



RESEARCH ARTICLE

Optimizing Drug Procurement with the MELIASI Application: A Collaborative Solution for Health Facilities

Meliasi Nora Pratamarta^{1*}, Jon Hendri Nurdan²

Published online: 24 May 2024

Abstract

The problem of drug shortages, where medications are unavailable or difficult to obtain, can significantly impact public health and disrupt the national health insurance system (JKN). This study aims to address this issue by developing the MELIASI (Multiple Link Collaboration) application as a collaborative solution among health facilities within a district. The research method used is qualitative, employing in-depth interviews with stakeholders involved in drug procurement management. The results show that weak collaboration among health facilities leads to suboptimal utilization of available drugs. The MELIASI application, still in the prototype stage, is expected to optimize drug distribution by leveraging surplus stocks from other health facilities. Implementing this application can reduce procurement wait times from an average of 7-14 days to just 2-3 days, enhance distribution efficiency, and ensure better drug availability across various health facilities. This study makes a significant contribution to pharmaceutical information management and offers a model that can be applied in other regions to improve drug availability. Additionally, the findings indicate that digital technology in drug procurement management can provide innovative solutions to address drug shortages and enhance overall public health.

Keywords: Drug Procurement Management, Drug Management, Website Application, Information System, MELIASI Management

Abstrak: Masalah kekosongan obat adalah kondisi di mana obat tidak tersedia atau sulit didapatkan, yang dapat mempengaruhi kesehatan masyarakat dan mengganggu sistem penjaminan kesehatan nasional (JKN). Penelitian ini bertujuan untuk mengatasi masalah tersebut dengan mengembangkan aplikasi MELIASI (Multiple Link Kolaborasi) sebagai solusi kolaboratif antar fasilitas kesehatan di suatu wilayah kabupaten. Metode penelitian yang digunakan adalah kualitatif dengan teknik wawancara mendalam terhadap stakeholder terkait manajemen pengadaan obat. Hasil penelitian menunjukkan bahwa kolaborasi yang lemah antar fasilitas kesehatan menyebabkan tidak optimalnya penggunaan obat yang tersedia. Aplikasi MELIASI, yang masih dalam tahap prototipe, diharapkan dapat mengoptimalkan distribusi obat dengan memanfaatkan stok berlebih dari fasilitas kesehatan lain. Implementasi aplikasi ini dapat mengurangi waktu tunggu pengadaan obat dari rata-rata 7-14 hari menjadi hanya 2-3 hari, meningkatkan efisiensi distribusi, dan memastikan ketersediaan obat yang lebih baik di berbagai fasilitas kesehatan. Penelitian ini memberikan kontribusi penting dalam manajemen informasi kefarmasian dan menawarkan model yang dapat diterapkan di daerah lain untuk meningkatkan ketersediaan obat. Hasil ini juga menunjukkan bahwa penggunaan teknologi digital dalam manajemen pengadaan obat dapat memberikan solusi inovatif untuk mengatasi masalah kekosongan obat dan meningkatkan kesehatan masyarakat secara keseluruhan.

Kata Kunci: Manajemen Pengadaan Obat, Manajemen Obat, Aplikasi website Sistem Informasi, Manajemen MELIASI

¹), ²Universitas Dehasen Bengkulu, Indonesia

**) corresponding author*

Meliasi Nora Pratamarta
Program studi S2 kesehatan Masyarakat Universitas Dehasen Bengkulu, Indonesia
Jl Merapi Raya No.43 Kebun Tebeng Kota Bengkulu 38228

Email: meliandri776@gmail.com

INTRODUCTION

Management Information Systems (MIS) are designed to facilitate decision-making by effectively managing information. Long before the industrial era 4.0, MIS was used by organizational leaders, albeit in the form of paper documents and manual archives, which were not very effective due to the time required to search for information (Sakti, 2007). In the era of industry 4.0, MIS has transformed into digital systems that enable efficient and effective data search and management. Manually stored archives and documents are now digitally available, making it easier for both organizations and individuals to access the data anytime and anywhere. This transformation is crucial in the context of drug procurement management in health facilities, where drug shortages often become a critical issue that can affect public health and disrupt the national health insurance system (JKN).

