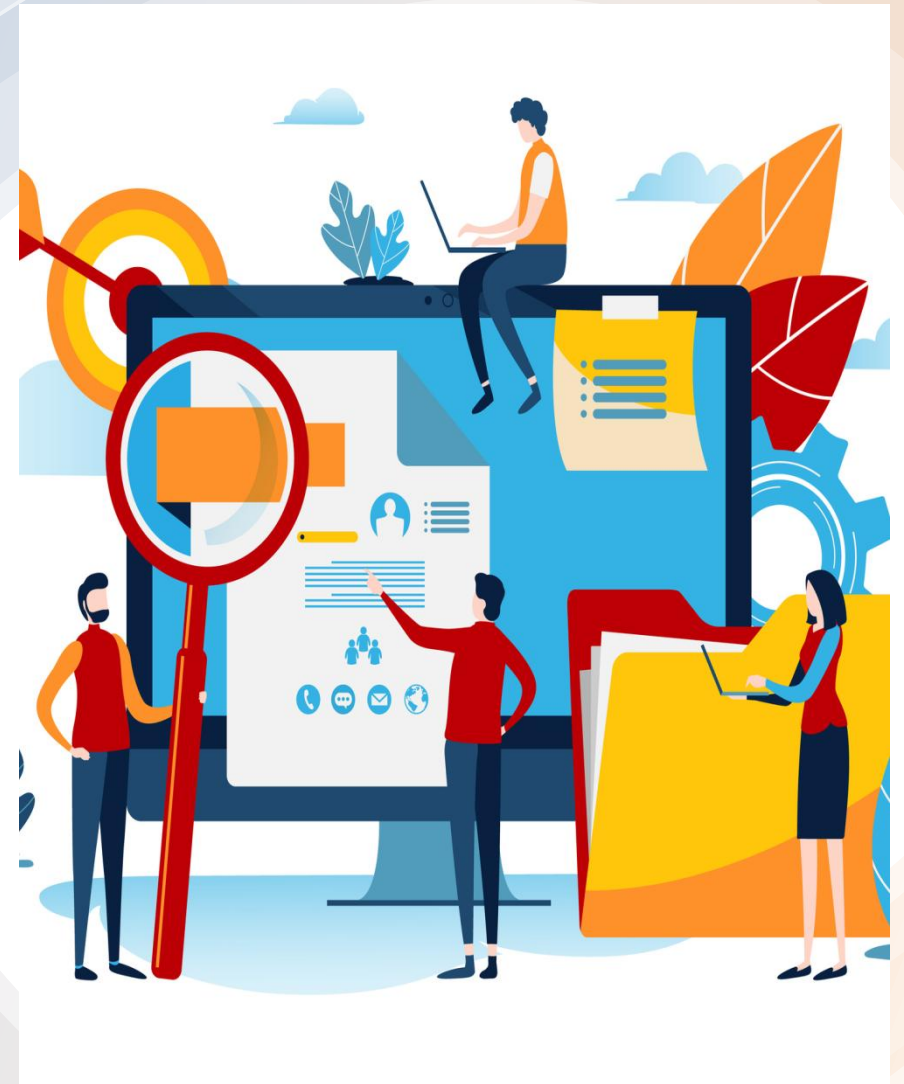


COMMUNICATION TOOL

- ▶ Through teleconferencing and messaging apps, technology has made it possible for doctors and nurses to communicate with one another, enhancing their ability to work together and share knowledge (Vargo and et. al., 2021).
- ▶ Technology has also been crucial in facilitating communication between healthcare professionals. Since there are so many people in need of medical attention, it has been crucial for healthcare professionals to communicate quickly and effectively.

DISEASE TRACKING

- ▶ Technology use has aided in disease tracking and surveillance as well. Big data and AI have been used by public health officials to monitor the COVID-19 outbreak and spot potential outbreaks (Li and et. al., 2019).
- ▶ Public health officials have been able to track the virus's spread in real-time and create plans to stop it by analysing data from social media, news articles, and other sources. During the pandemic, disease tracking has also been accomplished using mobile applications.





TELETHERAPY

- ▶ Patients can now access therapy and counselling from the comfort of their own homes thanks to technology, which has made it possible for healthcare providers to provide mental health services remotely(Nah and Siau, 2020).
- ▶ People now prefer tele therapy to conventional in-person therapy because they find it to be more convenient and accessible.

