Effectiveness of Digital Health Services: Challenges and Constraints for Society

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Abstract

This article discusses the effectiveness of digital health services by looking at the challenges and obstacles for society. One form of public services implemented by the government for the community is meeting the need for quality public services and having an orientation to the effectiveness of services to the community that are needed. In the health sector itself, advances in information technology have greatly supported health services. This online system is of high quality to be implemented because the public and members of the medical system can receive and provide detailed and fast information with the help of computerized technology. Information technology has reached various fields of life including the health sector to help the efficiency and effectiveness of health services. Information technology that is properly implemented can support the management process to be effective and efficient. The corona pandemic is changing people's habits in visiting and consulting doctors at hospitals. However, digital-based health services have not been effectively accepted by the public from various service units. They still need improvements in terms of connectivity, content and clarity of regulations.

Keywords: Effectiveness, Health Services, Challenges, Barriers

Introduction

The use of health telecommunications brings many advantages. The open exchange of medical information between a person and health workers through the use of electronic technology will lead to an increase in health services and patient health status. Prompt access to qualified health workers will also reduce the number of differential diagnoses, complications and improve health management. The use of technology that integrates with health management is carried out through an integrated reporting system so that decision making and allocation of health resources will be more precise in hospital management or health services (Drummond et al., 2008; Guindo et al., 2012; Mutale et al., 2013). Many applications appear to regulate a healthy lifestyle. For example, sports applications, diet management applications, and so on. This application can be downloaded for free via the smart phone application on the cellphone. To make using it easier, users can use the internet package method so that your lifestyle management application is easier and more comfortable to use.

The online doctor application itself was around for a while before the pandemic, but it is becoming more and more relevant today. If previously it could be considered a stage before consulting face to face with doctors, in the pandemic, online doctor services in the form of a health application can be done at the same time for online consultation.

The implementation of health telecommunications using digital media is not limited by place, so it is not impossible that health services, especially those that are promotive and preventive in
nature, are carried out not in health facilities. It is enough to redeem medicines from home. Most of these activities operate on the assumption that all those involved in online activities are really the patients, doctors, and hospitals that have an interest.

Methods

The research was conducted using a survey method in 3 service units with 100 respondents. Data collection obtained from observations and surveys. Digital technology can actually be a solution to health service problems. However, the health industry in general, especially hospitals, is still slow to carry out its digital transformation. This research is expected to provide input. Starting from the complicated registration process, registration must use the telephone, long and uncertain waiting times, manual payment processes and complicated, especially when using insurance.

Results and Discussion

The Effectiveness of Online Health Services

Public services are part of the attention of every individual (Sullivan & Skelcher, 2017; Thomas & Davies, 2005). By providing the best services in the field of services and goods to the community, it has become an obligation for the government, both in the central and local governments. Surabaya residents must get the best service and have the right to be served well. With the existence of good public services, indirectly the level of community satisfaction and the quality of life they live is increasing and there is in fact the government's attention to be given to the community in the form of this online-based program. The meaning of public service itself is an activity carried out in the context of fulfilling service needs in accordance with statutory regulations for every citizen and resident for goods, services and administrative services provided by public service providers. One form of public services implemented by the government for the community is meeting the need for quality public services and having an orientation to the effectiveness of services to the community that are needed. In the health sector itself, advances in information technology have greatly supported health services in health centers and hospitals. The use and utilization of this technology is one of the right solutions for solving public service problems

The benefits of the online system include being available and sustainable. These services must be available in the community and are sustainable, meaning that all types of health services needed by the community are not difficult to find, and their presence in the community is available at any time they are needed. Here the Online system is available and can be used continuously by Online users, from taking queue numbers to checking. Human resources are the subject and what is meant by human resources here is that employees who operate online services have not been effective. Where there are no special officers to accompany patients if they have difficulty using online services and patients can press the button provided. In addition, the hospital is also carried out internally from person to person only, for the officer side also understands the context of online but not all of them understand technically, therefore related parties can provide socialization and direction to provide maximum services to the community.