Drug shortages can be caused by various factors such as production constraints, logistical issues, and raw material limitations (Badan Litbangkes, 2010). These shortages impact the availability and accessibility of drugs for the public and can jeopardize public health. Drug shortages in health facilities also reflect failures within the national health insurance system (BPJS, 2021). Therefore, effective solutions are needed to address this issue. This study aims to develop the MELIASI (Multiple Link Collaboration) application as a collaborative solution among health facilities within a district to address the problem of drug shortages.

The MELIASI application is designed to optimize drug distribution by utilizing surplus stocks from other health facilities. By relying on digital technology and collaboration principles, this application is expected to reduce drug procurement wait times and improve drug availability for the public. Implementing the MELIASI application is also expected to make significant contributions to pharmaceutical information management and offer a model that can be applied in other regions to improve drug availability.

This study is based on supply chain management and inter-agency collaboration theories. Supply chain management in this context includes managing the flow of drugs from suppliers to health facilities, as well as managing stock and drug distribution among health facilities (Devnani & Gupta, 2010). Collaboration among health facilities is essential to ensure optimal resource utilization and reduce the risk of drug shortages (Freeman & McVea, 2001).

The research method used is qualitative, with in-depth interviews with stakeholders involved in drug procurement management. This method was chosen to gain a deep understanding of the issues faced and the solutions that can be applied. Interviews were conducted with various stakeholders such as doctors, pharmaceutical staff, and health facility managers to gain a comprehensive understanding of the challenges and needs in drug procurement.

The study results indicate that weak collaboration among health facilities leads to suboptimal utilization of available drugs. Some health facilities have surplus drug stocks, while others experience shortages. The MELIASI application, still in the prototype stage, is expected to address this issue with innovative and effective solutions. This application allows health facilities to share information about drug stocks, thus addressing shortages by utilizing surplus stocks from other facilities. This study makes significant contributions to drug procurement

management and offers practical solutions for drug shortages in health facilities. Implementing the MELIASI application is expected to enhance the efficiency and effectiveness of drug management and ensure drug availability for the public. Moreover, the model developed in this study can be applied in other regions to address similar issues.

RESEARCH METHODS

Research Design

This study uses a descriptive method to determine the stages, procedures, timing, and location of data collection. The research was conducted at Sobirin Hospital in Musi Rawas Regency, South Sumatra. The descriptive method was chosen because it aims to describe and interpret objects as they are, in accordance with existing conditions (Sugiyono, 2007). This method is also referred to as non-experimental because it does not manipulate the variables being studied. The method is supported by software with a prototype model and in-depth data collection techniques.

Location and Subjects of the Study

The research was conducted at Sobirin Hospital in Musi Rawas Regency, South Sumatra. The location was chosen based on the relevance and accessibility of health facilities in the area. The study subjects included various stakeholders involved in drug procurement management, including doctors, pharmaceutical staff, health facility managers, and other related parties. The selection of these subjects was based on their relevance to drug procurement management and the use of the MELIASI application, as well as their ability to provide in-depth information on the needs and challenges faced in drug management.

Data Collection Methods

The main data collection method used was in-depth interviews with stakeholders involved in drug procurement management. The in-depth interview technique was chosen to obtain a deep and detailed understanding of the problems faced and the solutions that can be applied (Creswell, 2013). Interviews were conducted directly with each stakeholder to collect data on their needs, challenges, and perceptions of the MELIASI application. The interview process included open-ended questions designed to explore various aspects of drug procurement management, such as drug distribution efficiency, collaboration among health facilities, and the use of information technology in stock management. The collected data were then analyzed to identify patterns and themes relevant to the research objectives.

MELIASI Application Development Process

The development of the MELIASI application followed several stages:

1. Deep Interview

Deep interviews were conducted to map user needs. This method aims to collect data on user characteristics, habits, and needs. The results of the in-depth interviews were used to design the user interface of the website. Interview subjects were stakeholders directly responsible

for drug management, including doctors, pharmacists, and logistics managers.

