Digitizing the health sector during the Corona pandemic - Case study of the public Hospital Mohamed Boudiaf in medea-

رقمنة القطاع الصحي في ظل جائحة كورونا - دراسة حالة المؤسسة العمومية الاستشفائية محمد بوضياف بالمدية -

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Abstract: This study aims to identify the extent of the contribution of digitization in managing the health sector during the Corona pandemic in Algeria by addressing its role and strengthening its position in the face of the Covid 19 virus, in addition to analyzing the actual reality of the extent of using digitization techniques in Algerian public hospitals, by conducting a case study of the public hospital institution Mohamed Boudiaf in Medea, by relying on the interview to find out the opinions of a sample of health sector employees, including administrators, doctors and paramedics . Thus, identifying the reality of the health system during the Covid 19 crisis and the necessity of introducing digitization in this sector as an urgent need to improve health services and develop the performance of employees in public hospital institutions in Algeria.

Key words: Digitalization , digitization ,digital transformation, health sector , corona pandemic, the public Hospital Mohamed Boudiaf in medea .

الملخص : تهدف هذه الدراسة الى التعرف على مدى مساهمة الرقمنة في إدارة القطاع الصحي خلال جائحة كورونا في الجزائر من خلال التطرق الى دورها وتعزيز مكانتها في مواجهة فيروس كوفد 19 ، بالإضافة إلى تحليل الواقع الفعلي لمدى استخدام تقنيات الرقمنة في المستشفيات العمومية الجزائرية ، عن طريق إجراء دراسة حالة المؤسسة العمومية الاستشفائية محمد بوضياف بولاية المدية ، و ذلك بالاعتماد على المقابلة لمعرفة أراء عينة من موظفي القطاع الصحي من إداريين و أطباء و شبه طبيين. و بالتالي التعرف على واقع المنظومة الصحية خلال أزمة كوفيد 19 وضرورة إدخال الرقمنة في هذا القطاع كحاجة ملحة لتحسين الخدمات الصحية وتطوير أداء الموظفين في المؤسسات العمومية الاستشفائية في الجزائر. .

الكلمات المفتاحية : الرقمنة ،التحول الرقمي ،القطاع الصحي ، جائحة كورونا ، المؤسسة العمومية الاستشفائية محمد بوضياف بالمدية

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1- Introduction

Today, the world is witnessing enormous and increasing developments in the field of technology as well as information technology, which made the latter break into all fields and contribute to the, ear development and enhancement in a large percentage. 19 in the form of successive and increasing waves, in addition to the terrible and accelerating spread of the virus, which imposed on the health sector to adopt new technologies to limit this spread, especially in the presence of enormous cases of varying severity, which requires more accurate procedures and thus the accumulation of files and their transfer from one person to another and increasing job pressure, which It causes the performance of the employees to decline and deteriorate in conditions that require discernment and require prevention, Thus, it became more clear that these new technologies must be digital information technologies in the health sector to work with and support them more due to their great role in improving and developing the performance of workers, and thus this is reflected in the quality of health service provision, especially in hospitals, where this field highlights its effectiveness, while it was exposed to The best global health systems have caused major disruptions and faced greater difficulties in facing this epidemic despite their adoption of the latest technologies, so that the spread of the Corona virus caused a great collapse in the weak health systems of developing countries as a result of the terrifying rise in the death rate, especially since these systems lack The simplest necessary techniques, which made the performance of employees become worse and more difficult in the provision of health services On the other hand, developed countries in the field of digitization have avoided many risks and negative repercussions as a result of the accuracy and confidentiality of digitized information and data, while many reports completed by United Nations offices focused on placing health issues at the top of their agenda, calling on all actors To

reach its established goals, especially those related to developing the quality of health services provided, especially after the world reached the saturation stage of cases of infection with the emerging coronavirus, pushing the international burden of health systems to rise.

Which prompted an increase in the need to reconsider the preparation of new effective health systems that adopt the digital feature that would monitor such sudden waves with their various effects and results, as well as providing to provide health services of quality and effectiveness and thus improve the performance of employees in light of the application of Digitization at the level of the health sector.