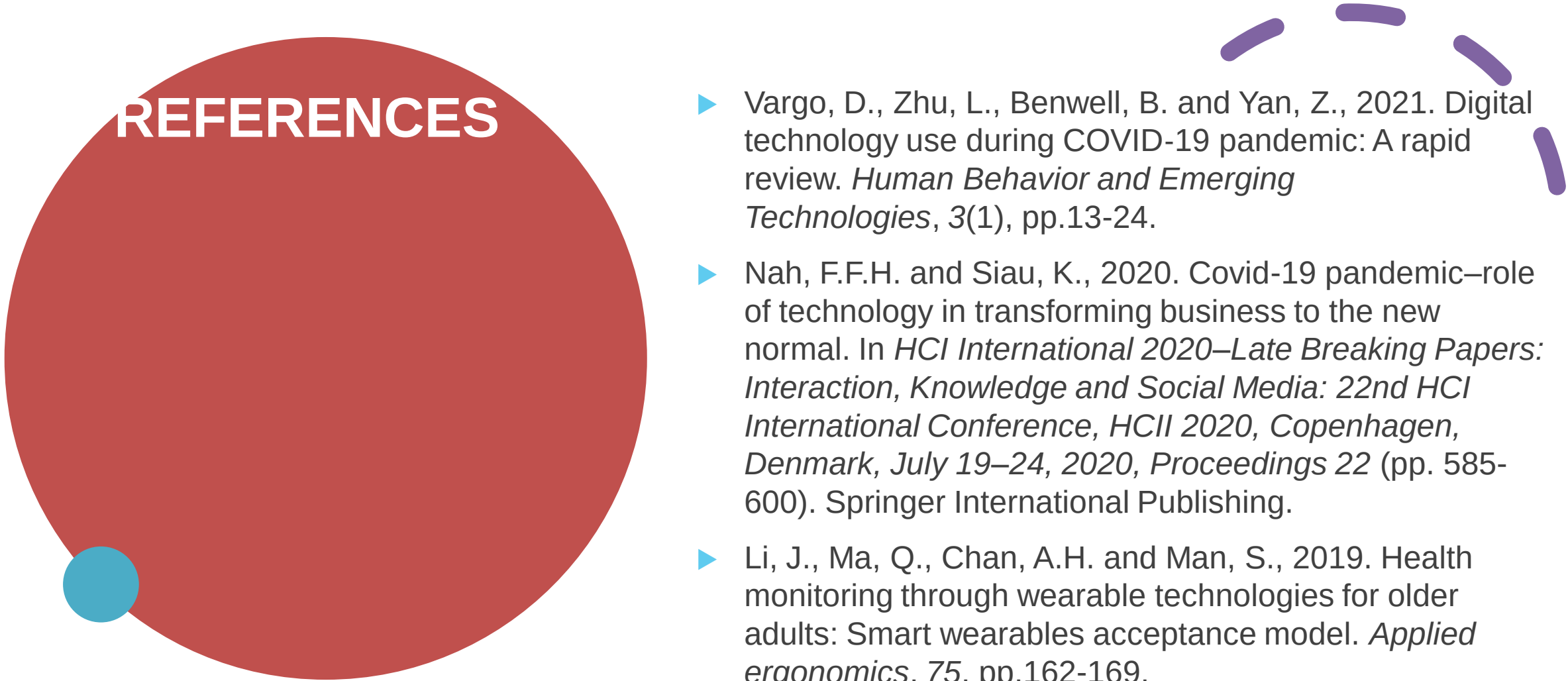
VACCINE DEVELOPMENT

- ▶ The use of cutting-edge technologies, such as mRNA vaccines, allowed for the rapid development of vaccines in record time.
- ▶ A brand-new class of vaccines called mRNA vaccines uses the genetic material from the virus to stimulate the body's immune system.

CONCLUSION

It can be concluded that the COVID-19 pandemic has drawn attention to the value of technology in healthcare. Fighting the pandemic has relied heavily on telemedicine, remote patient monitoring, communication tools, disease surveillance, vaccine development, etc. It is crucial that we continue to embrace and use technology to enhance healthcare outcomes and meet the changing healthcare needs of our communities as we navigate this difficult time.