Acceptable and Reasonable Services in the online system do not conflict with customs, culture, beliefs and beliefs of the community and are reasonable, because along with the development of information and communication technology it encourages innovation and change in various fields of life, including the health sector, which without having to oppose the customs, culture and beliefs of the community. Therefore, the online system in the hospital is very well accepted by the
community because it makes it very easy for people to carry out treatment or examinations and with this online system the public can be required to follow current technology developments so as not to bother employees and train the skills of the community as well as employees.

**Easy to reach**

Understanding is reached here from the point of view of location. In order to realize health services, the distribution arrangements for health facilities are very important. With Online, it can make it easier for users to take better advantage of time without having to wait long because in the Online system itself, if users who have registered themselves will certainly get a queue number, therefore users can predict their arrival. Online is the use of information and communication technology to process various types of medical information in carrying out clinical services (diagnosis or therapy), administration and education (Palen et al., 2012; Perednia & Allen, 1995). With Online people can make online transactions via an internet data connection without having to come to the hospital. Maybe not all activities can be carried out in a system, but there are many things that make it easier for the community, such as queuing online at the hospital which no longer has to wait long for the queue number retrieval process. It's easy to get because this online system can be accessed at hospitals and health centers available.

**Reachable**

The notion of affordability is mainly from a cost point of view, because in order to create a situation like this, the cost of health services must be made in accordance with the economic capacity of the community, but with this online system, people do not need to pay, people only fill in data according to their IDs.

Quality Shows the level of perfection of health services provided which on the one hand can satisfy service users and on the other hand the procedures for its implementation are in accordance with the established code of ethics and standards. This online system is of high quality to be implemented because the public and members of the medical system can receive and provide detailed and fast information with the help of computerized technology (Ludwick & Doucette, 2009; Øvretveit et al., 2007). There are many benefits from implementing an online system such as increased efficiency or reduced costs, improved quality of health services, proof of diagnosis through scientific evaluation, empowerment of patients and consumers, encouraging better relationships between patients and health workers, education for health workers and the community, encouraging the growth of communication and exchange of information between health service institutions, and the expansion of the scope of health services. This system can improve the welfare of the community because it has extraordinary advantages, namely that it can make it easier for people to obtain Rights and Obligations in the health sector, which usually people view the world of health is very complicated and it is difficult with this the government shows the community with tangible results, namely creating superior and quality programs to facilitate health care services in hospitals.

**Challenges of Health Services through Online Administration**

**Human Resources**

Telemedicine is one of the applications of information technology in the health sector, and therefore requires support from IT professionals. However, expertise in information technology is not a core competency of a healthcare organization. Therefore, it is very likely that hospitals and
other health facilities will not have access to the professional staff needed to build and operate a telemedicine system.

Hospitals and health facilities can recruit additional staff to support and manage telemedicine services. Another alternative is to take advantage of services from telemedicine technology solution providers, so that the hospital can focus on the medical aspects of remote health services.

**Initial investment, privacy and security**

The aspect of privacy and confidentiality of patient data is also an important issue which can be a challenge. The telemedicine technology system adopted must be able to maintain patient privacy when it comes to data transfer and storage. Privacy also needs to be maintained when doctors and other health professionals share data for consultation or seek other opinions.

Despite the potential to provide cheaper healthcare services, Telemedicine technology requires a significant initial investment. This investment includes the information and communication technology infrastructure required for data transmission (text, images, videos). This could be a barrier to the adoption of Telemedicine technology by health organizations. Therefore, you must choose the right Telemedicine solution provider so that your investment can pay off in optimal service.

**Supply, Demand and Fragmented**

Many hospital managers focus more on facility expansion and underestimate digital transformation because it has a high bargaining position due to a lack of competition. Several other private hospital groups such as Mitra Keluarga are also undergoing major expansion but in total they do not reach 5% of the total number of hospitals in the region. This is a challenge for solution provider partners and digital technology partners, because being able to integrate into each hospital individually will incur large costs and time.