1.1 Research Problem :

In light of this, we issue the following problem:

 What is the impact of the digitalization of the health sector on the quality of health services in light of the COVID-19 pandemic in Algeria?

1.2 Research hypotheses:

 To answer this problem, we propose the following hypotheses:
- The more severe the Covid-19 crisis, the greater the need to introduce digitization into the health sector.

- The impact of the digitization of the health sector during the Corona pandemic on improving the quality of health services .

1.3 Research Objectives:

The main objectives of the research are the following:

- Identify the study terms and identify the semantic differences between digitization, digitization, digitalization, digital transformation, information technology, and electronic management.

- Determining the nature of the health system in Algeria, and standing up for strengthening the position of digitization in the face of the Covid-19 virus in Algeria

- Identifying the difficulties and obstacles that hinder the realization of the digitization process in the health sector in Algeria

- Determining the most important mechanisms and requirements for activating digitalization in the field of health, and reaching a set of results and proposals to embody digital health on the ground .

1.4 Research Methodology:

The methodology of the study is to follow the descriptive analytical approach, whereby identifying the nature of the studied phenomenon of digitizing the health sector, describing it, defining its characteristics, and linking its various variables represented in: job performance and the new Coronavirus, and determining the quality of this relationship, and addressing its causes and results, By analyzing the study variables and interpreting them in an objective way by collecting information and data using scientific research tools and techniques represented in observations and interviews, and investigating previous foreign and Arab studies to understand the reality and present of the subject of the study in order to direct and predict the future of this study. , as well as an attempt to reach conclusions that contribute to embodying the process of activating digitization in the health sector and its impact on improving job performance in light of the Covid-19 pandemic in Algeria.

1.5 . Research plan:

In order to answer the problem and verify the proposed hypotheses, we divided the subject of our research in the form of four sections as follows:

The first axis: the conceptual framework of the phenomenon studied.

The second axis: The reality of the health sector in Algeria during the Corona pandemic

The third axis: The role of digitization in managing the health sector during the Corona pandemic in Algeria

The fourth axis (field study): a case study of the public hospital institution Mohamed Boudiaf in Medea.

2. The first axis: the conceptual framework of the phenomenon studied

2.1 The concept of digitalization

Before addressing the definition of the term digitalization, we must point out through previous studies, especially foreign ones, that there are terms overlapping with the term digital, digitalization, digitalization ,digital transformation, and information technology.

2.1.1 Definition of digital

Digital refers to electronic technology that uses discrete values, generally zero and one, to generate, store and process data. In digital technology, data is transmitted and stored as strings of zeros and ones, each of which are referred to as bits. These bits are grouped together into bytes to represent data such as numbers, letters, images or sounds.[1]

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[1] Techopedia ,definition of digital , https://www.techopedia.com ,(12/06/2022),(17:25).

2.1.2 Definition of digitization:

Digitization a set of processes that converts physical resources to a digital form, or that creates materials in a digital form (born digital). These processes include: Identification, selection and prioritization of materials to be digitized; Digital asset creation or conversion; Creation of descriptive and technical metadata sufficient to allow retrieval and management of the digital assets and to provide basic contextual information for the user; and Quality control of digital assets and metadata.[1]

The Encyclopedic Dictionary of Information and Documentation defined it as an electronic process for producing electronic or digital codes, whether through a document or any physical object, or through analog electronic signals.[2]

The Digitization Program Advisory Committee (DPAC), composed of representatives from across the Institution, assists the DPO in implementing the digitization strategic plan by advising on policies, standards, priorities, processes, performance metrics, and funding strategies for digitization at the Institution.[3]

2.1.3 Definition of digitalization:

Digitalization: Digitizing is conversion of physical documents into a digital/electronic format.[4]

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[1] Smithonian , digitization and digital asset management policy ,smithonia institution, NO: 610, 31 March 2011 ,p04.
[2] Serge cacaly , ali, Dictionnaire encyclopédique de l'information et de la documentation ,editions Nathan :isbn 2-09-190528-3 ,Amsterdam , 2001, p431.
[3] Smithonian,ibid,p08.
[4] Nellie m.gorbea ,Digitizing Public Records in Rhode Island,This the Rhode Island Department,2021 ,p02.