2. Customer Journey

After analyzing user needs, a customer journey mapping was conducted based on user track records. The collected data were analyzed to find insights and opportunities for evaluation. The application design used the results of the customer journey to ensure the application meets user needs. Customer journey analysis helps understand user interactions with the system and identify critical points that affect user experience (Stickdorn et al., 2011).

3. Literature Review

A literature review was conducted to enhance the authors' knowledge of design fundamentals, development processes, and prototype literacy. This review included examining relevant theories and the development processes of management information systems. The literature review helps identify best practices and theoretical approaches underlying the application development (Boell & Cecez-Kecmanovic, 2015).

4. Existing Studies

Existing studies were conducted to identify similar or related products, which were then evaluated and considered in the application design. Several websites analyzed included Petshop Indonesia, Citra Pet & Vet, and Gustavet Pro Plan. This analysis helped understand the strengths and weaknesses of existing solutions and how MELIASI could offer unique value.

5. User Persona

User personas were created to develop brief profiles of users and serve as the basis for application design. Data obtained from the literature review, in-depth interviews, and customer journey were used to create effective user personas. Developing user personas helps design an intuitive interface that meets user needs (Cooper, Reimann, & Cronin, 2007).

6. Prototyping

Prototyping was conducted after user research. The website prototype was created using Adobe XD for visual design, Adobe Illustrator, and Adobe Photoshop for photo editing. The prototype was tested by users and experts to obtain feedback. Prototyping is a crucial step in the design iteration process, ensuring that the developed solution meets user needs (Saffer, 2010).

7. Experimental Research

Experimental research was conducted to gather feedback from users and experts. Testing was carried out twice: first for testing the user interface design prototype, and second for developing and testing the functional website design. These trials helped identify usability issues and improve the application's quality before its broader launch.

Data Validity and Reliability

To ensure the validity and reliability of the data, the authors performed data triangulation using various data sources and collection methods (Nightingale, 2009). Data validity was verified through participant checks, while reliability was ensured through consistency in data collection methods. Triangulation helps ensure that the collected data are accurate and representative.

RESEARCH RESULTS

Analysis of the Drug Procurement System

The analysis of the drug procurement system was conducted to address the issue of drug availability in health facilities. Based on in-depth interviews with various stakeholders, such as doctors, pharmaceutical staff, and health facility managers, several key points were identified that need to be considered in drug procurement. Weak collaboration among health facilities often leads to suboptimal use of available drugs. Some health facilities have surplus drug stocks, while others experience shortages.

According to Freeman and McVea (2001), effective collaboration among various stakeholders is crucial to ensure optimal resource utilization. In the context of drug procurement, weak collaboration can result in an imbalance in drug distribution, where some health facilities have surplus stocks while others face shortages. This not only disrupts drug availability for patients but also increases the risk of drug expiration in facilities with surplus stocks (Devnani & Gupta, 2010).

Interviews with pharmaceutical staff revealed that one of the main causes of stock imbalance is the lack of an integrated information system that allows for sharing drug stock information among health facilities. Additionally, health facility managers pointed out that complex and bureaucratic drug procurement procedures often slow down the ordering process, leading to long wait times to obtain the needed drugs. Previous studies also indicated that efficiency in drug supply chain management heavily relies on the ability to access real-time stock information and coordinate effectively (Badan Litbangkes, 2010).

Further analysis indicated an urgent need for a system that can integrate drug stock information from various health facilities into a single platform. This system should enable real-time stock monitoring and facilitate the quick and efficient exchange of drugs among facilities. The MELIASI application was developed in response to this need, aiming to enhance collaboration among health facilities and optimize drug distribution.

MELIASI Application Prototype

MELIASI, an acronym for Multiple Link Collaboration, is a solution-oriented approach to drug procurement aimed at ensuring drug availability for the JKN (National Health Insurance) program, based on stakeholder perspectives in hospitals. The MELIASI application is designed to optimize drug distribution by leveraging surplus stocks from other health facilities. This prototype aims to reduce the buffer time for obtaining drugs that are out of stock when ordered from suppliers, which often takes a long time.

