

THE USE OF TECHNOLOGY IN THE HEALTHCARE SECTOR

Digital Skills and Research Methods
(BMSW4003_LON)

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OUTLINE

1. The use of contemporary technology in healthcare (diagnostic, administrative and care support).
2. The use of technology during Covid19.
3. The use of digital communication, collaboration and participation.
4. Digital identity, well being, and safety,.
5. The use of digital literacy for employee well being and their professional career development (teaching learning and self development).
6. The relevance of technical proficiency for data and information handling.

THE USE OF CONTEMPORARY TECHNOLOGY IN HEALTH CARE SECTOR

1. WHAT IS CONTEMPORARY TECHNOLOGY?

According to (O'Regan,2021) Technology involved in the healthcare sector as it is more efficient and is present in many daily operations within the healthcare and social innovations such as:

- 3D printing
- Robotics
- Nanotechnology
- Artificial intelligence

[Technology in Health and Social Care |
Types & Benefits \(highspeedtraining.co.uk\)](https://highspeedtraining.co.uk)

THE USE OF CONTEMPORARY TECHNOLOGY IN HEALTHCARE: DIAGNOSTIC

Telehealth



**Heart Failure Readmissions Similar
After Telehealth, In-Person Follow-up
(mhealthintelligence.com)**

Telemedicine



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THE USE OF CONTEMPORARY TECHNOLOGY IN HEALTHCARE:ADMINISTRATIVE

❑Kronos

- check employee availability
- Automatic notifications.
- Delivery of quality care.

Workforce management to empower staff and improve visibility | Kronos



THE USE OF CONTEMPORARY TECHNOLOGY IN HEALTH CARE SECTOR



DATABASE

- **What is it?**
- Healthcare databases are systems into which healthcare providers routinely enter clinical and laboratory data
- One of the most commonly used forms of healthcare databases are electronic health records (EHRs).

[Healthcare databases: focus on electronic health records – RWE Navigator \(rwe-navigator.eu\)](http://rwe-navigator.eu)

GUYS AND ST THOMAS HOSPITAL UTILIZE STRATASYS 3D PRINTING COLLABORATION TO PROVIDE GROUND-BREAKING PATIENT CARE.



- 3D printing in medicine can be used to print organ models
- 3D printers produce precise replicas of objects and are increasingly used in healthcare to customise medical products and equipment for individual patient needs.

[Guys & St Thomas Hospital 3D
Printing Collaboration | Tri-Tech 3D
\(tritech3d.co.uk\)](#)



[Meet the expert: Robotic surgery - YouTube](#)

THE USE OF TECHNOLOGY DURING COVID-19

Why do you think the technology has been increased during Covid-19?

- Social distance
- Safety for health care professionals and patients
- Faster results reporting

(Bonnie Clipper, 2020, pp.500-503)



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THE 3 SUB-CATEGORIES OF HEALTH TECHNOLOGY THAT HAVE GROWN DURING THE COVID-19 PANDEMIC ARE:

- **Virtual care:** virtual visits
- **Telehealth:** facilitates remote health services