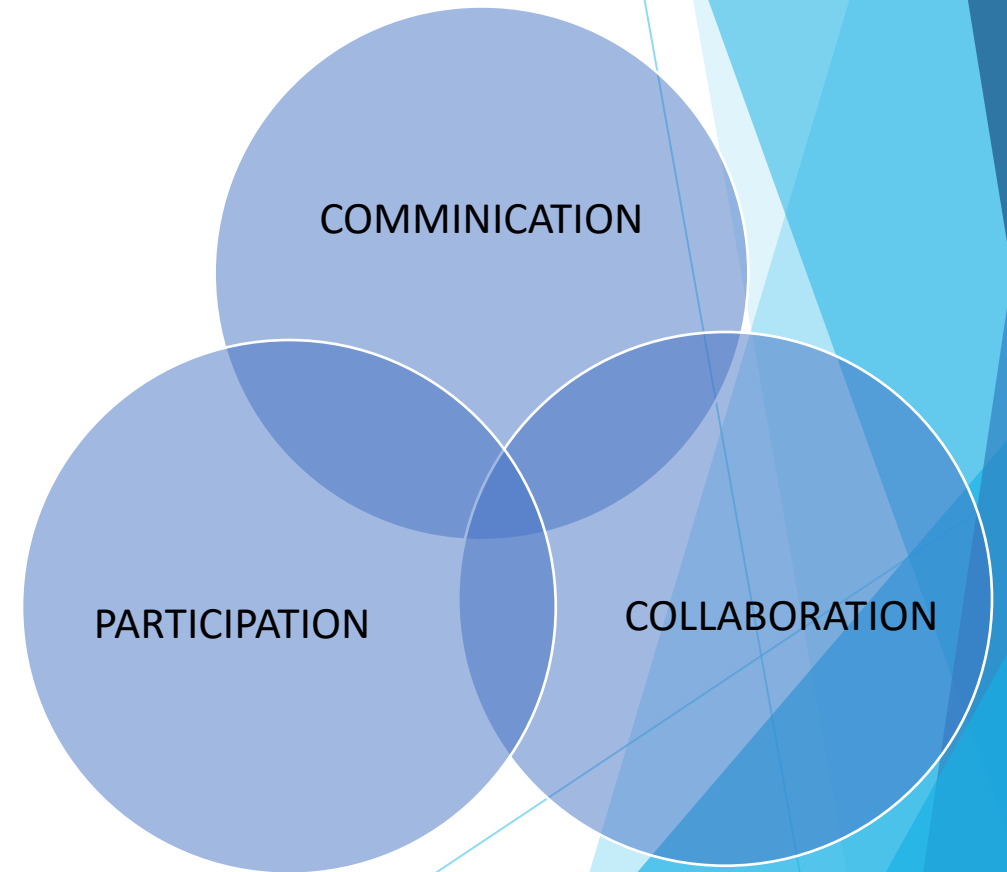
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Digital communication, collaboration, and participation as team members in the health care system.



1010

Digital communication

what is digital communication;

It is about using the internet, a computer, and video calls. During the LOCKDOWN health and social care health. depended on video calls to treat patient's care.



What is digital communication, collaboration

This means people work in partnership within health care. The hospitals and the GP practices were able to exchange messages via emails, tablets, pads, smart phone. Zooming was important to save lives and control the spread of coronavirus. (REF)



Digital participation

This is about team participation in hospital and GP practices. Having the privileges to use the internet, computers, and iPads and to deal with emergency. The connected skills is use within the multidisciplinary team to saves lives during the break out including ambulance crew.

-- For example electronic devices were used to record patients care starting point in an ambulance. -- Ambulance handover data)- (REF) .

