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Improving digital health services strategy using evidence to support community health care

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***Abstract*---**Efforts to improve health evaluation strategies with the help of technology or so-called software applications to improve public services are an exciting issue to be reviewed. This study tries to obtain scientific evidence from various fires and viewpoints from various publication sources. We examine it with a phenomenological approach, and finally, we find very valid results to answer the problem. Based on the study and discussion results, we have obtained results, including efforts to increase digital health evaluation and the provision of comprehensive health services, which are believed to increase the effectiveness of accessibility, convenience, efficiency, and personalized services for every community. Experts say these strategies are technological innovations in health services that involve a digital-based service system. People who seek treatment can benefit from the cost-effectiveness of spending and other dangers that often occur before digital-based health innovations occur.

***Keywords*---**Enhancing, digital health, evaluation strategy, scientific evidence, community service.

Introduction

The COVID-19 pandemic does not seem like it has finished yet. All nations have made various efforts, as shown by the limitations and capacities of the medical staff in dealing with them (Al-Maroof et al., 2020). Because all diseases certainly impact public services and all components of human existence and development, be it the economy, schools, welfare, or socio-culture. Then again, it turns out that out of the many dire consequences of pandemics and other diseases, only one door has been opened (Fauzi et al., 2021). The Covid-19 pandemic has been shown to accelerate progressive changes in both treatment and how to handle it with the help of technology. Many disease studies and treatments are generally completed physically and are expected to be successful; However, the medical way must be completely changed to become more advanced and sophisticated because pandemics and other diseases are a real threat to public health. Online coordination meetings, web-based education, educational experiences, internet shopping, and counseling and treatment with specialist doctors or other health workers are increasingly carefully. For this reason, the presence of digitalization is an undeniable need. The law of every disease, including a pandemic, has accelerated the way treatment works and health services in general (Lazim et al., 2021).

The digitization of the health sector is essential in today's medical care. Welfare administration is one of the essential and essential types of administration (Ittefaq & Iqbal, 2018). The human development index is a sign of increasing the nature of human existence. One that is not fixated on the welfare component, especially the future. To be able to achieve the target of improving welfare. So that the welfare universe is also expected to follow the changing events and progress of the times, especially the change from the manual period to the computerized era (Botvinik-Nezer et al., 2020). The digitization of the health sector is divided into two. In general, the creators envisage that the digitization of welfare administration is divided into two essential parts: the administration's digitization and the welfare board's digitization. Digitization of health services is the most common way to digitize health care programs provided by health workers in health care institutions, whether in individual health efforts or public health efforts. By digitizing healthcare services, assuming some individuals have a medical condition and will have an interview and require therapy, there is a solid reason to meet with a specialist or other healthcare worker. However, it tends to be done on a digital support (Neumann et al., 2021).

In addition, by digitizing welfare administration, meetings or references for welfare administration should be possible on the web; This action is known as Telemedicine. General professionals in Primary Health Facilities can complete discussions with expert specialists at Advanced Referral Health Facilities by utilizing the web (Frennert, 2018). Digitizing board welfare incorporates the executive-run cycle of welfare digitization. All plank exercises are done with care. Everything is done carefully, starting from arranging, selecting information, stock of information, retrieval, and understanding. Likewise, checking and assessment are also carried out carefully at the implementation stage. The change from manual to computerized is not just changing from writing to composing. However, many things have also changed. This impacts mentality, changes in the

framework and human resources that must be provided, and different changes. Apart from these difficulties, towards the beginning of this period of change, there is also the application of happiness. Many applications are created and sent for execution. Sometimes a crossover occurs with the same request for information between one application and another so that the administrator in the medical service office does the same thing twice (Miner et al., 2014).

Health digitization can be implemented optimally because it is characterized by broad, advanced well-being depicting computerized data, information, and correspondence innovations to collect, share, and dissect health data to work on sustainable health and medical care delivery (Dash, 2020). Some time ago, the time the medical services industry (described by specialists who controlled the tertiary considerations) was anticipated to move into the data age (separated by patients residing in the medical care habitat). Clinical judgment was relatively isolated from automatic and adaptive progress impairment in the past. Alongside making more noteworthy, adjustable, and the $27 billion government speculation has validated irrelevant computerized abundance drivers, the massive change in US clinical advantages under the Health Information Technology for Economic and Clinical Health Act of 2009. Endowments and individual Interest in state-of-the-art abundance expanded to more than $3.5 billion in 2017. Modernized thriving can speed up, smooth out, and further extend clinical evaluation endeavors while decreasing expenses (Ricciardi et al., 2019).

This improvement could work with and advance more standard randomized clinical starters (RCTs), which is especially critical as RCTs are turning out to be progressively over the top and perplexing, deferred to finish, and are carving out opportunities to incorporate outcomes (Konttila et al., 2019). The consolidation of mechanized movements into clinical commencement ought to be investigated. In any case, there is essential to notice these improvements to empower more unobtrusive and reasonable establishments. Maybe the potential gain of mechanical riches for clinical and research thinking will be valued when specific difficulties have been settled concerning information quality, security, openness, affirmation, and the requirement for guidelines (Chatterjee et al., 2021).