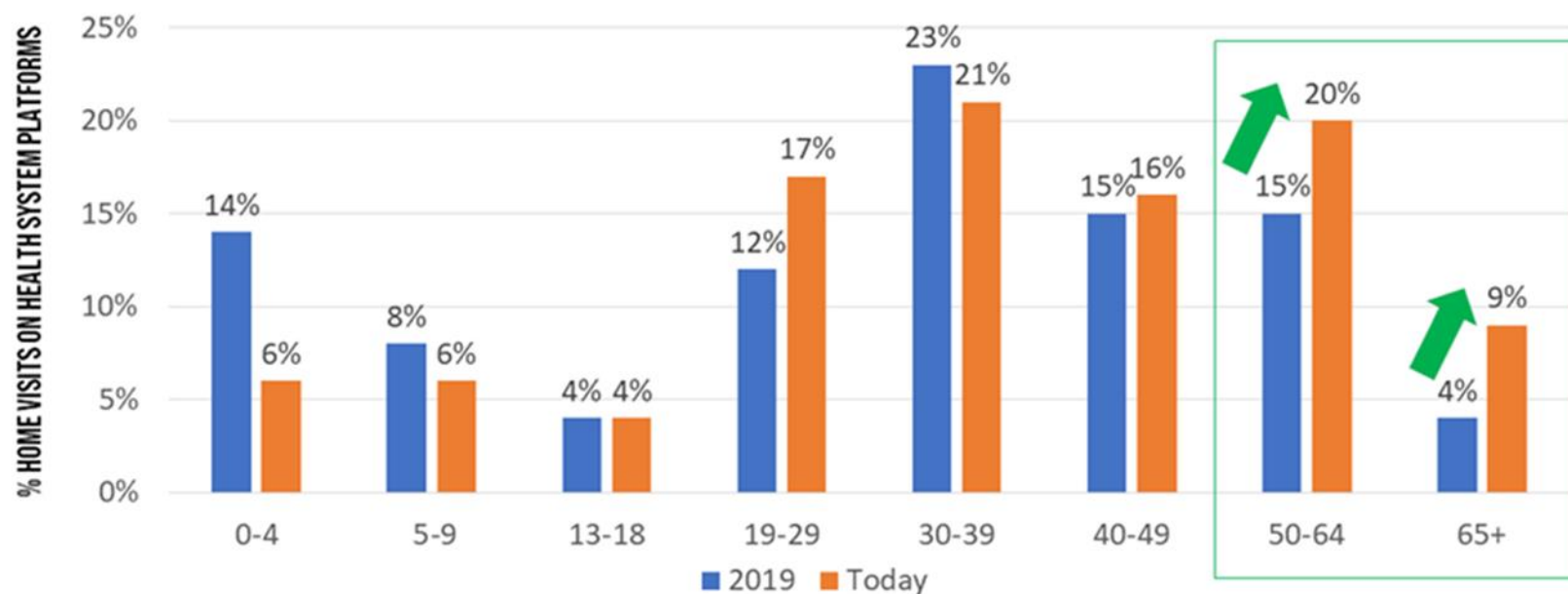


(Bonnie Clipper, 2020, pp.500-503)



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THE PANDEMIC EXPANDED THE DEMOGRAPHICS OF TELEHEALTH USERS BOOMERS & SENIORS USING TELEHEALTH MORE



Sarasohn-Kahn
(2020)

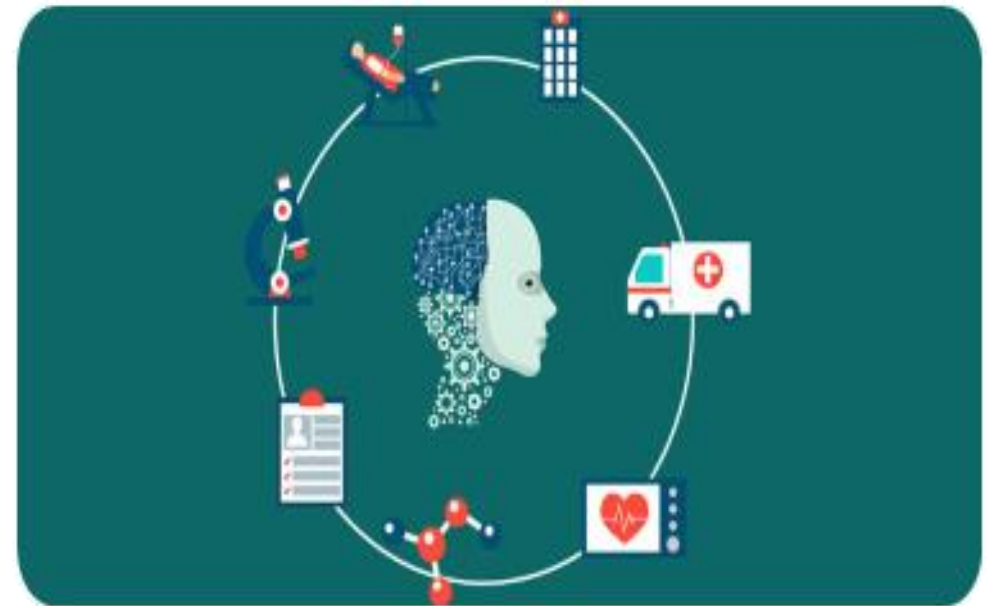
Source: AmWell, presentation to ATA 2020 Conference, 22 June 2020



Artificial intelligence

- Detection and diagnosis
- Monitoring the effectiveness of treatment
- Contact tracing, control of virus spread and mortality projections
- Treatment and vaccine development

(Bonnie Clipper, 2020, pp.500-503)



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Robotics

In China, an experiment was conducted to introduce robots to take care of patients infected with covid-19, preventing healthcare workers from becoming infected.
(Bonnie Clipper, 2020, pp.500-503)



UV LIGHT BACTERIA-KILLING
ROBOT DEPLOYED IN WUHAN

THE USE OF DIGITAL COMMUNICATION, COLLABORATION AND PARTICIPATION.

