

E-Health Implementation from a Medical Secret Angle

Sri Siswati^{1,*}, Yolanda Safitri¹, Elsa Giatro²,

¹ Faculty of Public Health Andalas University

² Eye Health Center West Sumatera Province

*Corresponding author. Email: srisiswati@yahoo.co.id

ABSTRACT

The future development of information and communication technology is inevitable, including in the health sector, namely electronic-health (e-health). In the Era of the Industrial Revolution 4.0, there has been a huge change. E-health in the health sector is overgrowing. Many applications are created in health services and the distribution of health needs such as drugs, medical devices, and others. The Health sector adheres to the characteristics of medical ethics that respect patient autonomy (respect for autonomy), do good (beneficence), do not do things that will harm (nonmaleficence) and are fair (justice). On the other hand, in electronic print media, especially social media, the patient's medical secrets are disclosed. This research is a type of descriptive research of the quantitative approach. The study was conducted from April until October 2021 through Google Form. The population in the study was a student and general public, but the exact population number is unknown. For samples taken randomly using the formula Lemeshow with an unknown population and the sample obtained after the calculation of the formula, there are 97 respondents. The results show that it is necessary to disseminate information to the public about these medical secrets so that the public can understand the importance of medical secrets and issue regulations relating to medical secrets in e-health services and anticipate their impact on health service recipients. At the time of the covid-19 pandemic the use of e-health in the community is quite popular considering the situation and conditions that make them afraid to leave the house and choose to consult or buy drugs online. Basically, with adequate counselling or information from the doctor, the patient or his family can assess every step taken by the doctor. Informed consent (approval of medical actions) needs to be considered and essential provided by the doctor and fully understood by the patient / his family. Not every disappointment from the results of medical services using telemedicine becomes a case of malpractice.

Keywords: E-Health, medic confidential, law, socialization, impact

1. INTRODUCTION

The Industrial Revolution 4.0 has fueled advances in information and communication technology over the past few years. Information and Communication Technology (ICT) has many roles in improving efficiency and expanding access to healthcare. Currently, ICT-based health services are referred to as e-health. A skill for utilizing the internet to obtain health information is health literacy. In Indonesia, as many as 51.06% of people use the internet to search for health information and 14.05% to consult with health experts.^[1]

Indonesia is a developing country with several many problems and challenges (challenges) in public health. The development and use of Telemedika and e-health (and other related areas) have many opportunities to help solve problems and challenges in these fields. Various applications that can be utilized include recording and reporting, outbreak management, electronic prescription, TB patient management, mobile telemedical systems, e-psychology, mobile e-health, various types of e-health systems with image processing, and open-EHR (Electronic health record) systems.⁵ In this case,

information technology plays a vital role as an agent of change.^[2]

In principle, this online medical service is similar to telemedicine because both can provide remote medical services, but these two medical services differ in how they are conducted. Suppose telemedicine covers aspects of treatment, diagnosis, consultation and treatment, and the exchange of medical data and scientific discussions remotely, in contrast to online medical services that only provide consultation facilities between doctors and patients. In terms of its use, telemedicine uses a call centre system to interact with patients, while online medical services use mobile applications on smartphones and to access it is needed internet network.^[3]

Regarding the benefits derived from the things mentioned above, the legal issues that arise are regarding the protection of patients' privacy rights for their health data recorded electronically on online-based medical services, as it is known that everyone is entitled to the confidential health condition of his or her health that has been submitted to the health care provider. The use of online medical services will also need to be regulated about the protection of patient data so that it is not easily accessible to parties who are not interested and provide a sense of security to each user. According to the author, the confidentiality guarantee of patient medical data recorded electronically is stated in the form of an agreement so that it can have legal implications in the event of abuse.

2. METHODS

This research is a type of descriptive research of the quantitative approach. The study was conducted from April until October 2021 through Google Form. The population in the study was a student and general public, but the exact population number is unknown. For samples taken randomly using the formula Lemeshow with an unknown population and the sample obtained after the calculation of the formula, there are 97 response.

