

The Impact And Advancement Of Artificial Intelligence In The Development Of Technologies In The Health System

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Abstract

The technology system in the health system is complex and necessary for its functionalization. A health information system refers to a system created to manage health care data. The information technology system in health enables the collection, storage of data, management and a patient's electronic medical transmission. As an integrated effort, these can be used to improve patient outcomes, to inform everyone's condition and prognosis. In these systems, security is a major concern for data storage. The health information system has positive potential between any public-private hospital for data information. Also, the information system handles data related to activities offered and health organizations. Automated and interoperable health care information systems will continue to improve medical care and public health, reduce costs, increase efficiency, reduce errors, and improve patient satisfaction, while also optimizing reimbursement for health care providers. outpatient and hospital. Photo archiving and communication systems help healthcare professionals store and manage medical images of patients in the image bank of separate departments, such as radiology, cardiology and neurology. Telemedicine can also be practiced, which enables an approach through audio and other advanced access. Information A regional and international networking for the possibility of fast information and advanced cooperation of the technology system.

Keywords: Technology system, health system, data management, health system intelligence.

Methodology: During the process of drafting the Strategy, quantitative and qualitative methods were used to research the state of the health sector, including the review of the experiences of implementing the Sectoral Strategy, the relevant local and international study documentation in the health sector, as well as the analysis of the results.

Introduction

Technology in the health system has an important role in health care by providing effective, fast and quality services. The fastest functionalization of technology in the health system affects the entire country by providing quick information to the patient, informing services between clinics,

pharmaceutical information, easy and fast radiological access by saving images, quick information of new researches, saving the data of patients and health staff. Information and cooperation with international health organizations, information of professional advancements, emphasizing that science in the world health system there is a rapid development,

as in professional, technological, pharmaceutical and other advancements. (Dávid Dankó., 2014) Health care technology management is a systematic process of planning and managing health care technology, the assets to operate an advanced technology system can be high, and at a cost accepted by any health institution in which it can be life and non-functional non-application. Every institution that applies health technology must have protection and preservation of patient confidentiality. Protected by legitimate state institutions.

Digitalization in the health sector

The basis of digitization is the medical data of the insured person, which are exchanged between doctors and patients, but also between individual service providers, using modern information and communication technologies. (PwC, 2017) Digitalization creates new diagnostic and treatment options such as personalized medicine, facilitates communication between individual players in the health care system, and enables individual patients to control their health more effectively, for example through applications and online information. Major challenges facing the health care system include changing demographics and exploding costs. Digitization can help meet these challenges. While previously it was only possible to increase the quality of medical care for the individual or reduce costs for the general public, this conflict of objectives can be resolved with the help of digital innovations: digitization enables high-quality and affordable care for all. (World Health Organization , 2022)

It also ensures that people in structurally weak rural regions have access to medical expertise through telemedicine solutions.

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-Many developed countries in Europe have a lag in progressing to the same step of technology, but a significant part have rapid and very productive advances, as for the Western Balkans in the advancement of technology, there is a significant lag in the development of digitization of the western system.

- Digitization carries with it different risks where the storage of data is of particular importance, which must have an advanced

security by technology experts as well as state institutional protection.

Artificial intelligenc in health care

Artificial intelligence is the key technology of the future - especially in the health sector. It can help detect diseases earlier, provide better care for people and reduce healthcare costs in Europe alone by an amount of three billion figures in the next ten years, as a PwC study shows. But the road there is difficult, because artificial intelligence is based on large databases that must first be built. Regulatory issues, such as in the field of data protection, also need to be clarified. Main principles of Artificial Intelligence which have been reported in different European systems.. (Michael Burkhart., 2019)

The advancement of artificial intelligence in the health system became a managerial task within the institution

Artificial intelligence changes the DNA of a company in the healthcare sector. This change needs a strong leader at the helm – with the ability to think strategically and with the foresight to develop an AI vision for the future, a high level of technological understanding, a willingness to act with agility, to constantly adapt and make responsible decisions. AI enables decision-making based on large amounts of data. In hospital management, for example, technology can help to better control capacity utilization.

Advancement and credibility towards health professionals by practicing Artificial Intelligence.

Artificial intelligence will not replace healthcare jobs, but it will significantly change job profiles. This is especially felt by employees who deal with the diagnosis of diseases such as cancer and diseases from the field of neurology and cardiology. This requires a high level of trust in the smart diagnostic tool by doctors and other health professionals. However, AI rewards them

with shorter wait times for the result and more time for the individual patient. In the future, routine processes in the health sector may be delegated to the learning of computer systems, while employees will be required above all to have the skills that human intelligence requires: problem solving, leading people, creating innovations. (Sevilay Huesman-Koecke, 2019) Further training and development of the workforce should be based on this goal.

Clinical benefits and providing information to the patient

Artificial intelligence is changing daily clinical practice and creating better patient care, for example in the areas of cancer diagnosis and early detection of dementia and heart disease. Technology has promoted sophisticated devices to prevent some of the ailments that are inevitable. (CAO, a.d.)

Use of imaging processes: Machine learning can support the doctor in evaluating X-ray images, for example, and thus provide more accurate diagnoses.

Decision-making: Technologies such as data processing can identify the problem at an early stage and treatment decision-making will be easier for both the treating physician and the patient.