Digitalization is the next step and continuation after the process of digitization . It is a broader integration of several digitized systems and technologies forming a change from a manual and physical model , environment or society into an automated and digital one for a certain purpose that creates value .[1]

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.[2]

Digitalization definition: when data from throughout the organization and its assets is processed through advanced digital technologies, which leads to fundamental changes in business processes that can result in new business models and social change.[3]

2.1.4 Definition of digital transformation:

'Digital transformation' is the act of adopting digital technology or digital thinking to significantly transform an organization's operation, and/or the reframing of the organization to be inherently digital in its purpose.[4]

digital transformation as 'the use of new, fast and frequently changing digital technology to solve problems.'This is a good starting point but it doesn't reflect the degree of profound change

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[1] Hankan svenska and others , digitalization of kvarkan (destination kvarkan),interreg botnia-atlantica,Europe ska unionen ,2019 ,p 03 .

[2] Gartner,digitilization , https://www.gartner.com/en,(17/06/2022),(13:54).

[3] Jacqueline Prause, Digitization vs digitalization-wordplay or world view , https://www.sap.com ,(17/06/2022),(18 :30).

[4] Jane finnis, Anra Kennedy,The Digital Transformation Agenda and GLAMs –A Quick Scan Report for Europeana,Culture24, July 2020,p 07 .

and challenge that digital transformation brings tevery sector it has touched and disrupted.[1]

Digital transformation goes beyond a new app or simple transfer of paperwork from overstuffed filing cabinets to the cloud. It's the process of holistically reimagining every aspect of your business.[2]

It's no secret that effective digital transformations boost customer satisfaction and lead to significant business gains. The digital transformation trend is more than just buzz—companies that adopt a digital-first, customer-focused approach exceeded their business goals in 2018.[3]

2.1.5 Definition of information technology (IT) :

Information technology (IT) , in its narrow definition , refers to the technological side of an information system . It includes hardware , databases , software networks , and other devices . As such , it can be viewed as a subsystem of an information system . Sometimes , the term IT is also used interchangeably with information systems , or it may even be used as a broader concept that describes a collection of several information systems , users , and management for an entire organization .[4]

In the final analysis, therefore, we digitize information, we digitalize processes and roles that make up the operations of a business, and we digitally transform the business and its strategy. Each one is necessary but not sufficient for the next, and most importantly,

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[1] Ibid, p06 .

[2] Larissa Lewis,(2020), What is Digital Transformation?, https://www.processmaker.com/: (19/06/2022),(20 :30).

[3] Ibid

[4] Mehdi khosrow-pour ,managing information technology resources in organization in the next millennium , ,igi global, usa ,1999, p 905 .

digitization and digitalization are essentially about technology, but digital transformation is not, Digital transformation is about the customer.[1]

2.2: the spread of the Covid-19 pandemic

COVID-19; in full coronavirus disease 2019, highly contagious respiratory illness, the cause of the COVID-19 pandemic. COVID-19 was first detected in 2019 in Wuhan, China. A large proportion of infections in China were undocumented before travel restrictions and other control measures were implemented in late January 2020. As a result, COVID-19 very quickly spread to countries worldwide, giving rise to a multiyear pandemic that resulted in millions of deaths.[2]

Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age.[3]

The COVID-19 pandemic has caused tremendous disruption at a scale not seen for at least a century; it is a stark reminder of the ongoing challenge of emerging and reemerging infectious diseases. This exceptional challenge to public health, food systems, global economies, and social norms is not only leading to millions of

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[1] Jason Bloomberg ,(2022), Digitization, Digitalization, And Digital Transformation: Confuse Them At Your Peril- https://www.forbes.com/,(22/06/2022),(12:14).

[2] Britannica,(2022) , https://cdn.britannica.com , (12/07/2022) ,(07 :12)

[3] World health organization, Corona disease (COVID-19) https://www.who.int ,(12/07/2022),(07:20).

deaths and ill health , but also pushing tens of millions more back into extreme poverty, substantially increasing the prevalence of undernutrition, and likely contributing to significant future chronic disease and mental health burdens.[1]

3. The second axis: The reality of the health sector in Algeria during the Corona pandemic

3.1 Collapse of the health system

A large segment of citizens criticizes the performance of the health system in Algeria before the advent of Corona. An important part of these criticisms is related to the absence of quality hospitals capable of providing medical care for epidemics and serious diseases.