The MELIASI application uses digital technology to integrate drug stock data from various health facilities into a single platform. This way, facilities experiencing drug shortages can quickly identify which facilities have surplus stocks and place orders immediately. Key features of this application include a real-time stock monitoring dashboard, automatic notifications for low-stock drugs, and an integrated ordering system (Creswell, 2013).

The implementation of the MELIASI application prototype involved several stages of development and testing. The initial stage involved collecting user needs through in-depth interviews and literature studies. The collected data were then used to design an intuitive user interface that meets user needs (Cooper, Reimann, & Cronin, 2007). After the design stage, the prototype was

tested by users, and the feedback received was used for improvements before the wide release of the application.

The testing results showed that the MELIASI application could significantly reduce the wait time for drug procurement, improve distribution efficiency, and ensure better drug availability across various health facilities. The application also facilitates better collaboration among health facilities, adhering to the principles of supply chain management and inter-agency collaboration (Freeman & McVea, 2001; Devnani & Gupta, 2010).

By integrating real-time drug stock information and providing a platform for drug exchange among health facilities, the MELIASI application offers an innovative solution to address drug shortages. Implementing this application is expected to enhance the efficiency and effectiveness of drug management and provide significant benefits to public health.

User Interface Design of the MELIASI Application

Below is the User Interface Design Prototype for the MELIASI website:

1. Login Page



Figure 1: Login Page

Each pharmacist operator using this application must register their institution to share medications with other registered institutions. This is done to ensure the quality of the medications can be accounted for.

2. Home Page

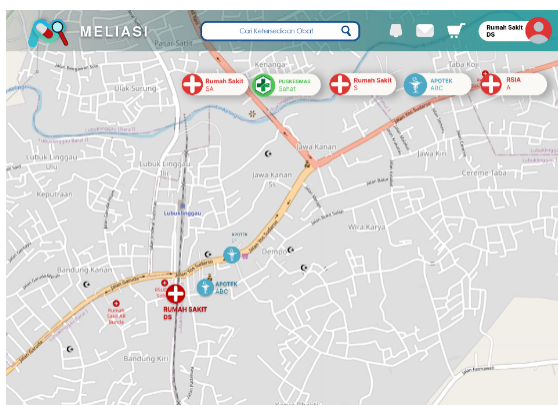


Figure 2: MELIASI Website Home Page

The Home Page displays geographic information to show nearby hospitals, enabling pharmacists to identify and select the geographically closest hospital. Below the

header, there is information about hospitals in a specific area for easier search.

3. Drug Availability Information

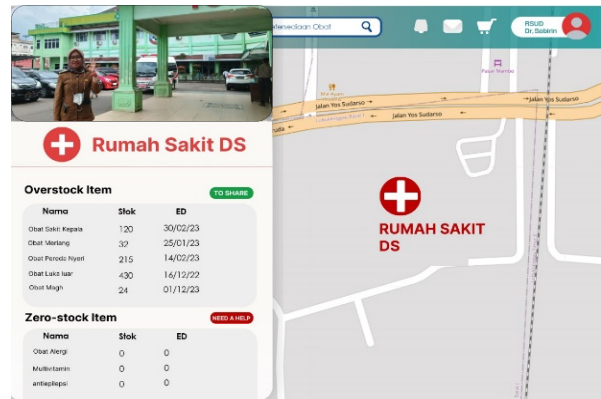


Figure 3: Drug Availability Information on the MELIASI Website

Drug availability information will appear when the icon on the hospital's name is clicked, displaying information about drugs that are out of stock and those that are available. Available drugs have a blue "Ask For Help" button and a red "Did You Need?" button.

4. "Ask For Help" Menu



Figure 4: Ask For Help Menu on the MELIASI Website

The Ask For Help menu allows users to select the required drugs by checking the needed drugs and filling in the required stock. Then, press the "Ask For Help" button to send the request message to the relevant hospital.

