

# Systematic Review: Implementation of Telepharmacy Services for Pharmacies

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Abstract: Telepharmacy services are service activities that provide pharmaceutical care to patients at a distance through the use of telecommunications and information technology. The purpose of this review article is to analyse the importance of telepharmacy services in the competitive pharmacy business by providing a brief overview of the meaning of telepharmacy, the implementation of telepharmacy services, the role of pharmacists in telepharmacy services and the results of the evaluation of telepharmacy services in pharmacies. Data searches and retrieval methods were conducted electronically using Google Scholar, Pubmed, Science direct, Nature, NCBI websites. Keywords used in the search included "pharmacy development strategy", "telepharmacy strategy", "telepharmacy", "telepharmacy in pandemic" and "telepharmacy in Covid-19 pandemic". A total of 24 journals were found and only 12 journals and 10 government regulations met the inclusion criteria. From this literature review, it can be seen that telepharmacy services can help maximise pharmaceutical services in the competitive era of pharmacy business, and with the results of this evaluation, it is hoped that they can be used as a reference for Indonesia in creating integrated policies and procedures for implementing telepharmacy services in the future.

## 1 INTRODUCTION

Health is an important thing and one of the factors related to the Human Development Index. Health is also something that many people strive for in order to improve the welfare of Indonesian society (Irwan, 2020). There are various types of health problems that many people experience, which are related to lifestyle, food pattern, environment, and genetic diseases (Pinontoan et al., 2019). Pharmacies are health service facilities that provide patients and the public with various sources of information related to health services. Pharmacies also have full authority and responsibility for the supply of medicines. Pharmacies can act as managers to organise implementation plans.

Pharmacy is a type of health service that basically has two functions, namely a health unit and a business unit. Pharmacy is also one of the efforts to develop health services with the mission to provide medicines and public health needs to achieve optimal health. The pharmacy function in the business unit aims to make a profit, so pharmaceutical service activities include not only the management of medicines as goods and

patient services to improve the quality of life, but also to balance pharmaceutical and financial aspects for the benefit of patients (Hartayu et al., 2020).

The development of information and communication technologies has given rise to an application in the provision of pharmacy services to provide services to one or more remote locations via computer, video and audio links, known as telepharmacy. Information and communication technologies play an important role in different types of access to health services, which can be called electronic health (Armada, 2023). In addition, health services based on information and communication technology in the pharmaceutical sector are referred to as electronic pharmacy or also known as telepharmacy, which can help in efforts to improve people's quality of life and has been widely used in rural facilities due to the low number of pharmacists available (Hendra, 2023).

Telepharmacy is a remote service that allows a pharmacist to check and profile prescription drug orders. This can also help to improve the quality of services provided by pharmacies and is linked to development strategies in both health and business

sectors (Rahayu et al, 2023). Research by Saswita et al. (2023) and Farid et al. (2022) showed that the use of telepharmacy can increase the effectiveness of services and the use of medicines by the community. Based on the research by Fathoni et al, (2021) explained that the use of telepharmacy is a strategy to improve pharmacy services and marketing, especially in the pandemic era and the current era of globalisation, making it easier to provide services to the public by using electronic communication and electronic payments from order to receipt.

This electronic pharmacy or telepharmacy service is regulated by several laws, including Law No. 8 of 1999 on Consumer Protection, Law No. 14 of 2008 on Public Information, Law No. 36 of 2009 on Health, Law No. 11 of 2008 on Information and Electronic Transactions, Law No. 19 of 2016 on Amendments to the ITE Law, Law No. 25 of 2009 on Public Services, PPRI No. 72 of 1998 on the Safety of Pharmaceutical Preparations and Devices, and Presidential Decree No. 51 of 2009 on Pharmaceutical Work, Law No. 25 of 2009 on Public Services, PP RI No. 72 of 1998 on the Safety of Pharmaceutical Preparations and Medical Devices, PPRI No. 51 of 2009 on Pharmaceutical Work, Presidential Decree No. 72 of 2012 on the National Health System, and Minister of Health Regulation No. 9 of 2017 on Pharmacies (Dwiyanto, 2021).

## 2 RESEARCH METHODS

The data search and retrieval strategy was conducted electronically using the Google scholar, Pubmed, Science direct, Nature and NCBI websites. Keywords used in the search included 'pharmacy development strategy', 'telepharmacy strategy', 'telepharmacy', 'telepharmacy in pandemic' and 'telepharmacy in Covid-19 pandemic'. From the search results, 24

journals related to telepharmacy were obtained, but in this review article only 12 journals and 10 government regulations were used as literature, with the criteria being research journals, primary articles, scientific articles with a publication period of 5 years. final. Exclusion criteria in this study were the type of journal review article, the journal could not be accessed in its entirety.