Ambulance using Ipad to saves lives in the NHS/



REF:

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DIGITAL LITERACY

Digital Skills and Research Methods

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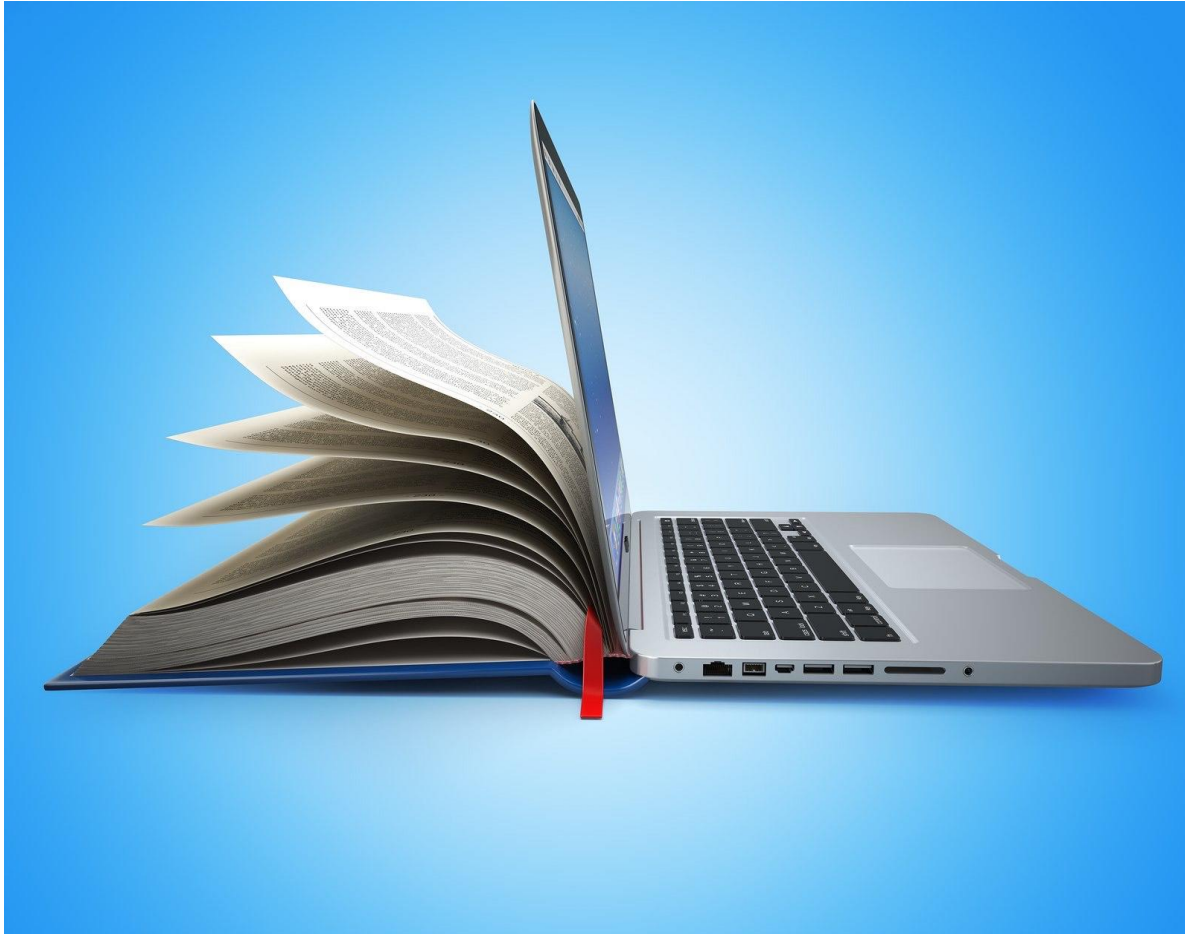
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The use of digital literacy for employee well-being and their professional career development (Teaching, e-learning and self-development)

