

## VIRTUALIZATION OF HEALTH COMMUNICATION MEDIA ON E-HEALTH HALODOC

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### ABSTRACT

*Especially in times of pandemic, health is very important and irreplaceable. People often seek health information through health communications media. Various forms of health communication compete to spread their wings and evolve to provide the best information. Health magazines are one of the health communication media that provide information on health and healthy lifestyles, followed by various radio stations and television programs. With the development of technology, including the Internet, digital media providing health information has also become prevalent, from simple health information portals to virtual media in the form of applications that enable two-way interaction. This research literature review focuses on mass media and its development, the development of the Internet and its application to the Halodoc electronic health media platform. Globalization is also the reason behind the development of the Internet. The researcher also describes four eras with the best means of communicating time and technological determinism. There are pros and cons to using e-Health Halodoc as your e-Health media platform. The results of this research prove that Internet development and technology can not be separated. These two things play an important role in mutual development, especially in medical media.*

**Keywords:** Health Communication, Virtual Media, Halodoc, Communication Technology

### INTRODUCTION

In the current pandemic era, health is priceless. Many things are done by the community in maintaining their health (Ratnasari, 2008). People often seek information in various ways, one of which is health communication. Health communication is not only limited to one-way communication in the form of delivering information, but two-way with the response from the recipients of information. In delivering health information, communication media is needed so that the information reaches the recipient of the message well. Health media was born to reduce people's difficulties in getting information about health.

Health communication is a form of providing information, influencing and motivating the public about several important issues from the health sector to improve public health. In addition, health communication is also understood as a

study that explores how to use communication strategies to disseminate health information that can influence individuals and communities to make the right decisions related to health management. Health communication includes prevention, health promotion, health care policies, business regulations in the health sector, which as far as possible change and update the quality of individuals in a community or society by considering aspects of health science and ethics (Liliweri, 2011).

Health magazine is one of the health communication media that has a function as a source of accurate health information and supports health behavior (Stefanus & M., 2018). Several health magazines began to appear, such as FIT Magazine. Apart from magazines, radio broadcasts in Indonesia also provide information about health. Radio, which functions as a medium for broadcasting sound and is relatively inexpensive and

easy to access and listen to, has the power to stimulate factual information through the ears of the listeners. Main Radio 97.1 FM Bangkang is one of the radio stations that has a health segment called Healthy Tips which shares a healthy lifestyle with listeners.

However, as developments emerged, other electronic media such as television and the Internet emerged (Mabruri, 2013). Television as a form of sound broadcasting with moving images has succeeded in shifting the existence of radio. DR. OZ on the television station Trans TV is one proof that television has also taken the realm of health. DR. OZ broadcasts about lifestyle and various health issues. This program was also led directly by a doctor who managed to steal the public's trust in this show.

Health programs provided by several mass media, print and electronic, answer the concerns of people who have health problems. As we know, in the world of public health, we need doctors, but the presence of this health media is one way to minimize the difficulty of the community in getting information about health and its services. Not only magazines, radio and television, technological developments in the world of health also propagate using the internet. This is proven by the emergence of health websites such as [www.alodokter.com](http://www.alodokter.com), [www.klikdokter.com](http://www.klikdokter.com). The health website is here to provide health information in the form of articles written by doctors.

The development of technology today is almost out of control. Shortly after the emergence of the health website, the world of health has again spread its wings to the virtual direction with the existence of E-Health applications such as Halodoc. Halodoc, which was officially launched last April 2016, is here to provide online consultation services such as consulting a doctor in a hospital, health articles and

even online pharmacy where people can buy medicines through the Halodoc application. The emergence of halodoc was warmly welcomed by a number of Indonesian people who did not have much time to queue at the hospital.

Halodoc as a health media can be accessed through many ways, websites, applications and go-medicine services that are connected to online motorcycle taxi applications that can make it easier for the public to use it. Halodoc, which is a health application that was founded in 2016, is a public health service that makes it easy for users to get easy access to health services just by using a smartphone. This can make this application a pioneer of health service applications that are no longer complicated (Andra, 2019).

The features provided by Halodoc also vary, ranging from doctor chat where the user can consult directly with doctors both general and specialists who are registered with Halodoc at any time without having to wait for a schedule. In addition, Halodoc also provides pharmacy services where users can buy medicines using Halodoc and have them delivered directly to their homes. Halodoc also presents a feature to make an appointment with a doctor for certain cases that cannot be consulted via chat, so Halodoc has developed this feature so that users can register to see a doctor without having to queue at the hospital. In addition, halodoc collaborates with to be able to provide laboratory check services at home, bring laboratory personnel to the house and users do not need to come to the lab to check or take lab results, because the results will be directly linked to the user's halodoc account. Lastly, Halodoc also provides information about health that comes from doctors who are experienced in their fields. The information is in the form of tips, disease information, types of drugs and

other information related to health (Andra, 2019).