Utilization of computerized wellbeing innovation as an asymptomatic instrument. Fast advances in the handling force of electronic improvements have engaged the upgrade of A.I., figuring that affiliations like Facebook, Amazon, and Google used to develop search inquiries and limited time conditions further. These estimations emerged from the multiplication of misleading idea networks during the 1940s and 1950s, which endeavored to imitate the reaction of human cerebrum neurons to exterior upgrades as a source of inspiration learning and model acknowledgment. One representation of the value of this brain network arose out of the frontal cortex network examinations driven by Gulshan et al. to help the revelation of diabetic retinopathy (Bukowski et al., 2020). Huge examinations have recognized lymph hub metastases in illness in the wake of deciding slippery chest movement utilizing entire slide pathology. Different evaluations try to use progress in client wearable recognition to help the clinical disclosure of ordinary sicknesses (Santosh & Gaur, 2021).

For instance, the Apple Heart Study assessed whether Apple Watch could perceive irregular heart rhythms, for instance, atrial fibrillation (Ganguli et al., 2020). Given the tremendous clinical and helpful results of atrial fibrillation, this study exhibits the potential for cutting-edge shopping things under clinical thought. While these outcomes support, the following stage joins the choice of these potential applications and the different computations in existing clinical screening projects and thinking models. It surveys their effect on treatment and results by evaluating whether Apple Watch can recognize irregular heart rhythms, for instance, atrial fibrillation. Given the tremendous clinical and restorative results of perceiving atrial fibrillation, this study shows the capability of a high-level client thing in clinical advantage. Nonetheless, these outcomes are enabling; the going with stages are merged choosing the reasonableness of this application and different computations in existing clinical screening projects and thinking models and reviewing their effect on treatment and results (Bhavnani et al., 2020).

Present-day wellbeing as sickness the executives and choice help apparatus is fundamental. Electronic success advancements can likewise drive flourishing results by growing patient commitments for steady parental consideration, shutting correspondence, and associations perceiving people to take care of patient issues (Chatzakis et al., 2018). For instance, BlueStar is most likely the earliest application (application) supported by the US Food and Drug Administration (FDA) as a lead plate structure diabetes mellitus. This application requires treatment from a specialist and includes the patient titrating insulin portion utilizing a prohibitive insulin mini-computer. Choice help applications look at interruption as a massive reason for out-of-office occasions while engaging patients to work on their clinical issues (Pivodic et al., 2022).

Their accomplishment was a significant driver of how simple to utilize or complex these devices and electronic trades were for patients. The quick advancement of infection devices abroad has broadened administrative recommendations. The last draft course from the FDA has taken a gander at some of the issues concerning clinical and patient choice guides (Bluethmann et al., 2018). The FDA controls programs that meet the significance of devices under segment 201 (h) of the Federal Food, Drug, and Cosmetic Act. It integrates an elective help program that considers everything. Segment 3060 (a) of the Cures Act rethinks this definition to preclude unequivocal choices to help delicate things of clinical significance. Such a program introducing discoveries or remedial ideas ought to permit clinical advantage specialists to survey the support for such recommendations genuinely; the point is not such a massive amount for riches specialists to by, and large depend on this proposition to impact clinical bearing (Coorevits et al., 2013).

Suppose choice help programs do not show the support behind such a suggestion. The delicate thing could depend on the standard as a clinical computerized wellbeing device to increment research initiates. Patient enlistment is primarily noted as the place of Achilles effect of insightful clinical investigations, especially RCTs; It is not sufficient to pick essentials consistently face creation costs, valuable open doors are extended quite far, or even cutbacks. MyHeart exhibits the potential utility of utilizing mechanical success headways to increment early information exchanges. The Counts CardiovascularHealth Study

chose 48,986 patients from March 2015 to October 2015, utilizing Apple Research (Ahmad et al., 2020).

Wellbeing eHeart concentrates on center around cardiology. Confidential Investment in Digital Health per Year From 2011 to Venture capital and individual premium in mechanical flourishing has expanded, as a rule, outflanking 3.5 billion bucks in 2017 and reissued with endorsement from Rock Health (Al Kuwaiti et al., 2018). Electronic specialists have selected >140,000 (endorsed) individuals. They utilize current improvements to draw in conspicuous partners over the long run. People seek extra tests and substudies, intently organizing the different wearable sensors into the informational index. Online amusement will, in general, be one more road for the augmentation of patient enlistment to application-based enrollment. MyHeart Counts and Health Hearts show the customary utilization of state-of-the-art innovation intolerant enlistment; however, whether the gadget can foster choice in other standard presentations should be researched (Ryan et al., 2014).