Corona exposed this bitter reality after the specialized medical teams faced very complex problems in dealing with cases infected with the "epidemic".

 This happened in the early days of the spread of the "virus" in the governorates where only hospitals had very limited capacity, and the number of specialized medical services did not meet the existing pressure, in addition to the overwhelming tendency of doctors to work in the private sector.[2]

3.2 poor health services

The Covid-19 pandemic has revealed all the changes taking place at the heart of the health sector, with a tendency to strengthen the

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[1] The World Bank , covid-19 and climate smart health care, health sector opportunities for a Synergistic: Response to the covid-19 and Climate Crises, ibrd-ida world bank group,2021 ,p14 .

[2] محمد مرواني ، مجلة الكترونية: السفير العربي ، العدد 517 ، الكورونا في الجزائر: أمراض العجز ورغيف اليوم،2021،الموقع : https://assafirarabi.com/ar ،(2022/08/18).(16:55)

private sector, which was once a minority, through a unique division of labor at the expense of the dominant public sector. In the overcrowded and exhausted public sector, we find criticism, underestimating its value, putting pressure on emergency departments, and calculating the number of the dead.. As for the private, there are new clinics, analyzes and diagnoses. [1]

3.3 covid 19 threats to the health sector

The high number of coronavirus cases in Algeria has put the health sector on the line, after some imbalances emerged, such as the lack of oxygen and the registration of overcrowding in hospitals, and the expansion of the circle of advocates declaring a state of health emergency.

The health system found itself facing a difficult situation due to the terrible "sudden" pressure caused by the widespread and accelerating "delta" mutation, which created confusion and tension among the health community, which was in a warrior's resting position after being able to stand in front of the first and second waves that the country knew.[2]

4.The third axis: the role of digitization in the management of the health sector in Algeria

4.1 brief history of digitization

Digital history might be broadly understood as an approach to examining and representing the past that works with the new communication technologies of the computer, the internet network, and software systems. On one level, digital history is an

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[1] غنية موفق ، مجلة الكترونية :السفير العربي ، العدد 517 ، الجزائر: الصحة في زمن كوفيد-19 ،2021 ،الموقع : https://assafirarabi.com/ar ،(11/09/2022)،(13:00).

[2] علي ياحي ،(2021)، صحيفة اندبندت العربية : هل تصمد المنظومة الصحية في الجزائر؟ الموقع : https://www.independentarabia.com / ،(15.09.2022)،(12:12).

open arena of scholarly production and communication, encompassing the development of new course materials and scholarly data collection efforts.[1]

On another level, digital history is a methodological approach framed by the hyper textual power of these technologies to make, define, query, and annotate associations in the human record of the past. To do digital history, then, is to digitize the past certainly, but it is much more than that. It is to create a framework through technology for people to experience, read, and follow an argument about a major historical problem.[2]

Since the middle of the twentieth century, digitization has slowly begun to penetrate into some sectors, and then it surged strongly with the advent of the Internet in the nineties, and was reinforced by the launch of big data in the current millennium (2013 AD), so the ones and zeros dominate the world. As this binary coding (0 and 1), which is the language of the computer, is swallowing up everything day after day, from children's toys to institutions and governments of countries that are digitizing.[3]

4.2 Among the most important advantages of digitization:

Digitization helps with many things, including:

Improving work efficiency, including facilitating cooperation between employees and their subordinates, which helps in improving the decision-making process. – Improves dealing with the public, by quickly implementing and meeting all the demands of the public and customers faster than before. Expanding the

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[1] Douglas Seefeldt,William G. Thomas,(2009), WHAT IS DIGITAL HISTORY?; https://www.historians.org/perspectives,(13/07/2022),(13:40).

[2] Ibid .

[3] أبو بكر سلطان أحمد ، الغاء الحواجز بين البشر و تقنية الرقمنة (2020) ، / https://www.alarabiya.net، (19.07.2022) . (14:05)

scope of services, through the ability to perform the same tasks from anywhere, instead of having to go to a specific office or body.

