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PRIORITY DIRECTIONS OF TRANSFORMATION OF PUBLIC GOVERNANCE IN THE FIELD OF HEALTHCARE

Abstract. The article examines the transformation processes in the global medical industry as a result of the development of new technologies that open up new opportunities in the provision of medical care and health care. It is substantiated that in Ukraine digital transformations are one of the priority directions of healthcare reform; A prerequisite for achieving this goal is the creation of a national Electronic Health Record system, which will make structural changes in the health care system, meet the needs of the population in new medical services and their availability.

Keywords: health care, public administration, medical services, transformation of public health care

Formulation of the problem. The importance of digitalization of the medical industry of Ukraine is beyond doubt. Transformational processes in the world medical industry testify to the development of new technologies, including in the field of health care, which open opportunities for radical improvement of work to identify individual risk factors for diseases, their early diagnosis, reduction of inpatient care through the development of minimally invasive, outpatient surgery, telemedicine, remote monitoring of the patient's condition, etc.

Analysis of recent research and publications. Problems of digitalization of public administration were studied by: O. Karpenko, P. Klimushin, V. Namestnik, D. Spasibov and others. D. Borkovsky, V. Zhuravel, T. Tkachuk and T. Hryadil studied the use of digital technologies in the field of healthcare. However, despite the large number of scientific publications, further research is needed on the priorities for the transformation of public health management.

The main material. The European Union's "European Health Strategy 2020" program calls for the development and implementation in Ukraine of the National "Health 2020: Ukraine Dimension program", which aims to address pressing health issues.

The EU's "Health" Program aims to build a strategy for ensuring and caring for good health. This Program is part of the overall "Europe 2020" strategy and aims to transform the territory of the European Union into a developed smart, sustainable and inclusive economy, which contributes to the health of all its citizens and is one of the necessary conditions for its development. The program focuses on key priorities such as:

- increase in the number of jobs, investments (public health and medical services as a productive factor in economic growth and job creation);
- development of the market of pharmaceuticals, medical devices, cross-border health care and assessment of technologies for health care;
- digital single market (including digitalisation of health care);
- justice and fundamental rights (combating health inequalities);

- migration policy;
- safety (readiness for serious cross-border threats to health and management) [1].

Digital medicine should provide online interaction between patients, health care workers and institutions using digital technology. In Ukraine, digital transformation is one of the priority areas of health care reform.

The creation of a national Electronic Health Record (EHR) system is a prerequisite for achieving this goal. EHR is an up-to-date database of systematized patient health data that enables the exchange of information between stakeholders of health care providers and consumers. The EHR system stores information on all medical diseases, and is stored by a specially authorized center (Health Authority). Medical records are official data and can be made available to other authorized centers and similar medical services, as well as laboratories, government agencies, etc. to improve the quality of health care [2].

The creation of a national Electronic Health Record (EHR) system involves the implementation of a number of measures:

1. development and approval of national standards of digital medicine;
2. implementation of services:
 - Computerized Medical Record (CMR) provides for digitization of medical records, introduction of archival and backup functions;
 - Electronic Medical Record (EMR) assumes that digitized patient medical records are correlated with archived medical records. The EMR stores information about a specific medical field (for example dentistry), the custodian is a clinic or practitioner. This is usually an electronic version of the patient's medical history in a particular institution.
 - Electronic Patient Record (EPR) provides that patient data from different medical institutions are formally stored in a single database, as a result each doctor, having an electronic office and appropriate access, can enter data.
 - Personal Health Record (PHR) - stores certain medical information by the custodian; responsible for the completeness and quality of information is the

patient himself (or his representative, for example, a family member).

- Electronic Identifiers (EI) - identification of eHealth users [3].

Additional functions of the national Electronic Health Record system:

- epSOS (smart open service for European patients) - the minimum set of data (extract) from the EHR required to provide medical services to EU citizens;

- CDSS (clinical decision support system) - decision support system for doctors;

- implementation of ePrescription (electronic prescription) will be based on 3 procedures:

- a) eCapture - creation of an electronic prescription by a doctor of a medical institution;

- b) eTransfer - confidential transfer of an electronic prescription to the selected pharmacy;

- c) eDispensation - data transfer from the pharmacy back to the medical institution, confirmation.

- Patient ID and employee ID (doctor, etc.). The social insurance card and the citizen's card can be used as a patient's identity card;

- introduction of TeleHealth: "digital" technologies to provide remote medical care and support the work of doctors;

- introduction of eMedical Claim Forms: a package of electronic documents provided to social insurance bodies or medical institutions for reimbursement [4].

The public health system is one of the areas of activity where a lot of data provides the potential of the Internet of Things in clinical diagnosis, optimization of professional processes, network visualization, telemedicine, management, drug use, patient monitoring and more to save lives, prevention of diseases, monitoring and analysis, creation of new ways and methods of treatment, etc. Therefore, the Internet of Things or the Internet of Medical Resources as a new vector of development [5, p. 12] for this field of professional activity is not an utopia or modern pleasure, but one of the most promising technologies that is gaining popularity in the world and will affect its development in Ukraine.