In addition, the sad consequences of modern development planning in clinical work processes, such as confusing reductions in proficiency, loss of patient-specialist participation, and creation of storage facilities in clinical benefit meetings, warrant further survey (Elwyn et al., 2013). To design awareness of modern prosperity advances in clinical utility transportation and clinical assessment, cross-border agents from academia, industry, professional affiliations, managerial bodies, and government associations met for a December 2016 meeting of research organizations in Washington, DC (for an overview about social events, assuming no one cares. The hallmarks of this meeting are as follows; 1) To appreciate the ongoing scene of cutting-edge prosperity development in the transportation of clinical and primary clinical considerations with technology. 2) To understand the problems and limitations for developing and collecting this progress in supporting community health care. 3) Identify potential digital plans using perspectives from providers, industry, regulatory associations, payers, and critical social fabrics.

Based on evidence and the benefits of digital applications in supporting medical services, we want to review more intensely to understand the benefits of digital tools in the medical world (Bates et al., 2014).

Method

This second part will describe the implementation and stages of data collection for the study to improve digital-based public health service strategies in an era of advanced technology (Shuval et al., 2011) because this study relies on a public service strategy. The data that we excel at is sourced from health literature and technology from various sources, such as published journals and websites that actively discuss improving the quality and strategy of public health services (Ng et al., 2018). The data we collect is then studied under a phenomenological approach, such as coding the data, evaluating, and drawing conclusions so that the data answers the problems we are studying. Meanwhile, our study reporting follows a descriptive qualitative design system that addresses the previous study report model that actively raises health and technology issues. These include the

stages of data collection and final reporting of health and technology studies (O'Brien et al., 2014).

Discussion

The Importance of Digital Health Data

The rapid development of the modernization of medical technology in this decade, coupled with the Covid-19 pandemic, has turned into a gas pedal in sharp contrast to the overall example of today's work progress that affects different lifestyles, work models, and business frameworks, considering for the prosperity area (Bai, 2020). High-level development has become a fundamental part of the prosperity of today's organizations, where electronic data is a big payoff for providers and patients or clients. With the experience gained during the Covid-19 pandemic, it is appropriate to re-evaluate the approach of welfare organizations in the era of data-based modernization. The iterative pattern of abundance of wealth data must be achieved by knowing board norms, data for investigation, progress, and procedure making, and understanding progress that brings new encounters into preventive clinical considerations and public services in various contexts and applications (Jin, 2015).

Like this, clinical judgment specialists must take necessary action. First and foremost, create data snippets on leader techniques while developing other supporting thinking given insightful data. Second, the ability of firms in data combination, data sharing, and data maintenance, but more on data-driven progress (Nshimyuukiza et al., 2016). The various high-level prosperity applications made during the pandemic, such as PeduliLindung, should have helped in special and effective screening and followers. In addition, this temporary extension is far from discussing using telemedicine to limit pollution transmission and control the spread of Covid-19. In these circumstances, the obligation should be to maintain an organized individual well-being record, with direct and secure access for patients, caregivers, and providers of clinical judgment within a natural framework. In 2021, the Ministry of Health will see 2,249 health centers, 10,203 puskesmas, 30,199 pharmacies, and 9,752 drug stores. On the other hand, the central and surrounding states make more than 400 prosperity appeals (Seidi et al., 2015).

With so many workplaces and healthcare applications, it is sure to create partitioned medical data and traditional boundaries in data standardization and exchange. This condition affects the direction of welfare activities, which has not been fully established in comprehensive data, thus affecting inefficient welfare organizations (Lysaght et al., 2019). Of course, appreciation should be given to the Ministry of Health, which has started the main stage of the Indonesia Health Service (IHS), which connects all organic processes for prosperity industry players to reveal one welfare data. It is essential to focus on meeting the detailed requirements of business processes, data exchange frameworks, and data security that do not stop at associations and declarations. More than that, it is standard to influence more beneficial prosperity organizations. In modern era 4.0, health information can be created using detection technology through electronic health examination devices, artificial intelligence processing, and connection

correspondence between a collection of health servers for public health services (Ghazal, 2021).

The presence of health data integrates all conspicuous information independently, including section data, clinical history, test results, insurance information, and other information used to identify patients or provide welfare organizations, including clinical considerations. Some time ago, the welfare and security of electronic data were again included (Dash et al., 2019). Data security is a problem in client data spills at BPJS Kesehatan and Tokopedia. However, it was reviewed again in the media regarding the data security of the PeduliLindung application. In the realm of prosperity, alarms are critical at all periods of the data lifecycle. This spill of information can fundamentally affect the lives of individuals, high protection installments, and business incidents due to clinical history. Finally, there is no reason to reject the presence of digital applications in evaluation and health services in the modern era (Alauddin et al., 2021).

Health data protection

In modern era 4.0, health information can be produced using detection technology through electronic health monitoring devices, registering A.I., and connection correspondence between collections of health servers. Welfare data integrates only conspicuous information, including section data, clinical history, test results, insurance information, and other information used to identify patients or provide welfare organizations, including clinical considerations (Singh et al., 2020). Several times before, the issue of computerized information security and insurance has been brought up again. Previously, information security was a problem in spilling client information on BPJS Kesehatan and Tokopedia. The issue was again discussed in the media regarding the information security of the PeduliLindung application. In well-being, alerts are critical at all phases of the information lifecycle. This data spill can affect the individual's life (harassment), high insurance payments, and job misfortune due to clinical history (Tanwar et al., 2020).