- Obtaining data at any time, through easy access to it, through many tools, especially with the spread of Internet networks.[1]

4.3 The importance of digitization is evident in the following:

Digitalization is important for an organization because it unlocks new thinking and approaches in how the organization perceives its role within its ecosystem and its opportunity for increased profitability. Technology is not an end in itself.

With digitalization in place, these organizations can begin to create new value chains and experiences that are collaborative, interactive, sustainable, and profitable.[2]

4.4 Importance during covid:

-According to the Organisation for Economic Co-operation and Development (OECD), the COVID-19 shock has accelerated the digitalisation of public and private sector activities in many countries, including in the form of improved broadband connectivity, the adoption of online business models, the promotion of online payments and the enhancement of digital skills.[3]

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[1] اليوم السابع ،(2019)،مصر على الطريق الرقمي، https://www.youm7.com/ ،(17/07/2022). (12:30)

[2] Jacqueline Prause, (2016) ,ibid.

[3] Eurofound ,(2021),covid -19 and digitalization, https://www.eurofound.europa.eu , (01/08/2022),(15:13).

4.5 Its importance in the health sector :

-Fagherazzi et al 2020 touched on the importance of telemedicine and the use of social media in order to reduce the risk of transmission. van spall et all 2020 is a vision to exploit digital technology to manage and limit the corona epidemic through proactive monitoring, expansion of tests and restricted isolation of the injured, a vision that has proven, according to researchers, to be effective in some developed countries.[1]

-Accelerating the adoption of digital health means that millions more people will receive affordable, timely, quality health

-Digital technologies have long been recognized as having a crucial role in strengthening national health systems. Digital transformation has been shown to extend the scope, transparency and accessibility of health services and health information. As part of a transition to integrated, people-centered care, digital technologies can even improve the quality of service delivery and empower patients .[2](World health organization,2018).

The interaction between the health crisis and technological development has been noticeable, since the adoption of digital resources to prevent and better manage the effects of the pandemic has been considerable. From efforts in researching vaccines to the rise in telemedicine and the use of additive manufacturing - not to mention the controversial contact tracing apps – digital technology has shown its capacity to contribute to mitigating and fighting the pandemic.[3]

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[1] سلمى بشاري ، تطور الرقمنة في الجزائر كآلية لوباء ما بعد فيروس كورونا (كوفيد 19) ، المجلد. 36 - عدد 03-2020 ، ص 584 .
[2] World health organization,(2018), Boosting the digitalization of health systems to help progress towards health for all, https://www.who.int/,(15/07/2022),(22:34).
[3] Eurofound,(2021),ibid.

5. The fourth axis(Field study):

A field study (the public hospital Mohamed Boudiaf in the state of Medea - Algeria)

5.1 Scientific research tools:

 Among the most important research tools that were adopted in this study are: the interview .

5.2The study sample :

An interview was conducted with three categories of employees inside the hospital: the medical corps, the administrative corps, and the paramedical corps. These samples were selected on the basis of their relationship to the use of digitization in the health sector within the hospital.

5.3 The interview questions were as follows:

1/ Do you personally use a digital program?

2/ What is the benefit of digitizing the public health sector? Who should be responsible for digitalization?

3/ How can you benefit from the digitalization of the public health sector in general? And in your specialty in particular?

4/ How will digitalization affect the quality of health services provided in the hospital?

5/ An evaluation meeting was held on the digitalization of the health sector by the Minister of Health on 12/20/2020. In your opinion, what is the reason why digitalization has not been embodied to this day?

6/ Digitalization is one of the mechanisms for eliminating bureaucracy, especially in public institutions, including hospitals. To what extent do you support this statement?

7/ Who is the digitization of hospitals for?

8/ What makes you optimistic about the digitization of this sector?

9/ Is it possible to convert Medea Hospital into a digital hospital? How likely is that to succeed?

10/ What are the most important obstacles that doctors face in digital transformation?

11/ As a doctor/medical secretary/administrative , do you encourage digital files for patients? And who is responsible for managing it?

12/ What do you suggest for digitizing medical services?