Currently, the main goal of the Ukrainian government is to move to the "Digital State", where 100% of public services will be received via the Internet. Thus, the main priority of the Government of Ukraine in the field of health care is the introduction of the "E-Health" system. The E-Health ecosystem will allow patients to conveniently and efficiently receive medical services, provide physicians with the necessary access to patient medical data, and hospital managers with maximum analytical information for administrative decisions [6].

Medical databases started working more than a year ago. In September 2018, a database of medical preventive professional examinations was maintained [7].

Citizens were offered a service to verify the legality of certificates and obtain a duplicate. As a

result, citizens' confidence in the state's provision of quality services has increased.

Until 2020, the main provider of management services in Ukraine was the "Single State Portal of Administrative Services". It contained a very primitive list of services provided online. Healthcare services were generally limited to the certification of doctors and cosmetics. Gradually, this was replaced by a new reformed portal with the maximum list of services available online.

So far, in order to further develop e-government, a number of interesting reform projects have already been launched, including the "DIA" portal. The portal is still under development, but information about it is already available. On the "DIA" portal, the user can get acquainted with the services by sections. As for medical services, they are in the "Health" section and provide electronic medical certificates or services related to your electronic medical card.

Another interesting project, the implementation of which is currently underway, is the project "E-baby". This is a convenient way for parents to get services.

Among the available electronic services are: registration of the birth of a child; issuance of a child's birth certificate; registration of the newborn's place of residence; entering data about the newborn in the register of patients; registration in the register of taxpayers; appointment of state assistance at the birth of a child; application for one-time assistance (baby box); issuance of certificates to parents of large families; assignment of financial assistance to children born in large families [8].

All these services can be obtained after filling out only one electronic questionnaire.

Global Market Insights experts estimate that the global digital healthcare market will exceed \$ 106 billion in 2019. The average annual growth in digital healthcare investment will increase by 28.5%.

Thus, the main directions of development of the digital health care system for the next 5 years are:

1. *Mobile applications and fitness gadgets (mHealth)*

Fitness gadgets are becoming increasingly popular with consumers due to their dependence on smartphones, tablets and mobile platforms in general. According to Statista, by the end of 2019, the volume of the global mHealth market exceeded \$ 52.6 billion.

2. *Telemedicine*

Rapid diagnosis, discussion of rare diseases, selection of pharmaceuticals, development and search for molecules using digital libraries - just a few areas with the use of telemedicine. Along with innovations, telemedicine also allows for remote examination of the patient, history taking and counseling.

3. *Remote monitoring of the patient's condition*

Remote monitoring tools include mobile devices and their applications that analyze the patient's condition and allow you to monitor the condition of patients with chronic diseases outside the hospital.

4. *Point treatment of oncological diseases*

Medical innovations are related to developments in biotechnology and cover a wide range of areas, from

biopharmaceuticals, artificial insemination and gene editing to protein design and drug development.

5. *Resources for improving medical literacy for non-professionals*

The World Health Organization notes a direct relationship between critical health indicators (such as high mortality rates) and public health incompetence. That is why medical literacy is a popular direction of development over the next 5 years [9].

Telemedicine, or remote health monitoring, is one of the most obvious and popular applications of Internet of Things technologies in medical practice. In some cases, patients do not need to see an emergency department or see their family doctor. Devices, along with various applications, replace the activities of medical personnel and perform everything themselves. Physicians, on the other hand, only use remote monitoring to draw more sound conclusions about patients' health. With the help of telemedicine, the patient's costs for visiting medical institutions, institutions or governing bodies are reduced.

The most common meaning of the Internet of Things, IoT, is a concept that allows physical objects ("resource objects") to interact with each other or with the external environment, in part or in whole without human intervention. All you need to do is use the appropriate network connections of such devices. In fact, this means that everyday things that surround us, from the simplest, such as TV, to the car, can transmit the necessary data, providing maximum comfort without interference and control.

Thus, with the help of artificial intelligence you can collect a complete medical history, data on tests for the period of treatment, the state of the body during a certain period. The data downloaded to the database is quickly processed by a computer. This saves doctors time, helps to establish an accurate diagnosis and allows you to timely prescribe the necessary treatment.

In China, the Xiaoyi robot (Xiao Yi) with artificial intelligence has successfully passed medical exams taken by doctors to obtain a license. According to Interesting Engineering, the robot scored 456 points out of 600 possible, which is 96 points more than required for a satisfactory result. Medical textbooks were loaded into the "consciousness" of the work. During the exam, the robot could not search for information on the Internet and gave answers based on the "studied" theory from textbooks [10].

Xiao Yi's robot was developed by the Chinese company iFlytek as a useful assistant for doctors who can receive information from patients and analyze it. The developers believe that such work can increase the effectiveness of medical care to patients. In addition, iFlytek plans to use artificial intelligence technology to find ways to treat cancer [11, p. 7].

Conclusions. Thus, the introduction of new technologies as one of the main directions of transformation of public administration in the field of health care will allow to make structural changes in the system of medical care, will meet the needs of the population in new medical services and their

accessibility. The only way to solve systemic problems in the field of health care is to develop a strategically oriented public policy, the main task of which is to define human health as one of the main priorities of the state, create, develop and ensure the functioning of the new national health care system.

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