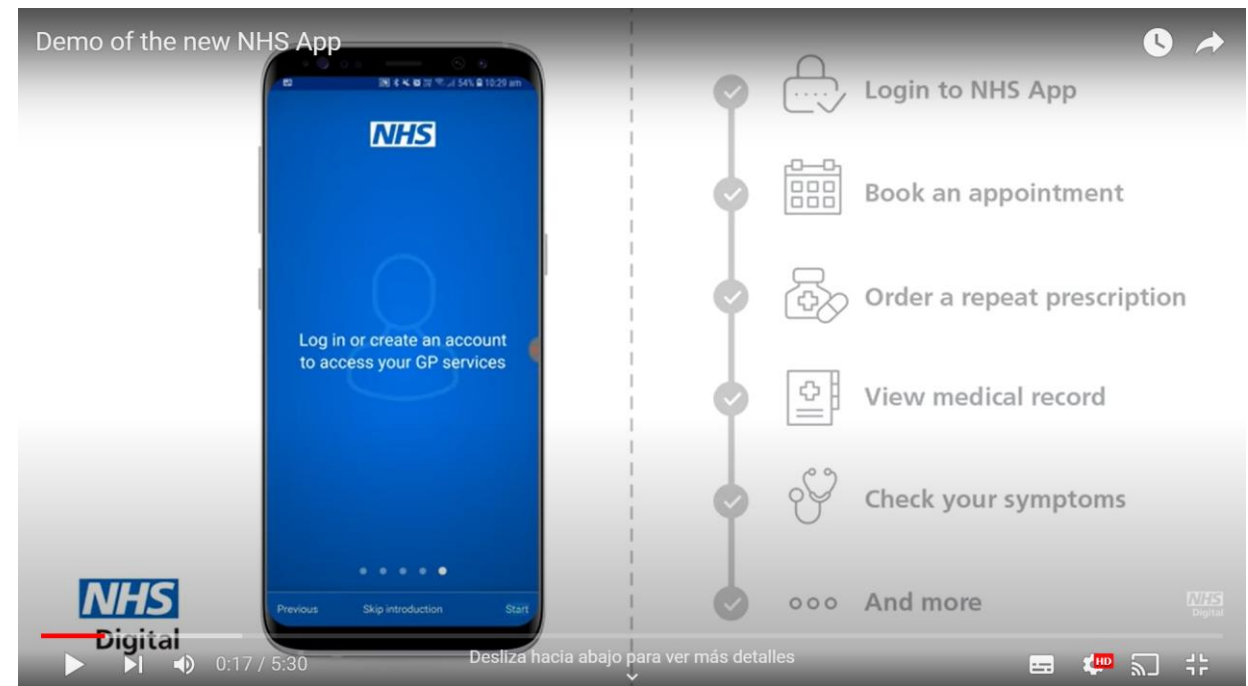
- In the present days, finally the health care and hospitals doctors can communicate with the patients by
 - Videocall
 - Phone calling



THE USE OF DIGITAL COMMUNICATION, COLLABORATION AND PARTICIPATION

Patient access

- Book appointment
- cancel appointment



<https://www.youtube.com/watch?v=YR7P4tXeb-Y&t=14s>

THE USE OF DIGITAL COMMUNICATION, COLLABORATION AND PARTICIPATION

- During COVID 19 many nurses and doctors studied and graduated in Medical schools, the General Medical and Health Education





THE RELEVANCE OF TECHNICAL PROFICIENCY FOR DATA AND INFORMATION HANDLING

- Technical aptitude remains a critical component in every work environment. As digital tools advance and become more prevalent in the workplace, you'll need to become more adaptable. (The Royal College of Nursing, 2016)
- Nowadays, in every practice, clinic or hospital all the information is stored electronically. In the system is possible to find all types of data from patients symptoms to exams' results and treatments, etc, and this information is usually utilised to make sure every patient gets the best care possible. (ECPI University, 2019)

THE RELEVANCE OF TECHNICAL PROFICIENCY FOR DATA AND INFORMATION HANDLING

There are different ways of handling information and data such as:

- Using computers to store, manage and protect patient's data (ECPI University, 2019)
- Distributing information through different platforms via emails or presentations (ECPI University, 2019)
- Transferring data between medical providers through cloud computer servers

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THE RELEVANCE OF TECHNICAL PROFICIENCY FOR DATA AND INFORMATION HANDLING

Technical proficiency for data and information handling in healthcare is extremely relevant as it:

- Helps speeding up diagnosis
- Predicts treatment results and improves treatment efficacy
- Improves treatments' safety and quality
- Distributes information and knowledge quicker

(Why, 2014)

DIGITAL IDENTITY, WELL-BEING, AND SAFETY

This domain requires you to show that you have the capacity to:

create

promote

protect acceptable digital identities that help you maintain a positive personal and professional reputation

use digital technologies in ways that promote one's own and others' well-being and safety

(The Royal College of Nursing, 2016)



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THE USE OF DIGITAL LITERACY FOR EMPLOYEE WELL-BEING AND THEIR PROFESSIONAL CAREER DEVELOPMENT(TEACHING-E LEARNING AND SELF-DEVELOPMENT)

- What is digital literacy?
- Why is digital literacy important for health social career?



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DIGITAL WELLBEING

- Digital wellbeing is A term used to describe the impact of technologies and digital services on people's mental, physical, social and emotional health.
- Teaching
- Learning
- Self-development



DIGITAL SAFETY



- Information
- Data (NHS)
- Media literacy



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