Table 1: Conceptual Framework.

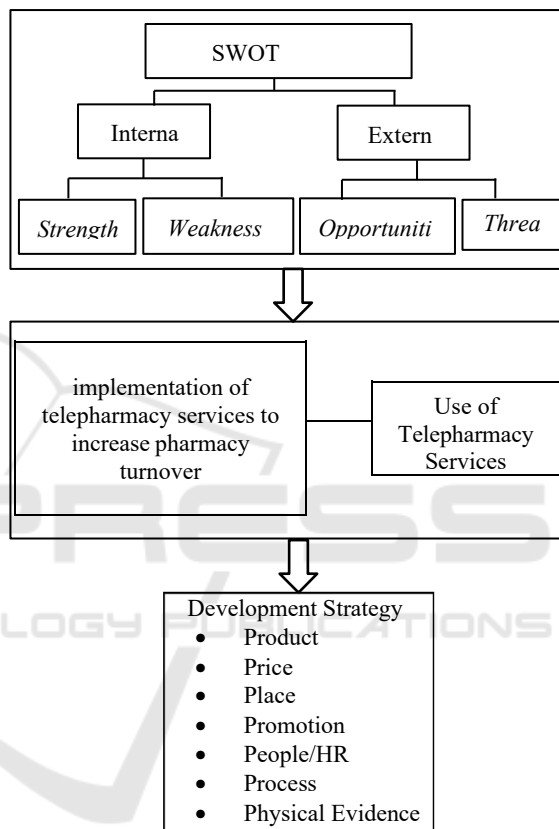


Table 2: Operational Definition of Variables.

No	Variable	Operational Definition	Dimensions	Indicator	Scale
1	Development Strategy	Strategy development is a planned and ongoing effort to apply behavioral science to system development using self-reflection and analytical methods	Product	- Product quality - Quality of raw materials - Product variety	Ordinal
			Price	- Price compatibility with purchasing power - Price compatibility with product quality, - There are attractive discounts - There is cashback if the product is damaged	Ordinal

Table 2: Operational Definition of Variables (cont.).

No	Variable	Operational Definition	Dimensions	Indicator	Scale
			Place	<ul style="list-style-type: none"> <li>- Access, for example a place that is easy to pass or easy to reach by public transportation</li> <li>- Visibility, for example the location can be seen clearly at the side of the road</li> <li>- Safe parking place</li> </ul>	Ordinal
			Promotion	<ul style="list-style-type: none"> <li>- Promotion quantity</li> <li>- Promotional media varies</li> <li>- Promotional funds</li> </ul>	Ordinal
			Person	<ul style="list-style-type: none"> <li>- Employee attitudes in serving consumers</li> <li>- Reliability of employees</li> </ul>	Ordinal
			Process	<ul style="list-style-type: none"> <li>- Production flow</li> <li>- Adequate equipment</li> <li>- Indirect/telephone service</li> </ul>	Ordinal
			Physical evidence	<ul style="list-style-type: none"> <li>- Space appearance</li> <li>- Cleanliness of place</li> <li>- Space comfort</li> </ul>	Ordinal
2	Use of Telepharmacy	The use of technology in the drug service process to make it easier for patients to obtain safe and quality goods	Provision Management Operation	Ease of use of telepharmacy in the process of providing, managing and operating medication orders to patients	Ordinal

### 3 DISCUSSION

The role of pharmacists in telepharmacy In telepharmacy services, pharmacists play an active role in communicating information related to pharmaceutical services. The impact of telepharmacy services has been demonstrated by the involvement of pharmacists in the remote review of medication orders (Schneider, 2013). The implementation of telepharmacy is carried out by pharmacist health workers with a range of services, including electronic prescription services, which include reviewing medication orders, counselling, education, providing drug information, as well as therapeutic monitoring of drugs, apart from being used for communication with prescribers, as well as being used as a medium to support the implementation. monitoring of pharmaceutical supplies, medical devices and consumable medical bodies (BMHP) (Hedima and Okoro, 2020).

### 4 CONCLUSION

There are many advantages to implementing pharmaceutical services using telepharmacy services, as evidenced by the evaluation results in several countries that have implemented comprehensive telepharmacy services. This can be used as a basis to further develop policies and procedures related to telepharmacy services in Indonesia, and to prove that telepharmacy services can be used to maximise pharmaceutical work and also as a medium to increase drug sales to generate more income for pharmacies.

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