Given the importance of safety, protection, and trust in data, there is a requirement for guidelines and moral codes that oversee the information security of medical services (Zarour et al., 2020). Moreover, as a source of information, the general public needs to understand the security, protection, and most authentic parts of their information to increase the recognition of good health information. In 2020, public authorities stated that the security of individual information in Indonesia had been managed by the region and, to some extent, spread over 31 regulations and guidelines. However, these guidelines do not fully control the security of individual information. In addition, public authorities have submitted the PDP Bill to the People's Representative Council, which has not yet been ratified as a regulation. The Electoral District Representative Law is needed as a legal basis for providing security, guidelines, and authorization burdens for the misuse of individual information, including computerized health information. In this unique situation, it is essential to support the people's council so that the guidelines can be immediately ratified to become a reference and reason for permanent partners, mainly to protect the local area (Dehling et al., 2015).

Reason to use digital as an evaluation tool

The health area is one area that relies on much paper the traditional way. The timeframe for obtaining health services from the enrollment cycle to modest recovery is very poor for patients (Garabedian et al., 2017). The use of innovation, for example, advanced personality in health, can help overcome this problem. Based on a review conducted at a clinic in Central Java, the perceived consequence of this information is that the traditional hanging time for patients from the enrollment segment is 15 minutes, the polyclinic area is 30 minutes, and the drugstore segment is 40 minutes. Minutes and the officer segment is 15 minutes. The absolute typical time from arrival to completion is 100 minutes, whereas according to the Decree of the Minister of Health, short-term patient waiting time is approximately one hour (Lotven, 2016). Although the era has shifted to computerization, paper use in the health sector is still reasonably common, for example, in emergency clinics. The welfare office in the United States even produces nearly 2 billion grams of waste paper and cardboard every year.

For example, in the manual documentation process, patients come directly to complete the registration structure, which is also why this area continues to follow the use of paper. Although it looks less qualified, this fact has happened in the field for a significant period (Ajami, 2016). According to an IDC report in the Electronic Health Reporter, the underlying explanation for emergency clinics, centers, and other medical care associations continuing to use paper results from an inappropriate board's framework or innovation record. The innovations provided by the association often do not match the needs in the field. Another explanation is that many work processes still require paper documentation, such as registration structures, marking clinical care approval structures, etc. It is not that there are no innovations that support regular job training; However, using related innovations in welfare is not ideal. Another explanation is that many work processes still require paper documentation, such as registration structures, marking clinical care approval structures, etc. It is not that there are not any innovations that support regular job training; However, using related innovations in the welfare sector is not ideal (De Rosa, 2017).

The pandemic outbreak some time ago became one of the tensions for all fields to start adapting computerized innovations to help run their business, not including the welfare sector. A review from Red Hat also revealed that by 2020 as many as 59% of its customers have plans for computerized change. Innovation has significantly influenced the way individuals act in shopping, exchange, and the world. The general public in the welfare sector has not experienced the same thing. According to research from the Mckinsey Global Institute, there are three main barriers to implementing progressive change in the welfare field: culture and mentality (views), structure, and administrative authority (Zhu, 2014).

Therefore, the computerized system should be not only a vision and mission for the region but also an essential part of completing work for all staff in this association. Patient ID is the most common way to collect data/information and offers a clue consisting of clinical record number and patient personality (Shortliffe et al., 2014). The motivation behind this interaction is to separate one patient from another. However, this stage is often time-consuming because the

framework relies on ordinary strategies. For example, patients must repeatedly complete the registration framework even though they have enrolled in the clinic. Likewise, patient cycles spend most of the day because emergency clinic staff, especially hospitals, need to view patient history through stacks of records stored in file organizers (Stuebing & Miner, 2011).

However, this manual cycle also often experiences blunders. Apart from Fierce Healthcare, medical clinics in the United States experienced misfortunes estimated at 1.5 million dollars and 6 billion dollars to related businesses due to inappropriate patients. It requests a copy of the patient data record and repeats the clinical treatment. In addition to interactions, medical record receipts are also carried out and stored physically (Stuebing & Miner, 2011). In fact, according to research led by The Pew Charitable Trusts, 61% of adults need access to clinical records via their mobile phones. This reality shows that patients are inclined toward everything computerized and technology.

Patient ID is the most common way to collect data/information and offers a clue consisting of clinical record numbers and patient personality (Wager et al., 2021). The reason for this interaction is to separate one patient from another. However, this stage is often time-consuming because the framework relies on traditional techniques. For example, patients have to fill in the registration form more than once even though they have previously registered at a medical clinic. Patient ID This process also takes up most of the day because emergency clinic staff, especially hospitals, need to search patient history through the stacks of records stored in file organizers. However, this manual I.D. process often goes wrong. Departing from Fierce Healthcare, emergency clinics in the United States experienced misfortunes valued at 1.5 million dollars and 6 billion dollars in related efforts due to incorrect patient I.D.s. These results copy patient data records and repeat clinical judgments (Murdoch & Detsky, 2013).