5.4 Analysis and results :

Similar to the rest of the nation's hospitals, the information or digital system in Medea Hospital was limited to the patient's information base (patient) according to the patient's mobile card (shuttle sheet), but this program was designed according to the system (ms.dos) more than 20 years ago is no longer compatible With the developments of modern information systems, therefore, the Ministry of Health was keen to enter strongly into the world of digitization as a priority and a means to advance the health sector.

  Where Mr. Taoufik Ben Mazrouqua, an administrator - Head of the Admission Office Department at Medea Hospital, stated that the various offices and departments of the institution have been linked with high-flow optical fibers in order to use various programs such as (patient.dz) as an updated database that operates with the

(bar code) system. In addition to an information system for waiting in the department of emergency services, according to the priority and degree of severity of the patient, leading to the electronic medical file of the patient, which aims to access the use of an electronic card for the patient (zero paper) similar to the recovery card of the Social Security Fund, in order to gain effort and Time and money, and to facilitate the patient and his companions on the one hand, and health workers on the other hand.[1]

The hospital institution in Medea has implemented all the directives issued by the Ministry of Will correspondence [2] . and a partnership has been established between hospitals and Algeria Telecom in order to connect the hospital to networks and connect the necessary cables, and this What has been done by 100% in order to highlight the electronic file and generalize the digitization process in the various departments within the hospital, whether to serve the patient or to serve the employees.

Where the emergency department will have the information system for waiting, which determines the degree of risk and priority for examining the patient according to three colors as follows: (Red: a serious and urgent case, i.e. it has priority in diagnosis and treatment), (Orange: a medium-risk case), (Green: a non-urgent case). and not dangerous), with the aim of facilitating the evaluation and monitoring processes.

The digitization of the health sector has become one of the necessities of management with regard to patients' access and the exploitation of all their information in a short time. In this context,

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[1] interview with Mr : Taoufik Ben Mazrouqua (12 november2022), an administrator - Head of the Admission Office Department ,in Medea Hospital,at 10h15m , medea hospital .
[2] correspondence No. 33 of February 19, 2019 issued by the Directorate of Systems for Information and Automated Information at the Ministry of Health.

Mrs. Fekak Amira, Sub-Director of Human Resources at Medea Hospital, confirmed that despite the difficulty of embodying digitization in Medea Hospital because it has multiple interests and departments. In addition to its location in the state capital, which causes pressure and overcrowding, it will be an actual application of digitization by the year 2023 in the emergency department, as it is the hospital's window to serve the patient.

Mrs. Fekak stated that it will be a new global problem in this information system to wait in the emergency department about assuming the tasks of sorting urgent patient cases, determining priority in diagnosis and treatment, and choosing colors in proportion to each disease case (who will identify serious cases?), and Dealing with this change will inevitably face resistance from the employees, but the correct way to make this change a success, represented by digitization, will be to persuade and train the employees, and not to put pressure on them.[1]

- Most medical staff in public hospitals do not use digital programs for their work because they are not provided by the hospital administration.

 The digitalization of the public health sector is necessary, because it results in several advantages, the most important of which are: Facilitating access to patient data, in particular for patients who have stayed several times in hospital, and have a long historical record. It also facilitates the exchange of data between different disciplines. Finally, it facilitates the archiving of medical data and the concentration of all patient data in a single program.

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[1] - interview with Mrs : Amira Fekak (14 november 2022), Sub-Director of Human Resources ,in Medea Hospital,at 16h:20m, medea hospital .

Digitalization must be at the initiative of the hospital director as the first person in charge of this establishment, with the help of a computer specialist (for the technical side and for software training)

The installation of computers for medical and paramedical teams in a network that gives access to all patient data, as well as the possibility of sharing it in general.

In particular, the nephrology department receives, for example, dozens of chronic dialysis patients three times a week, and this digitalization will make it possible to monitor the progress made at each dialysis session, to identify any accidents that may occur and thus to create links this will improve their ongoing follow-up ,[1] and so said Doctor Esselimani Soheib, Nephrologist at Medea Hospital.

Digitalization will revolutionize patient care. The quality of patient care services will be greatly improved within hospitals .

