

A REPORT ON USE OF TECHNOLOGY, DIGITAL TOOLS AND TECHNIQUES TO IMPROVE EFFICIENCY IN HEALTHCARE.

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Introduction

This report is based on the analysis of the use of technology and digital tools and how they have impacted the performance of health professionals.

Human beings, in contrast to other species, do not possess highly developed instinctive reactions but do have the capacity to think systematically and creatively about techniques. Humans can thus innovate and consciously modify the environment in a way no other species has achieved (Buchanan, R. Angus, 2020).

Hence the humankind has been development using their abilities do have no only to survive as a difference with the animals also to produce wealth term with technology is associate today. Technology, the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment (Britannica, T. Editors of Encyclopaedia, 2021).

We are currently living I a world where technology is constantly advancing, especially in the care of human beings. Health professionals have seen how over time technology has helped to improve the health of people in cases such as reduction of invasive methods in surgical procedures as a result of the implementation of new machines which leads to a decrease in hospital stays and recovery (Almeida, C.M.T., Almeida, F.N.A. dos S., Escola, J.J.J. and Rodrigues, V.M.C.P.,2016 p 1).

The integration of different technologies in health care is not only helping to improve the health of patients it also reduces cost growth at the hospital level resulting in a better use of resources and the capacity to care for more patients. As examples we can cite the electronic health records where the patient has direct access to their medical history thus helping them to know more about their state of health. Other tools that could be highlighted are the inclusion of artificial intelligence, management of clinics in the cloud, telehealth between others in the health system being this a support in clinical decision making, reducing crowding of health services thus creating the opportunity to help another kind of population as chronic patients who affect so much the health system (Shinners, Lucy et al., 2020).

However, along with innovations increased amounts of data available for decision-making will require healthcare workers gaining digital skills in order to manage these significant changes in the healthcare scenario (Yaldren, S., 2021). This process may be difficult for some, but the organisations have to guarantee support and follow-up in the learning process which will provide personal and professional improvement, generating a positive response that will be reflected in the care of the patients.

The use of contemporary technology in health care

It is hard to think that we can live at this point in history without using technology even for such simple purposes as choosing a holiday or scheduling meetings or shopping. The healthcare system has been no exception and the use of technology has opened up a great path that we are only just creating.

We could say that its beginnings were with the introduction of vaccines which has reduced under-five mortality worldwide over the last two decades, and that the rate of reduction in under-five mortality rates has increased since the 1990s. However, the average rate of reduction since 2000 is 2.3 per cent, compared to an average rate of reduction of 1.4 per cent between 1990 and 2000 (Unicef.es., 2021).

After vaccines, we also saw the inclusion of insulin, antibiotics until our current era when technologies such as robotic surgery, gene therapy and cellular immunotherapy have been introduced, which reduce mortality and promote the improvement of health and the prevention of disease, resulting in a longer life expectancy, one of the most cherished desires of human beings (Hospitalvirgindelmar.es.,2021).

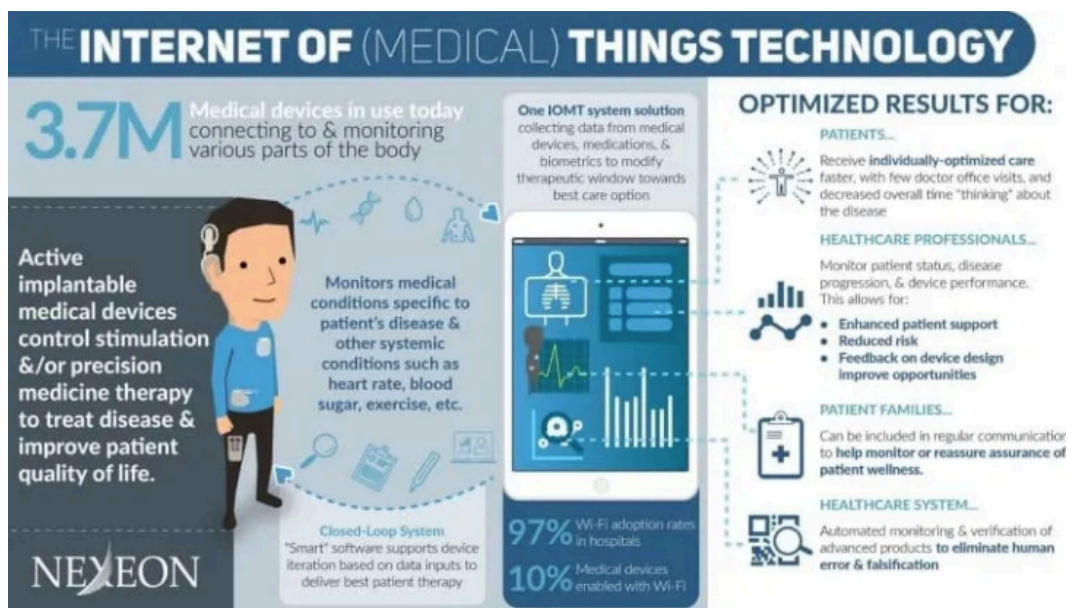


Fig 1. The Internet of Medical things technology

The use of Technology during COVID-19

As a result of this pandemic, health institutions and organisations in general have had to make important changes or even implement new technologies in order to provide a better capacity to respond to the needs of patients who were not prepared to live through a situation as stressful as the one experienced in the last year.