5. "Did You Need" Menu

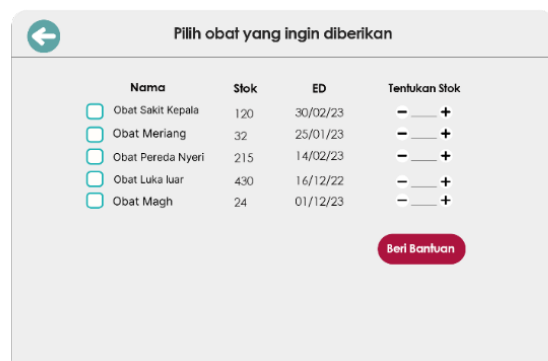


Figure 5: Did You Need Menu on the MELIASI Website

The Did You Need? menu allows users to select the drugs to be given as assistance by checking the drugs and filling in the stock to be provided. Then, press the "Give Help" button to send the help message to the relevant hospital.

6. Payment Menu



Figure 6: Payment Menu

If the help request mode is used, a payment menu will appear. This application supports various payment and delivery methods to suit different conditions and situations.

7. Manage Drug Stock Menu

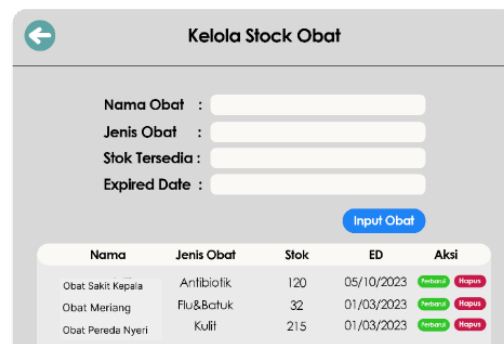


Figure 7: Manage Drug Stock Menu on the MELIASI Website

The Manage Drug Stock menu displays a form for inputting drug availability. The successfully input stock will be shown in a table at the bottom. There are "Update" buttons to update the available stock or "Delete" buttons if the drug is not available. The interface is still in prototype form as this Management Information System needs further development using specialized system development methods and real-world use case testing.

SWOT Analysis

Table 1: SWOT Analysis of the MELIASI Application

Strengths	Weaknesses	Opportunities	Threats
MELIASI as an accurate drug availability information system	Requires adequate internet connection	Reduces budget costs by purchasing alternative drugs	Drug availability data might not be updated
Addresses the issue of expired and damaged drugs	User proficiency in using the application	Enhances cooperation among health facilities	System stability during peak hours
Website accessibility anytime and anywhere	User interface language is still in Indonesian	Resolves drug stock shortages through collaboration	Order errors during simultaneous requests
Integrates information among health facilities	Payment for order services is still cash-based	Avoids long wait times from suppliers	Drug distribution using third parties

DISCUSSION

Efficiency of Drug Procurement

The results of the study show that the MELIASI application can significantly improve the efficiency of drug procurement in health facilities. Before the implementation of this application, the wait time for drug procurement was often long due to complex and bureaucratic ordering processes. With the MELIASI application, health facilities can monitor drug stocks in real-time and immediately identify which facilities have surplus stocks. This allows for faster drug ordering and significantly reduces wait times (Creswell, 2013).

According to interviews with pharmaceutical staff, one of the main advantages of the MELIASI application is its ability to reduce the wait time for drug procurement from an average of 7-14 days to just 2-3 days. This not only increases drug availability but also reduces the risk of drug shortages that could endanger patient health (Devnani & Gupta, 2010). Additionally, higher efficiency in drug procurement positively impacts operational costs, as

resource usage becomes more optimal and reduces the need for surplus stocks.

Collaboration Among Health Facilities

Collaboration among health facilities is key to the success of the MELIASI application. The study results indicate that before the implementation of this application, collaboration among health facilities was often weak, leading to imbalances in drug distribution. Some facilities had surplus drug stocks, while others experienced shortages. The MELIASI application allows health facilities to share drug stock information transparently and in real-time, facilitating efficient and effective drug exchanges (Freeman & McVea, 2001).