The development of technology accompanied by the development of the internet has also driven the development of mass media. From the explanation above, it can be seen where the media continues to develop along with the times, causing the presence of new technologies in society. This study aims to analyze the changes and developments of the media as a result of the development of technology and the internet in the world.

### Mass Media

Mass Media is defined conventionally as electronic media in the form of radio, television, film and recorded music. Whereas in print media, mass media are newspapers, magazines and literature as well as artifacts, experiences, practices and processes (Spitulnik, 1993). This means that mass media has various forms. Media, undergoes several stages of change and transformation, according to Roger in (Iskandar, 2017) is metamorphosis. Media has evolved from time to time from just traditional media which is a newspaper to now the media uses digital platforms. The development of the mass media can be accompanied by the development of computers and internet technology which includes more than the convergence of two media (Adoni & Nossek, 2001).

According to (McLuhan, 1999) that the medium used in conveying information is the message itself. According to him, the media is an extension of man. The influence of the media with the advancement of technology has had a huge impact on humans.

### Make Media History and Make "Sense"

The media of an era can determine the essence of a society, (McLuhan & Fiore, The Medium is The Message: An Inventory of Effects, 1967) in (West & Turner, 2010) presents four eras, each

according to the dominant mode of communication in his era, namely the Tribal Era, Liberate Era, Print Era and Electronic Era.

*Table 1. The Development of Era in Society Media*

Epoch History	The Dominant Technology	McLuhan Comment
Tribal Era	Face to Face Contact/Hearing	"Society of this era has a means of stability beyond anything possible for the visual or civilized and fragmented world" McLuhan & Fiore in (West & Turner, 2010).
Liberate Era	Phonetic Alphabet/Seeing	Western society (women) do not carry out research or understand the alphabet in creating many of the archetypes in its culture McLuhan in (West & Turner, 2010).
Print Era	Printing Machine/Seeing	The most significant positive impact of typography is detachment and non-engagement – the power to act without reacting to McLuhan in (West & Turner, 2010).
Electronic Era	Computer/Seeing, Hearing, and	The computer is the most

	Touching	powerful outfit of all the technology that has ever existed. This is because the computer is an extension of our central nervous system McLuhan in (West & Turner, 2010).
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### Development Of Communication Technology

Technological developments often exceed the speed of human development in the world. This belief will affect the knowledge and attitudes and behavior of the community. Some people who are not ready for the development of technology, of course, will experience some shocks from the development of this technology (Nurudin, 2017).

Communication technology is present and forms a culture with certain characteristics and is dubbed by researchers according to the type of technology (Soetrisno, 2010). Technology is defined as the application of science and engineering in developing machines and rules to expand and improve the human condition, at least improve the efficiency of society from many aspects (Latuheru & Irwansyah, 2018). Technology is often described as having the most important impact on society (West & Turner, 2010).

Electronic media has changed society. According to McLuhan, basically society depends on technology which is embodied in the social order of society based on technological capabilities (West & Turner, 2010). McLuhan in (Pamungkas, 2017) said that communication technology will continue to develop. Changes in communication

technology are supported by the globalization process that brings people closer to technology. Through technology, humans from all over the world can communicate and interact in two directions. The developments that occur can be said to be in line with the emergence of certain technological innovations through language and printing equipment.

In the current era, the development of science and technology is very rapid, especially in the development of the internet. In Indonesia, the internet is growing quite fast. Therefore, the media also need the Internet as a means of disseminating news and information. The development of the internet which began to be present in Indonesia from the end of the 20th century to the beginning of the 21st century began to be used as a communication medium. The use of the internet as a technical and physical communication medium is a new phenomenon in Indonesia (Effendi, 2010).

The global village phenomenon is one of the phenomena that occurs along with technological developments. This phenomenon can be observed with reality where virtual relationships are increasing and face-to-face interactions have begun to be replaced by internet-based virtual interactions (Saefudin, 2008).

### Technological Determinism

Technological determinism was an ideological and systems theme that circulated in the 1980s. This theme is a construction that is fundamental to the notion that world history is a range of technological advances. This deterministic technology system emphasizes the belief that tools that are inanimate objects make computers, robots and others machine technology becomes a complement to life (Saefudin, 2008).