Among the range of technologies used in this new global crisis is geolocation through information collected by telecommunication operators that basically provides information on the mobility of users in order to help health systems detect movements and control the epidemic. Likewise geolocation is used in social networks it is important to clarify that it is not new as platforms such as Facebook have been used for some time but during this time is very useful in terms of prevention and control.

Another frequently used technology nowadays are web applications or apps and chatboxes that include tests of questions and answers, queries for information and records of previous appointments, with the aim of decongesting the telephone lines to be used by people who for various reasons cannot use the internet.



Fig 2. The Interconnected digital technologies used in COVID19

The use of digital communication, collaboration and participation

Digital communication is the relationship we have with others within the digital system and which helps us to develop our capabilities such as the use of the different tools we use.

In this aspect we must develop skills that can help us to grow in the digital world as technology demands more and more competent people every day. It is also important to be aware that we must preserve a digital image in the same way as if we did it face to face. This means that we must take care of our identity and what we want to show to others about ourselves.

Digital collaboration is the ability to work in groups digitally where information is shared and knowledge is built up.

It assists in digital spaces such as shared resources, wikis, websites, digital writing and presentations as well as teaching students how to use digital tools to help break down cultural, social and linguistic barriers. (Digital Skills | eHealth | Royal College of Nursing, 2021).



Fig 3. DigiLit leicester

Digital identity, well-being and safety

Within this area, the protection of digital identities is promoted, leading to a positive personal and organisational image and also to the promotion of the safety and well-being of the individual and others. In addition, it aims to identify digital situations where security is compromised, whether at personal, professional or organisational level. (Digital Skills | eHealth | Royal College of Nursing, 2021).

Therefore, it is important to take some measures to ensure that our identity is safe and protected, including keeping your social security number safe, update the equipment through security software, using an external drive to store information, not always using the same passwords and also should be created in a safe way, being cautious when downloaded applications and one the most important is to use social networks in a responsible manner (Edwards, 2021)

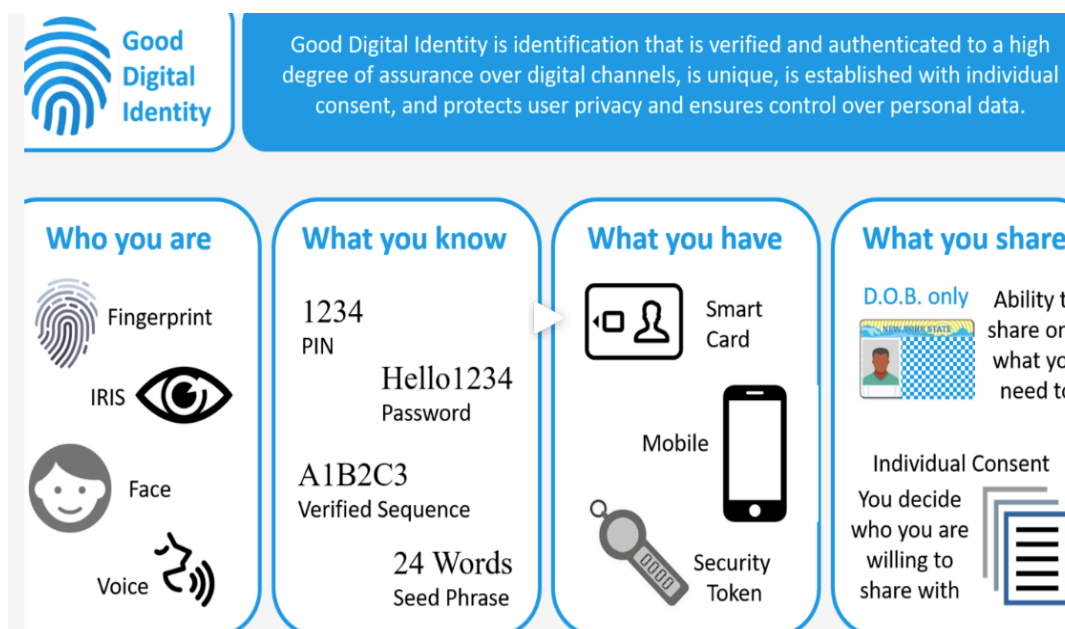


Fig 4. Digital Identity

The relevance of technical proficiency for information data handing

Technical competences could be defined as a set of abilities, aptitudes and knowledge that help to identify and recognise both when and how to use information effectively.

These abilities require creative, dynamic skills due to accelerated changes and advances in information technology (Cardenas, 2021).

It is important to emphasise that we are in a process of globalisation of information and that this evolution requires competent people who are at the forefront of the constant changes.

With respect to competences and skills we can highlight soft and hard skills one of them is data visualization that mean the ability to interpret graphs and illustrations the objective is very simple to help to understand through the visualization even to people who do not have a great knowledge about the interpretation of graphs.

Another skill that we can mention is data cleaning, which is fundamental in the daily management of information that is in charge of contributing to accurate results without being compromised by errors.

Conclusions

1. Technology has advanced, especially in the area of health and care, so health professionals have the responsibility to be at the forefront of technology, which involves constant and dynamic training to achieve competencies to strengthen the improvement of the health of our objects of care.
2. Many of the technologies used in this period of pandemic were already being used in other areas, reason for which facilitated its implementation in the area of health, however it is important to recognise that although it has been a great ally in this fight, we see how our privacy is being affected more and more.
3. As far as digital communication is concerned, it is important to emphasise that it is teamwork and not individual work, which requires other types of skills that go beyond knowledge. As a team working and communication.
4. Being responsible in the use of digital information promotes the privacy and security of our patients.

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