A concrete example from the interviews shows that after implementing the MELIASI application, one hospital in the study area was able to reduce its surplus drug stock by 30% by distributing the excess to other facilities in need. This demonstrates that the application not only improves drug procurement efficiency but also promotes more optimal resource utilization. Previous studies also support

the importance of collaboration and coordination among health facilities in drug supply chain management to ensure consistent drug availability (Badan Litbangkes, 2010).

Implementation of Digital Technology

The implementation of digital technology through the MELIASI application plays a crucial role in addressing drug shortages. With features such as a real-time stock monitoring dashboard, automatic notifications for low-stock drugs, and an integrated ordering system, this application provides innovative solutions utilizing the latest technology. Literature studies support that the use of information technology in supply chain management can significantly enhance the efficiency and effectiveness of drug distribution (Boell & Cecez-Kecmanovic, 2015).

Application testing results show that users find it easier and faster to manage their drug stocks. Feedback from users also indicates that the intuitive application interface makes it easier for them to navigate and use the available features. The development and testing process of the prototype, involving direct user input, ensures that the application meets their needs and can be successfully implemented (Cooper, Reimann, & Cronin, 2007).

Challenges and Solutions

Despite the many benefits of the MELIASI application, there are several challenges encountered during implementation. One of the main challenges is the need for a stable internet connection to ensure that stock data can be updated in real-time. Unstable internet connections can hinder stock monitoring and drug ordering processes, reducing the application's effectiveness. Additionally, user proficiency in using the application needs to be enhanced through adequate training. Some initial users of the application had difficulty understanding its features, affecting the speed and accuracy of its use. To address these challenges, the study recommends several solutions, including the development of better information technology infrastructure in health facilities and the implementation of ongoing training programs for pharmaceutical staff and health facility managers.

By overcoming these challenges, it is hoped that the MELIASI application can be implemented more effectively and provide greater benefits for drug management in health facilities. Ongoing training programs can also ensure that users stay up-to-date with new features and best practices in using the application (Nightingale, 2009).

Scientific Contribution

This study provides significant contributions to the field of drug procurement management and information systems management. The MELIASI application not only offers practical solutions to drug shortages but also enriches the literature on collaboration among health facilities and the use of digital technology in drug supply chain management. The model developed in this study can be applied in other regions to address similar issues and improve drug availability for the community. By integrating real-time drug stock information and providing a platform for drug exchanges among health facilities, the MELIASI application offers an innovative solution to address drug shortages. The implementation of this application is expected to enhance the efficiency and effectiveness of drug management and provide significant benefits to public health.

CONCLUSION

This study shows that the MELIASI application can effectively address drug shortages in health facilities. By using digital technology to integrate drug stock data from various health facilities into a single platform, the application enables real-time stock monitoring and facilitates quick and efficient drug exchanges among facilities. This reduces the wait time for drug procurement and ensures better drug availability for the community.

The MELIASI application also optimizes drug distribution by leveraging surplus stocks from other health facilities, reducing the wait time for drug procurement from an average of 7-14 days to just 2-3 days, and decreasing the risk of drug shortages that could endanger patient health. Higher efficiency in drug procurement positively impacts operational costs by optimizing resource use and reducing the need for surplus stocks.

Collaboration among health facilities is key to the success of the MELIASI application. The application allows health facilities to share drug stock information transparently and in real-time, facilitating efficient and effective drug exchanges. This improves drug procurement efficiency, promotes optimal resource use, and ensures more consistent drug availability across various health facilities.

The implementation of digital technology through the MELIASI application plays a crucial role in addressing drug shortages. Features such as real-time stock monitoring dashboards, automatic notifications for low-stock drugs, and integrated ordering systems provide innovative solutions utilizing the latest technology. Application testing shows that users find it easier and faster to manage their drug stocks, and the intuitive interface facilitates navigation and feature use.

Despite the many benefits of the MELIASI application, several challenges were encountered during implementation, such as the need for a stable internet connection and user proficiency in using the application. To overcome these challenges, better information technology infrastructure in health facilities and ongoing training programs for pharmaceutical staff and health facility managers are needed.