3. RESULTS

Table 1. Respondents Characteristic

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	13	13.4
	Female	84	86.6
Age	18-25	94	96.9
	26-45	2	2.1
	>45	1	1
Work ffff	Student	83	85.6
	Civil Servants	1	1.0

Private	6	6.2
Others	7	7.2

Most of the respondents are female (86.6%), most of the respondents age 18-25 (96.9%) and most of the respondents work are a student

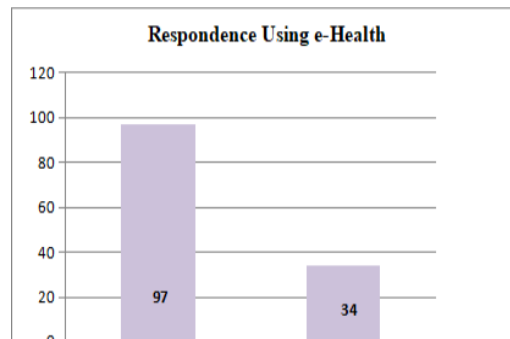


Figure 1. Respondents using e-health

Respondents who filled out the Google form amounted to 131 people, and respondents who answered had used e-health taken as respondents were as many as 97 people. Of these, we trace 97 respondents' answers related to the use of e-health.

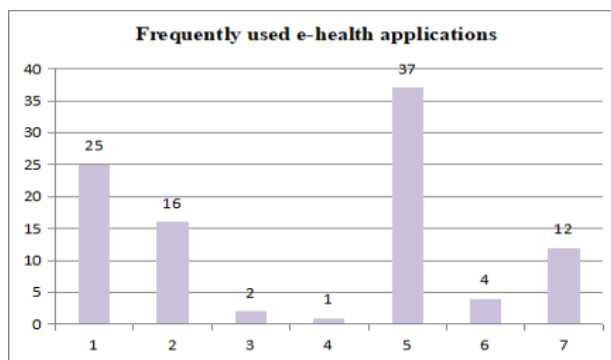


Figure 2. frequently used e-health applications.

In figure 2 seen from various e-health service applications that use Halodoc the most 37 people, Alodokter 25 people, the combination of Alodokter and Halodoc as many as 16 people and halodoc application and or mobile JKN.

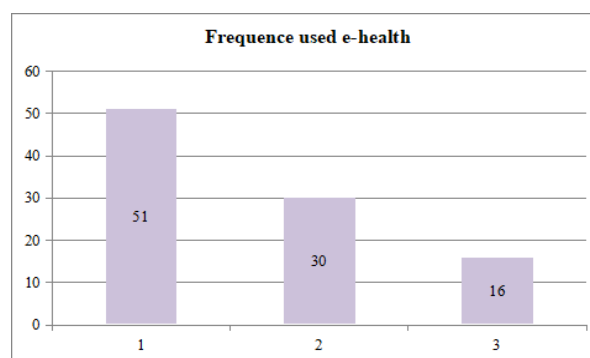


Figure 3. Frequency used e-health

From the figure can be seen 51 people using e-health 1-2 times, 30 people using 3-4 times and 16 people using more than five times during the covid-19 pandemic.

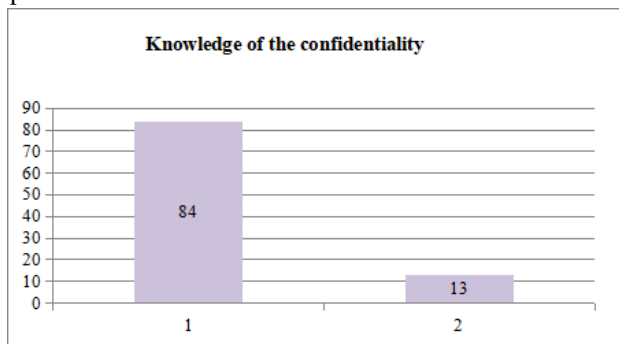


Figure 4. Knowledge of confidentiality

Regarding knowledge of the medical diagnosis, 84 respondents answered yes, and 13 respondents answered no.

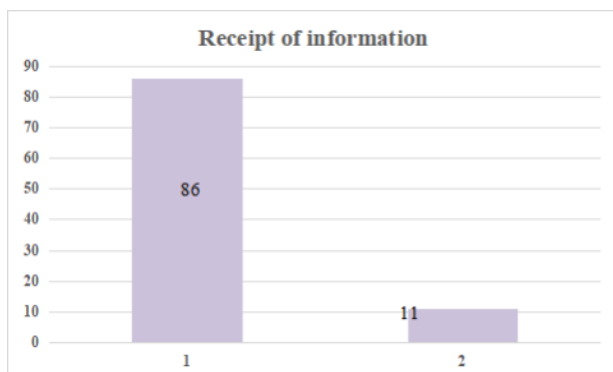


Figure 5. Receipt of information

Respondents who received precise information services were 86 people and did not receive unclear information as many as 11 respondents.