Sevinc Yener Kurt

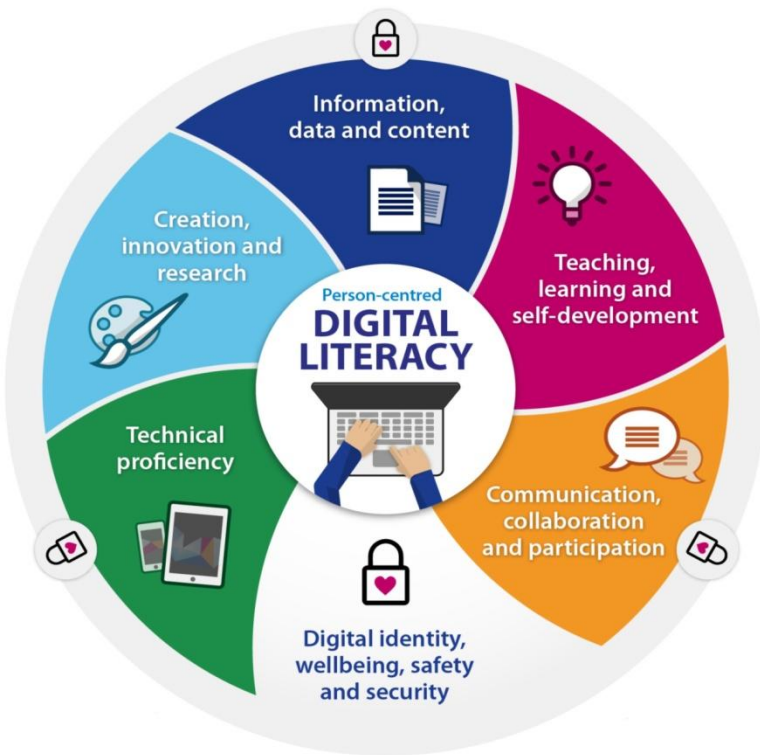
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What is a digital literacy?



- ▶ We define digital literacy as, “those capabilities that fit someone for living, learning, working, participating and thriving in a digital society”

What are advantages of the digital literacy?



- **Developing a digitally literate health workforce, confident and motivated to use digital technologies in their roles**
- **Ensuring there is curated, and quality assured digital skills learning resources available for the health and care workforce.**
- **Providing senior leaders with information and data to inform digital and learning strategies**

Contribution of digital literacy to employers

- An individual who is literate in digital media can distinguish the right one from millions of information
- Can use creativity in digital environment and make meaningful productions.
- Someone who is literate in digital media knows how to access the right information, as well as where and when to use it.



Why Should We Be Digital Literate?

Because now we digitally define and perform more and more actions, activities, habits every day. Digital business environments, digital education, digital culture-arts, digital health and more. In this new life, where every time we face a new source of knowledge, a new source, we must be digital literate to receive and apply as much as is necessary for us.



References

➤ **<https://www.go1.com/blog/post-the-importance-of-digital-literacy-for-your-workforce>**

➤ **<https://digital-transformation.hee.nhs.uk/building-a-digital-workforce/digital-literacy/what-is-digital-literacy>**