### METHOD

The research was conducted from April – July 2022, in Jakarta. The article uses literature study and analysis of changes in society. This is a literature review study based on documents, journals and books related to the discussion of the virtualization of electronic health media platform such as HaloDoc. The method of literature retrieval is the primary basis in this writing that inductively and deductively analyzes by studying literatures from the reports of studies in search engines and databases until the conclusion in identifying the whole aspect in using electronic health media platform and their perspective can be achieved. The change that is currently happening is the development of media which is growing rapidly along with the development of the internet. Shifting magazines as print media and shifting people's attention to digital with the presence of the internet and technological developments. This research was conducted by analyzing technological developments that occurred in society.

## **RESULT AND DISCUSSION**

### **Electronic Health Media Platform**

Technological advances make easy access to every electronic gadget, whether radio, TV or mobile phones. This development succeeded in shifting the existence of FIT Magazine as a magazine that provides health information. Public attention then turned to radio and television. Such as Main Radio 97.1 FM Bangkang which is one of the radio stations that broadcasts a health segment called Healthy Tips. Followed by the presence of the television program DR. OZ which is broadcast by Trans TV station. The program uses the format of talk shows and health demonstrations that talk about people's health and lifestyle. Along with the development of new media, and the development of the internet in Indonesia, health information has begun to explore

the digital world with the emergence of health article portals such as KlikDokter and Alodokter. These portals also share information about health which is monitored directly by doctors who are experts in their fields. Until this article was written, this portal is still a source of health information that is easily accessible to the public.

Technological developments have begun to spread to the virtual world where people not only get information about health, but people can also interact directly with doctors through applications. The Internet comes with several advantages of being able to build online relationships (within a network) and take advantage of its users. The internet makes it easier to live (Saefudin, 2008).

Halodoc is a virtual media pioneer that provides direct online consultations with registered doctors, both specialists and general practitioners. Halodoc application also makes it easier for people to meet their health needs. This application can be called a “one stop application” which provides many features such as buying drugs, consultations, laboratory checks and presenting health information. In the past, before the digital era, people had to queue to be able to consult a doctor, now, everything can be done in one application. This proves that technological developments have had many positive impacts on society.

### **The Pros and Cons**

The electronic health media platform has several advantages over other media when it comes to disseminating health information. First, the electronic health media platform is seen as the fastest among the available channels for sharing warnings and updates about disease outbreaks (Jin, Austin, Vijaykumar, Jun, & Nowak, 2019). Second, the electronic health media platform allows the use of various forms of media to engage the

public. For example, by integrating hyperlinks, electronic health media platform posts can direct the public to other online sources for additional health information.

Electronic health media platforms can provide a communication platform for stakeholders during disease outbreaks. The government's electronic health media platform account can be an official source of information that provides content about disease outbreaks to local institutions and journalists in a timely manner (Chen & Wang, 2021). In this case, HaloDoc can be considered as an official electronic health media platform account because it is organized by credible and registered doctors and health staff.

The advantages of health interventions are also described in this study. Electronic health media platforms are widely integrated into health interventions and can perform many functions. First, electronic health media platforms are used to convey health information to audiences motivate participation in health-related events, and direct audiences for interventions to other health resources (Chen & Wang, 2021). Second, electronic health media platforms are used to support interaction with audiences including engaging audience campaigns in two-way communication with health institutions and professionals and providing a platform for peer support group discussions (Yu, et al., 2020). Third, the electronic health media platform is used to motivate changes in health behavior; Intervention participants used an electronic health media platform to document and share their own health behavior change progress such as uploading pictures of daily healthy meals and sharing virtual weekly achievements in physical activity, setting group challenges towards health goals, and engage in health behavior competition

with peers (Chen & Wang, 2021). Finally, at the intervention preparation stage, the electronic health media platform was also used to reach a wider and varied population, including hard-to-reach populations. In general, empirical evidence shows that integrating an electronic health media platform in health interventions is acceptable to the target population and is effective in increasing health knowledge, reducing risk behaviors, and adopting health behaviors (Xiao, et al., 2020).

Another advantage also talks about how this digital health media is able to facilitate doctor-patient communication and online health services. Health professionals use the electronic health media platform for doctor-patient communication including responding to questions posted by patients, offering online consultations, and proactively providing health advice and information to followers of the electronic health media platform (Benetoli, et al., 2017). In addition, the electronic health media platform can be used to support offline health services. Health professionals can use the electronic health media platform to inform patients about the results of their examinations encourage adherence to treatment, receive feedback from patients about their health services, and collect information from patients after discharge to inform practice in the future (Senthilkumaran, et al., 2017). Encouraging interaction between healthcare practitioners and patients on electronic health media platforms can benefit patient health and the doctor-patient relationship. In addition, the electronic health media platform can also be used to provide medical services such as appointments, medical inquiries, personal information management, and payment of medical fees, which can improve the accessibility of medical care

and enhance the patient experience (Ranschaert, et al., 2016).