**People dan Culture**

As in other industries, the biggest challenge of digital transformation is the organizational culture and bureaucracy that hinders change. One of the biggest difficulties is the education and implementation process. This process requires commitment from the top level down to the staff. Need a change management strategy that is appropriate and continuously evaluated periodically. Doctors, as the most important stakeholder in the hospital digital ecosystem, are sometimes less receptive to these changes

**Legacy IT Infrastructure**

Currently, more and more hospitals in the region have implemented the IT Hospital Information System, including centralization of medical record databases. However, due to the lack of standardization of documentation and business processes, the implementation of this IT system works independently and is less integrated with other systems. Many hospitals already rely on outdated technology that makes it difficult to update to meet patient expectations in accessing information quickly, especially on mobile devices. Moreover, when the IT system in the hospital is built by different vendors, there is no continuity of the technology roadmap to be developed.
Barriers to Digital Health Services for the Community

Connectivity

It is important to note that connectivity constraints are the main cause of the undeveloped digital health system (Online) in regions, especially in remote areas which should need the same access to health as urban communities. If the connectivity is evenly distributed throughout the regions, then it can be ascertained that the community can get access to good health because they can consult a doctor even though they are far away. Even the cost is much cheaper.

Content

Service content should display images that are easy to understand and attractive and most importantly simple for people who are sick to read. Information technology that is rapidly developing today has reached various fields of life, including the health sector. Information technology that is properly implemented can support the management process to be effective and efficient. The corona pandemic is changing people's habits in visiting and consulting doctors at hospitals. As a result, the majority of consumers expect hospitals to provide digital health services or telemedicine. In one study conducted in the UK it was found that hospitals that use the Electronic Health Record (EHR) and Electronic Medical Record (EMR) systems have a lower mortality rate than hospitals that do not use these systems.

Clarity of Regulation

As much as 17 percent of users are still dissatisfied with digital health services. This dissatisfaction occurs because users are concerned about the security of the data inputted into the digital health service. There are also no rules regarding the procedures for drug delivery so that other objects are not contaminated until it reaches the patient. Apart from data security, which is still a major problem in the development of this digital service, among others, is the lack of good communication between doctors and sufferers of disease because they do not check the disease directly. Moreover, in experience, many doctors are not accustomed to examining diseases only by telephone.
Doctors are also inexperienced in examining patients through the application, although nowadays many are getting used to it. Plus there are also many senior doctors who are not good at using technology. Constraints about the regulations above, of course, become obstacles to online development. The government should regulate these regulations quickly considering the growing number of digital health service users. The health industry is very dependent on government regulation. However, the government needs to catch up in making legal products that cover innovations in the field of health technology and provide certainty to actors to protect their use. At present, for basic matters such as managing patient medical data, it still requires detailed rules of the game so that it is clearer to what extent the role of hospitals and the government in managing patient medical data. Including what are the rights and obligations of patients to be able to easily access, store and transmit to interested parties.

**Utilization Initiatives**

Low utilization of initiatives, low service levels of hospitals in regions are relatively low. The increasing need for digital health services encourages the government to develop telemedicine services for surrounding communities. This is reflected in the obstacles the community has in getting health services in several hospitals. Patients suffering from serious illnesses are asked to wait for services for up to 1 month at home. As a result, many societies are expensive and not standardized. Technology is not well utilized Existing technology is not well utilized for health services. In fact, internet users in the regions are the highest compared to other countries.

**Conclusion**

One form of public services implemented by the government for the community is meeting the need for quality public services and having an orientation to the effectiveness of services to the community that are needed. In the health sector itself, advances in information technology have greatly supported health services in health centers and hospitals. Connectivity and content need to be treated as essential in digital services but proper regulation and use of technology in health care. Digital-based health services have not been effectively received by the community from various service units.

**References**