Assessment 1 Group Presentation



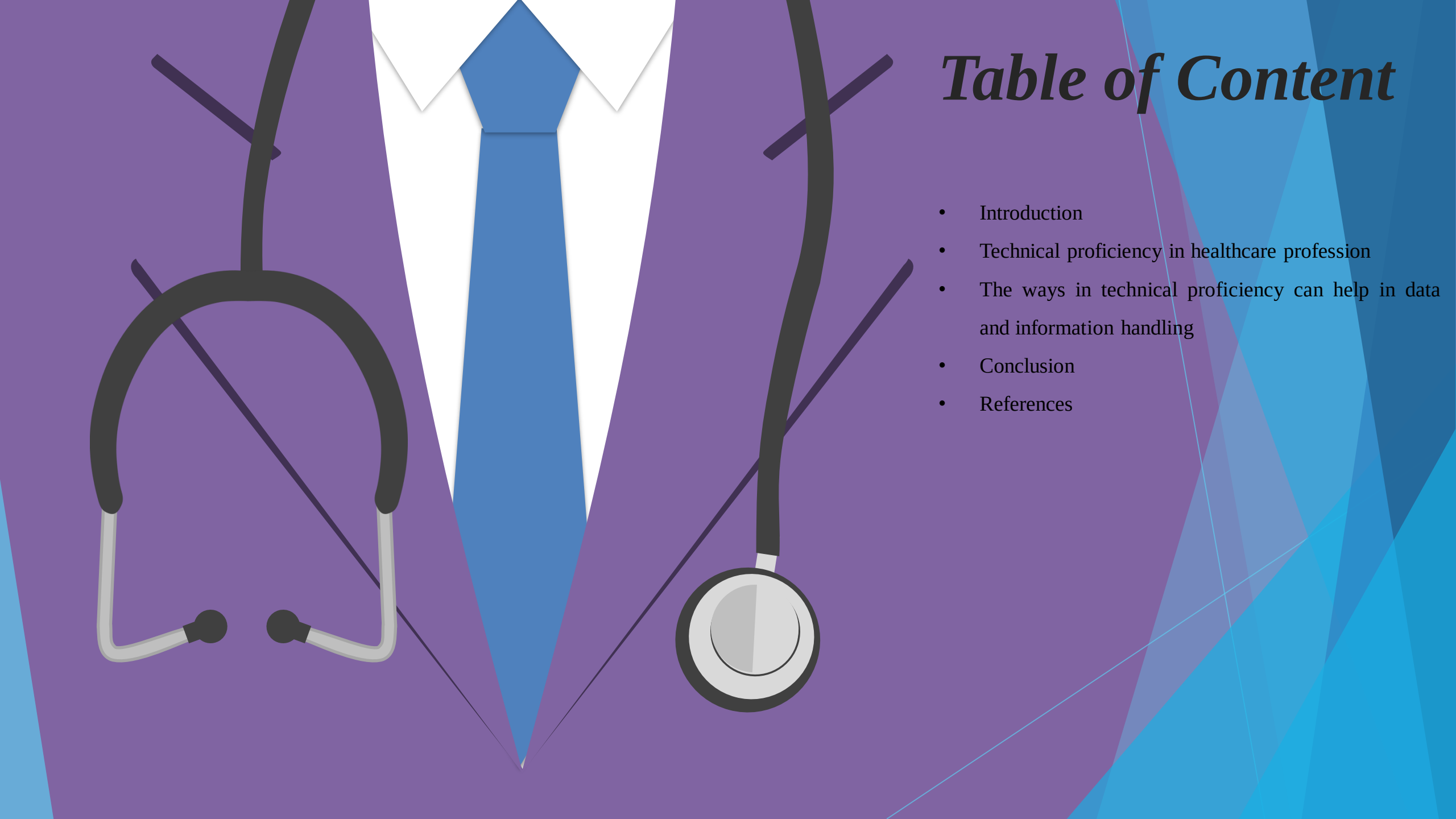


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Introduction

Technical proficiency refers to the ability to apply the knowledge of technicality into the professional or specialist job role for the achievement of outputs expected. Having these skills can help the healthcare sector professionals their work, living and in thriving in digital society. In this presentation, how technical proficiency can help healthcare professionals and practitioners' in data and information handling is analysed.