Patient self-monitoring: Patients initially receive additional information and training on the use of devices that are self-monitored by the patient. Wearable devices, previously used mainly as fitness trackers, are being developed into medical instruments, for example for monitoring values in diseases chronic.

Patient monitoring determinations have clinical and professional efficacy during treatment. in use. (CAO, a.d.)

Economic benefits and savings that can occur after the application of Artificial Intelligence

Artificial intelligence can make a major contribution to global economic growth – through increased productivity and changing customer behaviour. According to a global study by PwC, the global gross domestic product will increase by a trillion dollars by 2030. Artificial intelligence will provide a particularly large increase in healthcare. PwC looked at three common medical conditions that cause high costs.

Early detection of obesity in children:

Clinical studies show that health data from two-year-olds can predict their risk for obesity. Targeted preventive measures could save around €90 billion over the next ten years. Early detection of dementia: (pwc, a.d.)

Artificial intelligence enables early detection of dementia with an accuracy of 82 to 90 percent. If the disease is detected at an early stage, about eight billion euros can be saved over the next ten years. Alzheimer's disease can often be detected through regular check-ups.

Diagnosis and treatment of breast cancer:

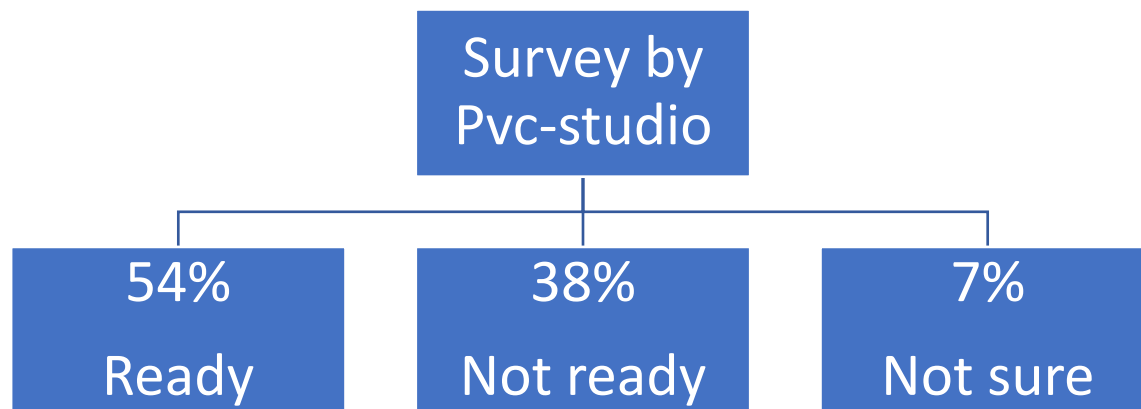
AI not only enables early detection of this disease, but also personalized therapy. In this way, artificial intelligence can predict how a

patient is likely to respond to chemotherapy. The savings potential in this area is estimated at 74 billion euros over the next ten years. We want to emphasize that cases of Alzheimer's disease, obesity, cancer are increasing and the treatment is very expensive. (Stefanini Group, Saturday, 24 July 2021)

The population must be informed and in constant contact with health institutions.

Patient interest in artificial intelligence is growing: a good half of the insured would be willing to engage with artificial intelligence in medicine in the future, and almost half could imagine minor interventions performed by a robot. However, readiness depends heavily on how accurately and quickly diagnostic and therapeutic tools work. Public trust is an important factor in the spread of AI. There is a clear difference in acceptance between industrialized and developing countries: while people in poorer countries are more open to robots and machine learning, policyholders in rich countries with a highly developed healthcare system are more skeptical. (Constant contact, a.d.) It is even more important

Percentage of respondents willing and unwilling to engage with AI and robotics for their healthcare needs (overall sample)



Ethics, Regulation and Privacy

Is the computer always right? Or to put it another way: Who takes responsibility for the diagnoses a patient receives from their doctor based on large amounts of data? The concept of "Responsible Artificial Intelligence" is spreading around the world to clarify questions about regulation, ethics and data protection. (AMA Journal of Ethics, a.d.) Artificial intelligence needs a high degree of regulation, especially in health, but also freedom for innovation. A central topic is the area of data protection for those affected, because artificial intelligence requires large amounts of data to be stored and shared. The General Data Protection Regulation applies to Europe, but there are many unanswered questions internationally. Countries like China, for example, are pursuing an aggressive AI strategy that gives them fewer rights to those affected. health care institutions.

(Michael Burkhart Head of Healthcare at PwC)

Recommendation

The advancement of the development of technology in the health system is almost primary for it to be functional in all countries. The achievement of an enabling political environment

is to achieve the balance and the fastest development of health technology for each country.

The means directed to develop the health technology have costs, but based on future profits, the cost will be reduced, the quality improvement will be at a higher level and the patients will have benefits as in the treatment of diseases which will to handle in real time also the change of time and cost for any more difficult problem to handle.

Health staff, in addition to additional training to apply such a system, they will be even more accurate in diagnosing diseases, Pharmaceutical products and similar. .Primary recommendation I would have enhanced the app for each patient so that the information is as suitable as I can apply it.

Emphasizing that the countries of the Western Balkans have a significant lag in the development of technology in the health system: Kosovo, Macedonia, Albania, Montenegro, as well as regional countries, still apply the old methods for treatment and information to the patient.

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