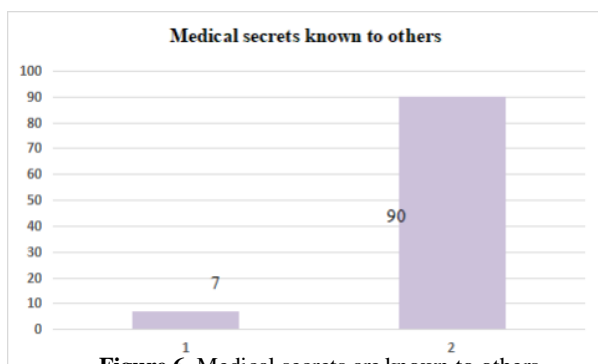


Figure 6. Medical secrets are known to others

Most respondents said they didn't want their medical secrets to be known to others.

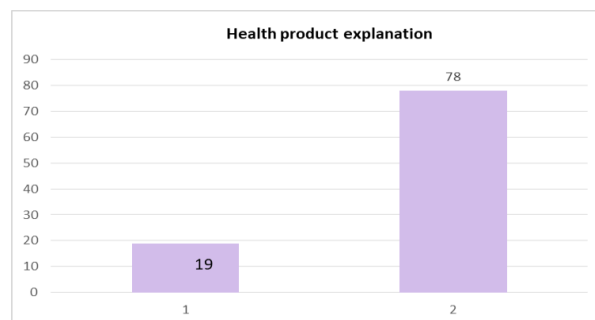


Figure 7. Health product explanation

In figure 7, 19 respondents were given an explanation, and 78 respondents said they received no explanation. Respondents only search for their own information from Google.

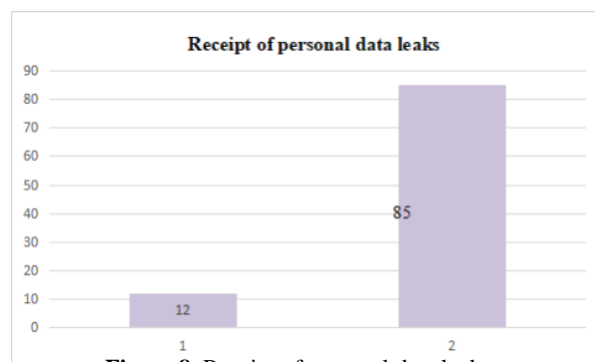


Figure 8. Receipt of personal data leaks

Of the 97 respondents, 12 received a leak of personal data, and 85 respondents said they did not accept.

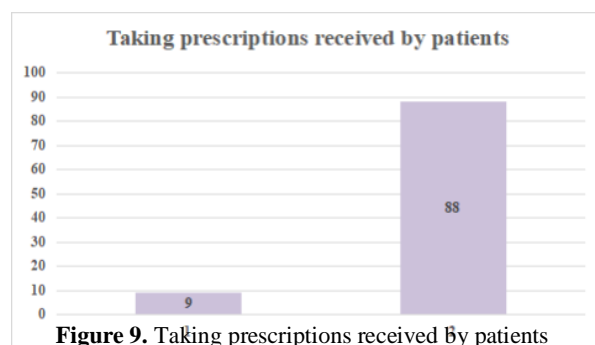


Figure 9. Taking prescriptions received by patients

From the figure, nine respondents uploaded by choosing the dispensary for the recipe takes, and 85 respondents chose to take directly to the dispensary.

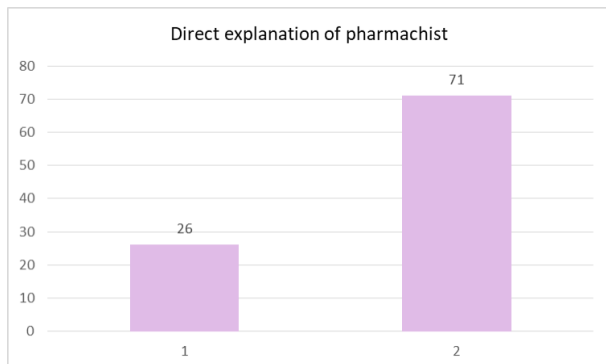


Figure 10. Direct explanation pf pharmacist

Taking prescriptions at pharmacies, 25 respondents said they received an explanation of the drug received directly from the pharmacist and 71 said receiving proof was not from the pharmacist or did not receive an explanation at all.