Even though I.D. interactions, entry into clinical records are also, in general, physically performed and stored. According to a review led by The Pew Charitable Trusts, 61% of American adults need access to clinical records via their mobile phones. This reality shows that patients tend to do everything that is computerized and robotized (Porter et al., 2018).

Several things must be completed as a condition for the digitization of welfare. The board should ideally be able to complete the digitization of welfare administration and the digitization of welfare. In simple terms, some of these include; in a perfect world, in all health care organizations, both in FKTP and FKRTL, there are human resources who have Information Technology capabilities. Faculty accessibility with I.T. This capability will significantly assist the implementation of welfare digitization (Jove, 2019). This type of I.T. staff is still rarely owned by welfare administration foundations. Existing workforce Most of them are lecturers with extraordinary abilities in welfare. Surprisingly, there is a labor shortage in welfare skills in specialists, medical nurses, birth assistants, and drug specialists. Most welfare workers today are youths aged twenty to thirty who are more educated about digitization than in the past, so this will support the implementation of digitizing public health (Auerbach & Bates, 2020).

Expenditure planning and its foundation is that good spending planning must uphold the implementation of welfare digitization. The financial plan includes, among other things, addressing issues of office acquisition, support, web network acquisition, skills preparation, and application rental (Larsson et al., 2019). The Planning Health Office has implemented BLU to be more adaptive in monitoring and utilizing their spending plans to assist the implementation of digitization. Apart from H.R., the accessibility of the framework plays a vital role in implementing digitization. Quality programs, equipment, and support devices must be met and claimed by health administration organizations to assist in the implementation of health digitization (Larsson & Teigland, 2019). As a guideline to provide rules in implementing welfare digitization, guidelines are needed. Guidelines are made so that everything completed in the digitization of welfare is guaranteed to be carried out safely and does not cause misfortune and problems. It is hoped that there will be guidelines so that the implementation of welfare digitization is carried out according to previously established norms (Noda, 2020).

Scientific evidence in the Public Health Project

Recently, experimental evidence to assist general health strategies has been developed empathetic. This occurs as a calculated enhancement characteristic of the development of the provenance-based drug (Kostagiolas & Katsani, 2021). The National Institute for Health and Clinical Excellence is responsible for establishing evidence-based public health regulations in the UK. However, trading "evidence-based" thinking from clinical practice to general health is not easy. General prosperity decisions are taken with the environment and even the country rather than the individual as a unit of intercession (Smania et al., 2020). Accessible evidence recommends that different segments of the population respond to typically indistinguishable mediations and that mediations acting on the well-being of a population can also increase public health imbalances. In this way, focusing on the average impact of mediation may miss an essential qualification. Some authors argue that evidence-based ways of addressing general well-being can increase welfare imbalances. This would probably reflect the same trend as the development of experimental evidence, for example, leaning toward younger age groups, severe diseases, and medication (Roman, 2021).

The number and nature of explorations in general health are not exact in clinical practice, and assurances about their continuity are low. Transferring "evidence-based" ideas from people to networks expands the importance of setting and implies that randomized controlled introductions are often inappropriate. In addition, the assessment provided by the planned exploration plan is unimaginable in many areas of public health. General health navigation, and the impact of testing, are also more confusing. General health strategies are challenging to characterize because most full-scale settings affect well-being. Therefore, he manages strategy making in all areas, including finance, agriculture, transportation, metropolitan preparation, and error. Then, when techniques for surveying the feasibility of complex mediation are developed, the interaction effects will become more pronounced (Blakey et al., 2018).

The large number of people influenced by the broad medical approach gathers the need for a good route. When Chalmers, Macintyre, and Petticrew fight, "unfalsified

expectations and reasonable speculation alone are satisfactory justifications for decisions about open ventures that impact the presence of others." To drive solid general prosperity techniques, confirmations must cover a broad range of effects (Blakey et al., 2018). Unlike confirmation-based prescriptions, where randomized controlled fundamentals and practical studies are drawn, verification for general health methodologies is very confusing. The procedure cycle combines the steps: framing the problem, fixing the decision, and executing it in a short time. The expected confirmation on each move is generally unique (Flahault et a., 2017). Appropriately, public health confirmation should consolidate requests for multiple intercessors; furthermore, affiliation, enforcement, and eligibility are not routinely covered by research evidence. For these situations, the evidence for general well-being is more than slightly flawed, complete, or unequivocal. Research findings are rarely authoritative or strong enough to include elective accentuations. They generally require a translation to execute. Proposed springs for extra evidence include eligible assessments, contextual analysis, social qualities, and patient tendencies (Imison et al., 2016).