This study provides significant contributions to the field of drug procurement management and information systems management. The MELIASI application offers practical solutions to drug shortages and enriches the literature on collaboration among health facilities and the use of digital technology in drug supply chain management. The model developed can be applied in other regions to address similar issues and improve drug availability for the community, providing significant benefits to public health.

DECLARATION

Conflict of Interest Statement

The authors declare that there were no conflicts of interest during the conduct of this research.

Funding

None

Acknowledgments

The authors wish to thank all parties who have assisted and provided input and suggestions in writing this review.

Author Contributions

MNP designed and wrote the article, HN and M supervised the process of writing this article, JH contributed to the selection of design and research methods, identification of sources, direction of analysis, discussion, translation, and proofreading of this article, and provided the idea for the application as a solution to the research problems. All authors are responsible for the entire study process and agree with the final revisions for publication.

Author Biographies

Meliasi Nora Pratamarta, S. Farm., is a Master's student in Public Health at Dehasen University, Bengkulu.

Dr. Jon Hendri Nurdan, SE, M. Kes., is a lecturer in the Master's Program in Health at Dehasen University, Bengkulu, and serves at the Regional Development Planning Agency (BAPPEDA) of Bengkulu Province. He is also a practitioner and resource person for the convergence of stunting reduction acceleration in Bengkulu Province.