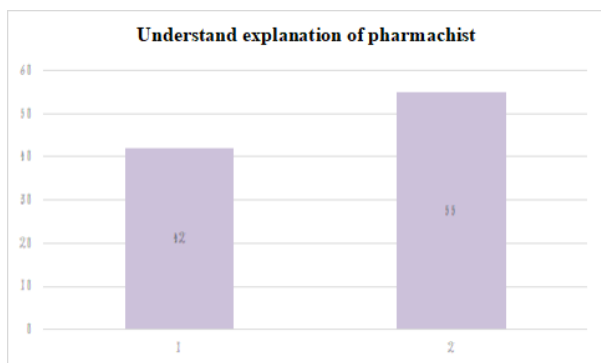


Figure 11. Understand explanation of pharmacist

From the figure, 42 respondents said they understood the prescription explanation received at the dispensary, and 55 respondents said they lacked understanding and took the drug alone according to the label on the drug packaging.

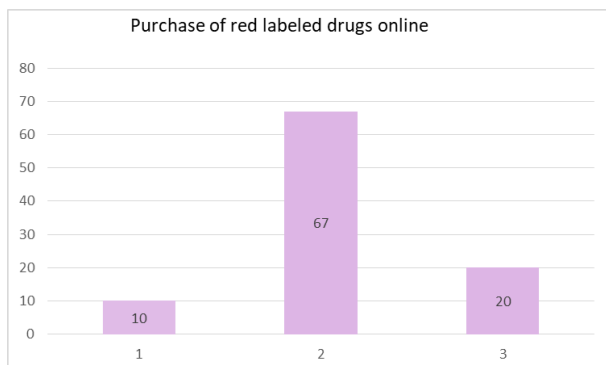


Figure 12. Purchase of red labelled drugs online

From figure 12, answers about the purchase of red-marked drugs online, ten respondents answered yes, 67 respondents answered no, and 20 respondents did not answer. Not giving answers can be because respondents do not understand and can be afraid to provide solutions and other reasons.

4. DISCUSSION

According to the World Health Organization (WHO), electronic health or e-health is defined as the use of information and communication technology (ICT) that is cost-effective and safe to support various things in health. The scope of this technology-based healthcare is extensive. Not only for consulting doctors online, making consultation appointments, or ordering drugs, but also for conducting research and providing health education.^[4]

The primary purpose of electronic health is to facilitate access to health services, improve the quality of health services, and reduce the cost of getting health services. In principle, online-based medical services only provide the interaction of doctors and patients. One of the other forms of interaction is health consultation, where patients can consult remotely online. In terms of consumers, the presence of online medical services provides convenience because it can present doctors through daily habits. Still, in practice, doctors can potentially do professional comfort because the process is done online that does not meet in person, besides that this online medical service has not been regulated explicitly in legislation and does not yet have operational standards made by

professional organizations, so as not to rule out the possibility of implementation can occur medical errors. sehingga tidak menutup kemungkinan pelaksanaannya dapat terjadi kesalahan medis.^[5]

Based on research, the presence of telemedicine sites became a solution offered to the community during the COVID 19 pandemic. Amid the concerns and anxiety that pervade the community ultimately also affects health which causes many complaints that are feared by the community as a symptom of COVID 19. Alodokter, Halodoc, and other sites are a means for patients to consult their health conditions online. The COVID 19 pandemic that hit the world with a fairly high rate of spread and a growing death rate makes panic, fear and anxiety a sight that we encounter every day. The hospital became a place used as a reference for COVID 19 sufferers but on the other hand, became a place that was very avoided by the community because of the assumption that the hospital is a place where the coronavirus is found. This is the first and main reason the use of online health consulting sites becomes an option.^[6]

The use of online health consulting sites through Alodokter and Halodoc sites that are used as an alternative during the pandemic period is certainly not without reason, the existence of solutions submitted,

recommendations of safe and consumable drugs, tranquillity and security that are expected to be the purpose of using this telemedicine site. The patient's level of trust is not based on the credibility of the doctor but rather on the results of the diagnosis delivered.^[7]

E-Health, Medical Law and Secrets

Doctors as organizers of medical practice obtain the authority to practice medicine based on the permission granted by the government. Permission from the government is a form of state responsibility to regulate and foster the practice of medicine in Indonesia. The practice of medicine using e-health contains potential vulnerabilities that can cause orientation changes. This kind of health care facility cannot be equated with ordinary health care facilities. Thus, the certificate or license must also be different. This difference requires different legal arrangements. Therefore, it is necessary to set national standards and guidelines for the use of telemedicine so that responsible, safe, quality and equitable and non-discriminatory health care can be created.