Despite the complex dynamic climate, several critical studies have uncovered how public health leaders use research evidence in their work. We conducted a systematic survey to integrate recently emerged findings to uncover how public health leaders use screening evidence. There is evidence to recommend that providers and policymakers have a different point of view when dealing with medical care frameworks that rely primarily on personalized medicine than where all-inclusive inclusion is afforded based on mandatory health care coverage or tax collection. We strictly limit our detailed survey to countries with medical services for all inclusions (Rivera et al., 2019).

Conclusion

Finally, this study arrived after studying various literature sources to obtain scientific evidence from previous studies to answer the problem of digital-based health service strategies in public health service efforts. We believe that this elephant has obtained scientific evidence supporting efforts to answer this problem. Among other things, we conclude the importance of health data in the digital era. Because the demands of the times want the health world to be supported by data and, in other words, digitalization in all service sectors. Furthermore, we have also understood that health data also require protection so that information and public services can be online with accurate and transparent technology-based.

Furthermore, we find several reasons why the use of digital in health evaluation is absolute. Working with this digital manual system is not a solution considering that all public service sectors have been integrated into innovative and reliable fast-paced services. Next, we also found that the scientific epidemic said that the public health project must indeed be carried out in an essential professional manner so that public data and regulations can be appropriately maintained. With our findings from various health data sources and the power of technology, we say that public health services are still undergoing transformation and innovation that are no less important than other public service sectors, such as the education business. These are among other important points that we can

summarize in a study that aims to understand the evidence from studies that say digital applications are very helpful in improving digital-based health services for the community.

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References

Ahmad, F. A., Payne, P. R., Lackey, I., Komeshak, R., Kenney, K., Magnusen, B., Bailey, T. (2020). Using REDCap and apple ResearchKit to integrate patient questionnaires and clinical decision support into the electronic health record to improve sexually transmitted infection testing in the emergency department. *Journal of the American Medical Informatics Association, 27*(2), 265-273.

Ajami, S. (2016). Use of speech-to-text technology for documentation by healthcare providers. *The National Medical Journal of India, 29*(3), 148.

Al Kuwaiti, A., Al Muhanna, F. A., & Al Amri, S. (2018). Implementation of digital health technology at academic medical centers in Saudi Arabia. *Oman Medical Journal, 33*(5), 367.

Alauddin, M. S., Baharuddin, A. S., & Mohd Ghazali, M. I. (2021). The modern and digital transformation of oral health care: A mini-review. Paper presented at the *Healthcare, 9*(2) 118.

Al-Maroof, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: The impact of google meet during coronavirus pandemic. *Interactive Learning Environments,* , 1-16.

Auerbach, A., & Bates, D. W. (2020). Introduction: Improvement and measurement in the era of electronic health records. *Annals of Internal Medicine, 172*(11_Supplement), S69-S72.

Bai, H. (2020). Modernizing medical education through leadership development. *The Yale Journal of Biology and Medicine, 93*(3), 433-439. doi:yjbm933433 [pii].

Bates, D. W., Saria, S., Ohno-Machado, L., Shah, A., & Escobar, G. (2014). Big data in health care: Using analytics to identify and manage high-risk and high-cost patients. *Health Affairs, 33*(7), 1123-1131.

Bhavnani, S. P., Narula, J., & Sengupta, P. P. (2016). Mobile technology and the digitization of healthcare. *European Heart Journal, 37*(18), 1428-1438.

Blakey, J. D., Bender, B. G., Dima, A. L., Weinman, J., Safioti, G., & Costello, R. W. (2018). Digital technologies and adherence in respiratory diseases: The road ahead. *European Respiratory Journal, 52*(5)

Bluethmann, S. M., Coa, K. I., Alfano, C. M., & Hesse, B. W. (2018). Electronic health information exchange opportunities for self-management of care: Responses from older adults with and without cancer history in the united states. *Current Oncology Reports, 20*(4), 1-8.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C. F., Dreber, A., Huber, J., Johannesson, M., ... & Rieck, J. R. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*, *582*(7810), 84-88.

Bukowski, M., Farkas, R., Beyan, O., Moll, L., Hahn, H., Kiessling, F., & Schmitz-Rode, T. (2020). Implementing eHealth and AI integrated diagnostics with multidisciplinary digitized data: Are we ready from an international perspective? *European Radiology, 30*(10), 5510-5524.

Chatterjee, R., Ray, R., Dash, S. R., & Jena, O. P. (2021). Conceptualizing tomorrow's healthcare through digitization. *Computational Intelligence and Healthcare Informatics,* 359-376.

Chatzakis, I., Vassilakis, K., Lionis, C., & Germanakis, I. (2018). Electronic health records with computerized decision support tools for Crete's pediatric cardiovascular heart disease screening program. *Computer Methods and Programs in Biomedicine, 159*, 159-166.

Coorevits, P., Sundgren, M., Klein, G. O., Bahr, A., Claerhout, B., Daniel, C., . . . Singleton, P. (2013). Electronic health records: new opportunities for clinical research. *Journal of Internal Medicine, 274*(6), 547-560.