On the other hand, the use of electronic health media platforms also has cons or disadvantages. It would most likely be perceived as something worrisome. First, many studies raise concerns about the information quality of electronic health media platforms and their impact on individual health outcomes (Reidy et al., 2019). Indeed, empirical studies provide reasons for concern. Sallam et al found that people who rely on electronic health media platforms to obtain health information have lower COVID-19 knowledge scores than those who rely on doctors and scientific journals for information (Sallam, et al., 2020). In addition, people seeking information on the electronic health media platform did not confirm its accuracy with a healthcare professional, and health professionals disagreed with the information found on the electronic health media platform on 36.7% of the times when people checked the accuracy of the information with a healthcare professional (Crilly, et al., 2019). This evidence calls for efforts to reduce misinformation on electronic health media platforms and improve the public's ability to find reliable sources of information on electronic health media platforms. This is reflected in the phenomenon during the COVID-19 pandemic. With the increasing volume of misinformation during the COVID-19 pandemic, much research has focused on concerns about the rapid spread of misinformation on electronic health media platforms and proposes approaches to combating misinformation through electronic health media platforms. For example, researchers suggest that health institutions increase efforts to monitor and enforce fact-checking of dubious information on electronic health media platforms, promote strategic and timely

refutation of misinformation on electronic health media platforms, share personal experiences on electronic health media platforms to refute rumors, and use search optimization strategies on electronic health media platforms to direct users who ask health-related questions to reliable sources of information. In addition to fighting misinformation through electronic health media platforms, health institutions can also encourage health professionals to establish interpersonal relationships with patients and invite patients to discuss misinformation they may encounter online (Chen & Wang, 2021).

Second, many studies raise concerns about risks to patient privacy and confidentiality and healthcare professionals lack knowledge about electronic health media platforms. The study also addresses challenges such as protecting the intellectual property of content creators and managing negative comments from patients (Ranschaert et al., 2016). Based on this it is highly recommended to develop guidelines or regulations regarding ethical, legal, and technological issues and provide training for health professionals and researchers on the proper use of electronic health media platforms. Privacy concerns also include the use of electronic health media platforms for a variety of health purposes including disease surveillance, health interventions, participation in online communities, and professional communication with colleagues and patients (Cherrez-Ojeda, et al., 2020). Researchers have consistently called for efforts to address privacy concerns regarding the use of electronic health media platforms for health purposes. Indeed, research efforts have been undertaken such as developing models to screen patients and caregivers and matching them with peer patients and trusted caregivers in a privacy-preserving manner and developing an electronic

health media platform privacy guide for healthcare professionals (Hennessy et al., 2019). However, gaps still exist in research and practice such as the lack of official guidelines on privacy issues associated with the use of electronic health media platforms [146], lack of approaches to guaranteeing informed consent online, and lack of awareness of the privacy risks associated with electronic health media research. Platforms (Bender et al., 2017). Future studies should explore research methods and establish practice guidelines that can address privacy concerns associated with the use of electronic health media platforms for health research, intervention, healthcare and patient-physician interactions.

## CONCLUSION

Based on the analysis that has been done by researchers Technological developments cannot be separated from the development of the internet in the world. This is because the internet has an important role in the development of communication technology, especially in the development of media. The internet has succeeded in shifting the existence of magazines, radio and even television. Halodoc is indeed not the first health media to use the internet, but Halodoc can be said to be a pioneer of virtual media in the health sector where there is two-way communication between patients or

application users and doctors who are already registered in the Halodoc application. The using of electronic health media platform also contains pros and cons that have been reported through related studies. The most pros in electronic health media platform is the capability to convey health information in easier access, support interaction between users and health institution and professionals, and proven to increase health knowledge, reducing risk behaviors, and adopting health behavior. Another advantage is this platform capable to facilitate doctor-patient communication. Despite the advantages, the cons are also found in the using of this platform, there are quality of information, misinformation, and privacy concern. Future studies should explore research methods and establish practice guidelines that can address privacy concerns associated with the use of electronic health media platforms for health research, intervention, healthcare and patient-physician interactions. Practitioners and organizations may use the result summary of this review as the starting step to identify the application of electronic health media platform related to their job. In addition, this review summarize literatures and help identifying research gaps in electronic media use for health purposes, providing the introduction for next research in this area.

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