As is the case with traditional patient-physician relationships, the relationship between doctors and patients using telemedicine must also meet the requirements stipulated in Law No. 29 of 2004 on The Practice of Medicine. Article 39 states that the practice of medicine is carried out based on the agreement. The agreement as intended is the maximum effort of the medical profession's devotion that must be done by doctors and dentists in healing and restoring patient health following service standards, professional standards, standards of operational procedures and medical needs of patients.^[8]

Everyone is entitled to the confidential health condition that has been submitted to the health service organizer (Article 57 paragraph (1) of Law No. 36 of 2009 on Health). In the use of telemedicine, the protection of patients' privacy rights over their health data recorded electronically in health care facilities, needs to be regulated so that it is not easily accessible to unauthorized parties. For this reason, it must be carried out by an authorized officer and have special permission for it. The guarantee of confidentiality of the patient's medical data is stated in the form of a written agreement with his patient, so that it can have legal implications in the event of abuse.^[9]

Each Electronic System Operator must organize electronic systems reliably and safely and be responsible for the proper operation of electronic systems (Article 15 paragraph (1) of Law No. 11 of 2008 on Electronic Information and Transactions). Assurance of the security and reliability of electronic systems in telemedicine practice needs to be carried out by a legal entity or competent institution that gets recognition both nationally and internationally.^[10]

According to the research, legal protection of consumers in online application-based health services provided by application companies is only limited to the responsibility for the use of the application because of

its status only as a liaison between consumers and health care providers, namely partners of this application company. Accountability for health services is the accountability of others who provide health services. In the application status as an attending physician (partner) who is responsible for his own mistakes if it harms consumers caused by negligence and lack of care in carrying out his professional duties or not fulfilling the rights of consumers who have been regulated in the Act.^[11]

5. CONCLUSION

At the time of the covid-19 pandemic, the use of e-health in the community is quite popular considering the situation and conditions that make them afraid to leave the house and choose to consult or buy drugs online. Basically, with adequate counseling or information from the doctor, the patient or his family can assess every step taken by the doctor. Through informed consent (approval of medical actions) needs to be considered and important provided by the doctor and fully understood by the patient / his family so that not every disappointment from the results of medical services using telemedicine becomes a case of malpractice.

AUTHOR'S CONTRIBUTIONS

All authors contributed conceived and designed analysis, collected the data, and wrote paper.

ACKNOWLEDGMENT

We would thanks to all authors and all respondents.

REFERENCES

- [1] Catharina Apriyani. Persepsi Apoteker Mengenai Penggunaan Internet dan Media Sosial Untuk Pelayanan Informasi Obat di Apotek-Apotek di Daerah Istimewa Yogyakarta. Sanarta Dharma; 2020.
- [2] Rosadi S. Implikasi Penerapan Program E-Health Dihubungkan Dengan Perlindungan Data Pribadi. Arena Huk. 2016;9(3):403–20.
- [3] Arif MAI. the Legal Review of Online-Based Medical Services. 2018;1–134.
- [4] World Health Organization. Telemedicine: Opportunities and Developments in Member States: Report on the Second Global Survey on eHealth 2009 (Global Observatory for eHealth Series, Volume 2). Healthc Inform Res. 2012;18(2):153.
- [5] Kristianto E. E-health di Indonesia. J Tek dan Ilmu Komput [Internet]. 2013;2(6):167–70. Available from: <http://ejournal.ukrida.ac.id/ojs/index.php/JTIK/article/download/790/755/>
- [6] Komalawati V. Peranan informed consent dalam

transaksi terapeutik: persetujuan dalam hubungan dokter dan pasien; suatu tinjauan yuridis. Bandung; 2002.

- [7] Sari GG, Wirman W. Telemedicine sebagai Media Konsultasi Kesehatan di Masa Pandemic COVID 19 di Indonesia. *J Komun* [Internet]. 2021;15(1):43–54. Available from: <https://journal.trunojoyo.ac.id/komunikasi>
- [8] Undang-Undang Praktik Kedokteran No. 29. 2004;55. Available from: <http://eprints.uanl.mx/5481/1/1020149995.PDF>
- [9] Undang-Undang Republik Indonesia. Undang-Undang No.36 Tentang Kesehatan [Internet]. 2009. Available from: <http://dx.doi.org/10.1016/B978-0->
- [10] Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi dan Transaksi Elektronik. Undang-undang [Internet]. 2008;11:1–18. Available from: <papers3://publication/uuid/8C845E4E-CD67-4476-BB4F-7123C56F0449>
- [11] Listianingrum, DM. Perlindungan Hukum Terhadap Konsumen Dalam Pelayanan Kesehatan Berbasis Aplikasi Online. 2019;8:1889–904.