Dash, S. P. (2020). The impact of IoT in healthcare: Global technological change & the roadmap to a networked architecture in India. *Journal of the Indian Institute of Science, 100*(4), 773-785.

Dash, S., Shakyawar, S. K., Sharma, M., & Kaushik, S. (2019). Big data in healthcare: Management, analysis, and prospects. *Journal of Big Data, 6*(1), 1-25.

De Rosa, E. (2017). Social innovation and ICT in social services: European experiences compared. *Innovation: The European Journal of Social Science Research, 30*(4), 421-432.

Dehling, T., Gao, F., Schneider, S., & Sunyaev, A. (2015). We are exploring the far side of mobile health: Information security and privacy of mobile health apps on iOS and android. *JMIR mHealth and uHealth, 3*(1), e3672.

Elwyn, G., Scholl, I., Tietbohl, C., Mann, M., Edwards, A. G., Clay, C., . . . Wexler, R. M. (2013). "Many miles to go...": A systematic review of implementing patient decision support interventions into routine clinical practice. *BMC Medical Informatics and Decision Making, 13*(2), 1-10.

Fauzi, A., Wandira, R., Sepri, D., & Hafid, A. (2021). I am exploring students' acceptance of google classroom during the covid-19 pandemic by using the technology acceptance model in west Sumatera universities. *Electronic Journal of e-Learning, 19*(4), pp233-240.

Flahault, A., Geissbuhler, A., Guessous, I., Guérin, P., Bolon, I., Salathé, M., & Escher, G. (2017). Precision global health in the digital age. *Swiss Medical Weekly, 147*, w14423.

Frennert, S. (2018). Lost in digitalization? Municipality employment of welfare technologies. *Disability and Rehabilitation: Assistive Technology.*

Ganguli, I., Gordon, W. J., Lupo, C., Sands-Lincoln, M., George, J., Jackson, G., . . . Bates, D. W. (2020). Machine learning and the pursuit of high-value health care. *NEJM Catalyst Innovations in Care Delivery, 1*(6).

Garabedian, L. F., Ross- Degnan, D., Soumerai, S. B., Choudhry, N. K., & Brown, J. S. (2017). Impact of Massachusetts health reform on enrollment length and health care utilization in the unsubsidized individual market. *Health Services Research, 52*(3), 1118-1137.

Ghazal, T. M. (2021). Internet of things with artificial intelligence for health care security. *Arabian Journal for Science and Engineering,* , 1-12.

Imison, C., Castle-Clarke, S., Watson, R., & Edwards, N. (2016). *Delivering the benefits of digital health care* Nuffield Trust London.

Ittefaq, M., & Iqbal, A. (2018). Digitization of the health sector in Pakistan: Challenges and opportunities to online health communication: A case study of MARHAM social and mobile media. *Digital Health, 4*, 2055207618789281.

Jin, J. (2015). Science & technology and modernization. Paper presented at the *Civilization and Modernization: Proceedings of the Russian–Chinese Conference 2012,* 87-102.

Jove, D. (2019). Peter Nowak v data protection commissioner: Potential aftermaths regarding subjective annotations in clinical records. *Eur.Data Prot.L.Rev., 5*, 175.

Konttila, J., Siira, H., Kyngäs, H., Lahtinen, M., Elo, S., Kääriäinen, M., . . . Fukui, S. (2019). Healthcare professionals' competence in digitalization: A systematic review. *Journal of Clinical Nursing, 28*(5-6), 745-761.

Kostagiolas, P., & Katsani, A. (2021). The management of public libraries during COVID-19 pandemic: A systematic literature review through PRISMA method. *Library Management*.

Larsson, A., & Teigland, R. (2019). *Digital transformation and public services: Societal impacts in Sweden and beyond* Taylor & Francis.

Larsson, A., Elf, O., Gross, C., & Elf, J. (2019). Welfare services in an era of digital disruption: How digitalization reshapes the health care market. *Digital transformation and public services* (pp. 33-57) Routledge.

Lazim, C., Ismail, N. D. B., & Tazilah, M. (2021). Application of technology acceptance model (TAM) towards online learning during a covid-19 pandemic: Accounting students perspective. *Int.J.Bus.Econ.Law, 24*(1), 13-20.

Lotven, A. (2016). Issuers praise the new special enrollment period guidance. *Inside CMS, 19*(9), 18-20.

Lysaght, T., Lim, H. Y., Xafis, V., & Ngiam, K. Y. (2019). AI-assisted decision-making in healthcare. *Asian Bioethics Review, 11*(3), 299-314.

Miner, G. D., Miner, L. A., Goldstein, M., Nisbet, R., Walton, N., Bolding, P., . . . Hill, T. (2014). *Practical predictive analytics and decisioning systems for medicine: Informatics accuracy and cost-effectiveness for healthcare administration and delivery including medical research* Academic Press.

Murdoch, T. B., & Detsky, A. S. (2013). The inevitable application of big data to health care. *Jama, 309*(13), 1351-1352.