Technical proficiency in healthcare profession



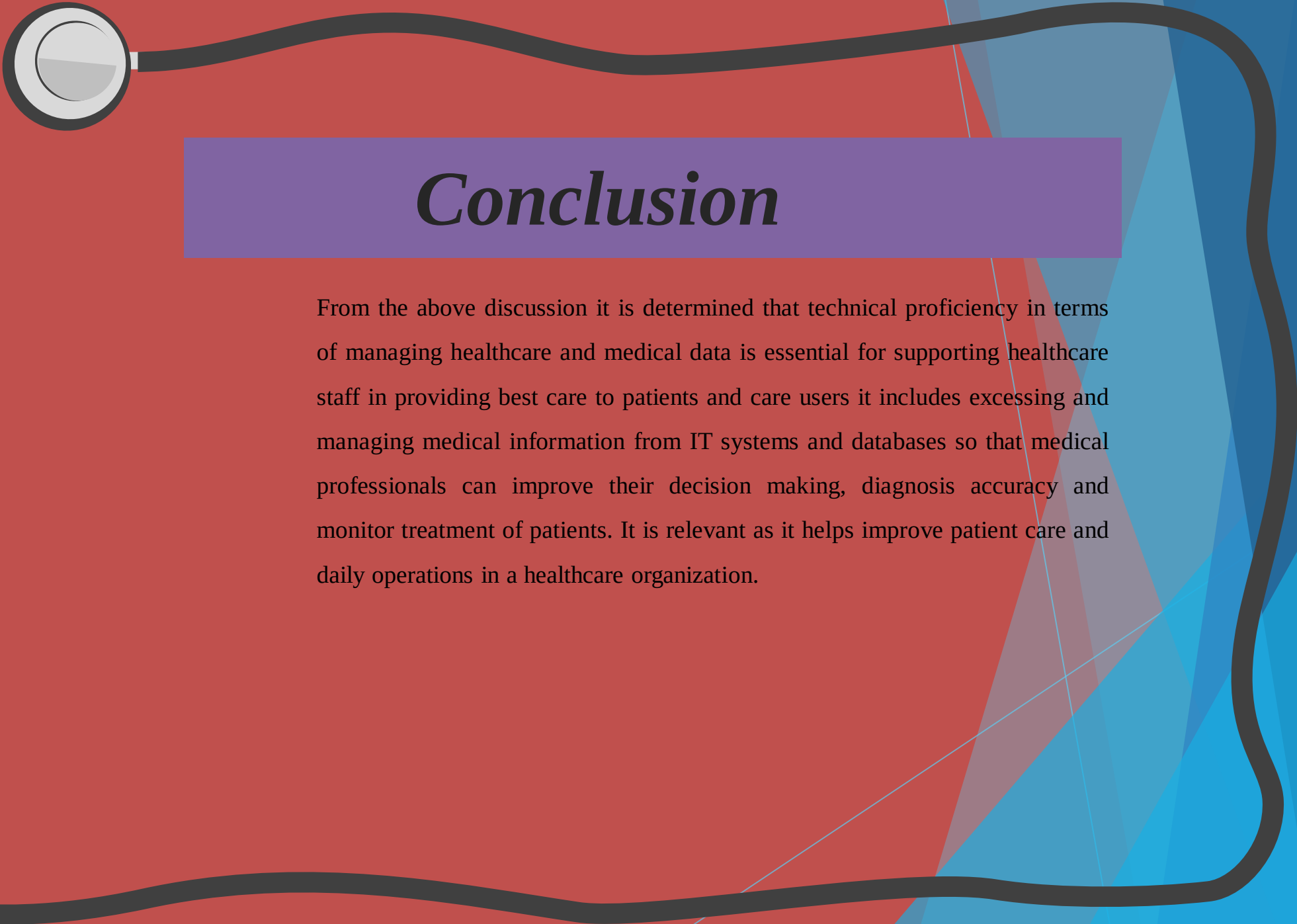
The term technical proficiency refers to the technical ability of a person. The technical aspect in healthcare includes medical devices, IT systems, cloud and block chain and artificial intelligence. This also includes managing data and information of various health devices, machines and medical units, digital communication for monitoring and diagnosing patient health. Technical proficiency for handling data and information in the healthcare industry is important because medical professionals and data analysis in the healthcare industry are responsible for collecting data from multiple sources to support effective treatment and care for care users it also involves managing and organizing datasets from database management systems of the health care organization so that medical professional and staff can easily access them and use them for their daily decision making. Building technical proficiency in terms of managing health care data is helpful as it and it was professionals to find pattern and trends through data analysis which can we used to estimate future operational, environmental and health related conditions of the region and organization.

The ways in technical proficiency can help in data and information handling

The health care professionals are responsible for the right care of patient. The Technical proficiency of healthcare professionals can help in storing, assessing and distributing patient related data more quickly. This data can help to identify and treat a person with more accurate way. For example, a patient's basic information and their disease patterns can be stored in their database which could be accessed at the time of their treatment and provide better care to them. Another example is where a patient is suffering from medical condition and getting treatment from a particular healthcare professional, the healthcare professional can store the medicine details with the use of technical proficiency.

Developing technical proficiency for handling data in the healthcare sector requires individuals to have variety of skills. This includes critical thinking of manufacture communication, proactive problem solving, intellectual curiosity come on medical knowledge and healthcare acumen. These skills support individuals in ensuring that information related to healthcare procedures, treatments and policies and manage in an effective manner. Medical professionals and staff are able to effectively utilize data from digital system of their organization by applying these skills.



A large, stylized stethoscope graphic is positioned on the left side of the slide. The stethoscope has a dark grey body and a silver-colored chest piece. The tubing is thick and black, curving around the top and bottom of the slide. The background is a solid red color with a large, abstract, light blue shape on the right side.

Conclusion

From the above discussion it is determined that technical proficiency in terms of managing healthcare and medical data is essential for supporting healthcare staff in providing best care to patients and care users it includes accessing and managing medical information from IT systems and databases so that medical professionals can improve their decision making, diagnosis accuracy and monitor treatment of patients. It is relevant as it helps improve patient care and daily operations in a healthcare organization.

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THANK YOU