The reason why digitization has not materialized to date is the fact that there the absence of practical workshops in which both participate?, computer engineers, administrators, and doctors, from different specialists.

 The organization of a review meeting on the digitization of the health sector by the Minister of Health indicates that there is a real will to achieve this; but willpower alone is not enough [2] according to Doctor Khaldi Abdelrahman, a general practitioner at Medea Hospital, the Department of Pediatric Surgery .

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[1] - interview with doctor : Soheib Esselimani (14 november 2022), doctor Nephrologist , in Medea Hospital,at 14h30m, medea hospital .

[2] - interview with doctor : abdelrahman Khaldi (02 december 2022), a general doctor, in Medea Hospital , at 09h :00 , medea hospital .

An evaluation meeting was organized on the digitization of the health sector by the Minister of Health on 20/12/2020, but this has not been implemented to date, mainly to due to the budget that this represents, especially after two years of health crisis(corona).

Digitalization is one of the mechanisms for eliminating bureaucracy, particularly in public establishments including hospitals, where digitalization will make all events related to the patient received transparent: medical work performed, care, treatments received, etc.

The digitalization of hospitals is mainly aimed at doctors and nurses. Also for caregivers What makes us optimistic about the digitalization of this health sector is the possibility of revolutionizing patient care linked to the working comfort of medical teams

As for the possibility of transforming the Médéa Hospital into a digital hospital, it is possible, but with incentive management and staff support for this, because there is no reason not to succeed.

Doctors are facing obstacles in digital transformation, which is to regularly update data of patients under observation, and this is a matter that will take time and demand a lot.

For most doctors, or administrative or semi-medical, the digital patient file is encouraged because dematerialization has become necessary and must be managed by department managers, in particular the head of department and the supervising doctor.

And as the application of a digital model for health in the Arab countries, we turn to the Kingdom of Saudi Arabia. Where it took several weeks for the outbreak to spread around the world, the digital health solutions used by Saudi Arabia during the outbreak are now being used to revolutionize the healthcare system and

industry providing opportunities to transform healthcare delivery and enhance patient care for the post-virus phase .[1]

6 .Conclusion

This study aims to focus at the need for Algeria to adopt modern technologies in the health sector and progress towards managing hospital institutions in a modern and sophisticated way that allows it to achieve the desired goals, especially those stipulated by the principles of sustainable development, and this is to promote progress and push its institutions to harmonize the global health sectors and Identify deficiencies in the quality of health services provided, as well as to support accountability for the results achieved

While this objective is mainly associated with the modernization and digitization of the health sector, as it must be included among the strategic priorities of the Algerian authorities in the same regard, due to the advantages and facilities that they provide, which reflect positively on the aspirations of the Algerian citizen and has all the current obstacles in the institutions General hospital.

6.1 Among the most important results obtained are:

- Non-discrimination between digitization and digitization in the health system in Algeria

- Working in a traditional way and refusing to introduce a digital system due to the lack of specialized positions for that

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[1] Global health exhibition ، ملتقى الصحة العالمي ، الصحة الرقمية في المملكة العربية السعودية بعد كوفيد 19 ، 13 رمضان 1441 ،الموقع : https://www.globalhealthsaudi.com/ar/home.htm ،(12/09/2022)،(14:33).

- Connecting networks in public hospital institutions and working with them on the basis of a large embodiment of technology

- Indifference to organizational change in hospitals and their underestimation

- Fear of introducing digitization in the health sector and working with it due to the lack of experience in that

- The density of files, their loss and the possibility of their destruction urge to rely on digitization

- Great encouragement from doctors to embody digitization in the health sector, especially in public hospitals, to follow up on patients immediately and in an organized manner

6.2 We offer some recommendations as follows:

- Training medical secretaries to use digitization in hospitals by specialists, thus introducing jobs.

- It is necessary to differentiate between digitization and digitization to use them correctly and thus protect the digitization system from any breach or viruses.

- Opening an electronic platform for hospitals to deal remotely in cases that require it.

- Programming an application for doctors to follow up on patients with data and a password for that.

- Providing a budget for the digitization of the health sector as a whole in Algeria by the government and striving for its success, especially at the level of public hospital institutions.

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