Neumann, M., Fehring, L., Kinscher, K., Truebel, H., Dahlhausen, F., Ehlers, J. P., . . . Boehme, P. (2021). The perspective of german medical faculties on digitization in the healthcare sector and its influence on the curriculum. *GMS Journal for Medical Education, 38*(7).

Ng, S. L., Baker, L., Cristancho, S., Kennedy, T. J., & Lingard, L. (2018). Qualitative research in medical education: Methodologies and methods. *Understanding Medical Education: Evidence, Theory, and Practice,* , 427-441.

Noda, Y. (2020). Socioeconomic transformation and mental health impact by the COVID-19's ultimate VUCA era: Toward the new normal, the new japan, and the new world. *Asian Journal of Psychiatry, 54*, 102262.

Nshimyumukiza, L., Douville, X., Fournier, D., Duplantie, J., Daher, R. K., Charlebois, I., . . . Boissinot, M. (2016). Cost- effectiveness analysis of antiviral

treatment in managing seasonal influenza A: Point- of- care rapid test versus clinical judgment. *Influenza and Other Respiratory Viruses, 10*(2), 113-121.

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic medicine*, *89*(9), 1245-1251.

Pivodic, A., E H Smith, L., Hard, A. L., Lofqvist, C., Almeida, A. C., Al-Hawasi, A., . . . Granse, L. (2022). Validation of DIGIROP models and decision support tool for predicting treatment for retinopathy of prematurity in a contemporary Swedish cohort. *The British Journal of Ophthalmology,* doi:bjophthalmol-2021-320738 [pii].

Porter, A., Potts, H., Mason, S., Morgan, H., Morrison, Z., Rees, N., . . . Williams, V. (2018). *70 the Digital Ambulance: Electronic Patient Clinical Records in Prehospital Emergency Care.*

Ricciardi, W., Pita Barros, P., Bourek, A., Brouwer, W., Kelsey, T., & Lehtonen, L. (2019). How to govern the digital transformation of health services. *European Journal of Public Health, 29*(Supplement_3), 7-12.

Rivera, L. F., Jiménez, M., Angara, P., Villegas, N. M., Tamura, G., & Müller, H. A. (2019). Towards continuous monitoring in personalized healthcare through digital twins. Paper presented at the *Proceedings of the 29th Annual International Conference on Computer Science and Software Engineering,* 329-335.

Roman, P. A. (2021). The role of telemedicine and digitalization in the paradigm shift of medical services in Romania. *The Annals of the University of Oradea.Economic Sciences, 30*(1st).

Ryan, A. M., McCullough, C. M., Shih, S. C., Wang, J. J., Ryan, M. S., & Casalino, L. P. (2014). The intended and unintended consequences of quality improvement interventions for small practices in a community-based electronic health record implementation project. *Medical Care,* , 826-832.

Santosh, K., & Gaur, L. (2021). AI solutions to public health issues. *Artificial intelligence and machine learning in public healthcare* (pp. 23-32) Springer.

Seidi, J., Alhani, F., & Salsali, M. (2015). Nurses' clinical judgment development: A qualitative research in Iran. *Iranian Red Crescent Medical Journal, 17*(9).

Shortliffe, E. H., Shortliffe, E. H., Cimino, J. J., & Cimino, J. J. (2014). *Biomedical informatics: Computer applications in health care and biomedicine* Springer.

Shuval, K., Harker, K., Roudsari, B., Groce, N. E., Mills, B., Siddiqi, Z., & Shachak, A. (2011). Is qualitative research second-class science? A quantitative longitudinal examination of qualitative research in medical journals. *PloS One, 6*(2), e16937.

Singh, R. P., Javaid, M., Haleem, A., Vaishya, R., & Bahl, S. (2020). Significance of health information technology (HIT) in context to COVID-19 pandemic: Potential roles and challenges. *Journal of Industrial Integration and Management, 5*(04), 427-440.

Smania, G. S., de Sousa Mendes, Glauco Henrique, Lizarelli, F. L., & Favoretto, C. (2021). Service innovation in medical device manufacturers: Does digitalization matter? *Journal of Business & Industrial Marketing.*

Stuebing, E. A., & Miner, T. J. (2011). Surgical vampires and rising health care expenditure: Reducing the cost of daily phlebotomy. *Archives of Surgery, 146*(5), 524-527.

Tanwar, S., Parekh, K., & Evans, R. (2020). Blockchain-based electronic healthcare record system for healthcare 4.0 applications. *Journal of Information Security and Applications, 50*, 102407.

Wager, K. A., Lee, F. W., & Glaser, J. P. (2021). *Health care information systems: A practical approach for health care management* John Wiley & Sons.

Zarour, M., Alenezi, M., Ansari, M. T. J., Pandey, A. K., Ahmad, M., Agrawal, A., . . . Khan, R. A. (2021). Ensuring data integrity of healthcare information in the era of digital health. *Healthcare Technology Letters, 8*(3), 66.

Zhu, X. (2014). Mandate versus championship: Vertical government intervention and diffusion of innovation in public services in authoritarian china. *Public Management Review, 16*(1), 117-1