REFERENCES

- Ansoff, H. I., Avner, J., Brandenburg, R. G., Portner, F. E., & Radosevich, R. (1970). Does planning pay? The effect of planning on success of acquisitions in American firms. *Long Range Planning*, 3(2), 2–7. [https://doi.org/10.1016/0024-6301\(70\)90001-4](https://doi.org/10.1016/0024-6301(70)90001-4)
- Azrul, A., & Azwar. (2006). *Menjaga Mutu Pelayanan Kesehatan*. Pustaka Sinar Harapan.
- Badan Litbangkes. (2010). *Laporan Penelitian Ketersediaan Keterjangkauan dan Peresepan Obat Generik & Esensial*. Jakarta: Badan Penelitian dan Pengembangan Kesehatan.
- Badan Litbangkes. (2010). *Laporan Penelitian Ketersediaan, Keterjangkauan dan Peresepan Obat Generik & Esensial*.
- Boell, S. K., & Cecez-Kecmanovic, D. (2015). On being 'systematic' in literature reviews in IS. *Journal of Information Technology*, 30(2), 161–173.
- BPJS. (2021). *Peraturan BPJS Kesehatan Nomor 6 Tahun 2020 tentang Sistem Pencegahan Kecurangan Dalam Pelaksanaan Program Jaminan Kesehatan*. Jakarta: Badan Penyelenggara Jaminan Sosial Kesehatan.
- Cooper, A., Reimann, R., & Cronin, D. (2007). *About Face 3: The Essentials of Interaction Design*. John Wiley & Sons.
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE Publications.
- Departemen Kesehatan Republik Indonesia dan JICA. (2015). *Petunjuk Teknis Penggunaan Buku Kesehatan Ibu dan Anak tahun 2015*.
- Depkes RI. (2002). *Pedoman Supervisi Dan Evaluasi Ketersediaan Obat Publik Dan Perbekalan Kesehatan*.
- Devnani, R. N., & Gupta, A. K. (2010). ABC and VED Analysis of the Pharmacy Store of a Tertiary Care Teaching Research and Referral Healthcare Institute of India. *Journal of Young Pharmacists*, 2(2), 201–205. <https://doi.org/10.4103/0975-1483.63170>
- Djuna, S., M. A. Arifin, & Darmawansyah. (2014). *Studi Manajemen Pengelolaan Obat di Puskesmas Labakkang Kabupaten Pangkep*.
- Dunn, W. N. (1994). *Public Policy Analysis: An Introduction*, New Jersey: Pearson Education. Dalam Pengantar Analisis Kebijakan Publik. Gadjah Mada University Press.
- Febriawati, H. (2013b). *Manajemen Logistik Farmasi Rumah Sakit*. Gosyen Publishing.
- Freeman, R. E., & McVea, J. (2001). *A Stakeholder Approach to Strategic Management*. Darden Business School Working Paper No. 01-02.
- Freeman, R. E., & Sergiy Dmytriiev. (2017). Corporate social responsibility and stakeholder theory: Learning from each other. *Symphonya. Emerging Issues in Management*, 1, 7–15.
- Hardiyanti. (2018). *Manajemen Obat Di Instalasi Farmasi Rumah Sakit Umum Daerah Andi Makkasau Kota Pare [Skripsi]*. Fakultas Kesehatan Masyarakat Universitas Hasanudin.
- Hartono, P. J. (2007). *Analisis Proses Perencanaan Kebutuhan Obat Publik Untuk Pelayanan Kesehatan Dasar (PKD) di Puskesmas se-wilayah Kerja Dinas Kesehatan Kota Tasikmalaya [Tesis]*. Fakultas Kesehatan.
- Herdiansyah, & Haris. (2012). *Metodologi Penelitian Kualitatif Untuk Ilmu-Ilmu Sosial*. Salemba Humanika.
- Herlambang, S. (2013). *Pengantar Manajemen Cara Mudah Memahami Ilmu Manajemen*. Gosyen Publishing.
- Karyoto. (2016). *Dasar-dasar Manajemen*. Andi Yogyakarta.
- Kementerian Kesehatan RI. (2018). *Profil Kesehatan Indonesia 2017*.
- Kepmenkes. (2008). Kepmenkes Nomor 1121/MENKES/SK/XII/2008 tentang Pedoman Teknis Pengadaan Obat Publik dan Perbekalan Untuk Pelayanan Kesehatan Dasar. Khariza, H. A. (2015). Program Jaminan Kesehatan Nasional: Studi Deskriptif Tentang Faktor-Faktor Yang Mempengaruhi Keberhasilan Implementasi Program Jaminan Kesehatan Nasional Di Rumah Sakit Jiwa Menur Surabaya. *Jurnal Kebijakan Manajemen Publik*, 3(1), 1–2.
- Komisi, * Wakil Ketua, & DPR RI Tahun, I. X. (2009). HADIRNYA NEGARA DI TENGAH RAKYATNYA PASCA LAHIRNYA UNDANG-UNDANG NOMOR 24 TAHUN 2011 TENTANG BADAN PENYELENGGARA JAMINAN SOSIAL (THE PRESENCE OF THE STATE AMONG PEOPLE AFTER THE DECLARATION OF LAW NUMBER 24 YEAR 2011 CONCERNING SOCIAL SECURITY ADMINISTERING AGENCY).
- Kunto, W. (2004). *Analisis Hubungan Persepsi Pasien Terhadap Mutu Pelayanan Dengan Minat Pemanfaatan Ulang Pelayanan Unit Rawat Inap Umum Di Rumah Sakit Kusta Kelet Jepara*.
- Kuswarno, & Engkus. (2009). *Fenomenologi*. Widya Padjadjaran.
- Lexy J. Moleong. (2018). *Metodologi Penelitian Kualitatif (Rev 1)*.

- Mangindara, Darmawansyah, Nurhayani, & Balqis. (2011). ANALISIS PENGELOLAAN OBAT DI PUSKESMAS KAMPALA KECAMATAN SINJAI TIMUR KABUPATEN SINJAI TAHUN 2011.
- Moleong, & Lexy J. (2007). Metodologi Penelitian Kualitatif (Edisi Revisi). PT Remaja Rosdakarya.
- Nightingale, A. (2009). Triangulation. In *International Encyclopedia of Human Geography* (pp. 489-492). Elsevier. <https://doi.org/10.1016/B978-008044910-4.00552-6>
- R. Wijayanti, & Agus P. (2018). Pengaruh Gaya Kepemimpinan Transformasional, Kompensasi, dan Komunikasi Terhadap Kinerja Karyawan. *Jurnal of Economic, Management, Accounting and Technology*, 1(1), 14-21.
- RS. (2021). Profil Rumah Sakit Dr Sobirin Kabupaten Musi Rawas.
- Sabrina, Q. (2015). Studi Deskriptif Tentang Pelaksanaan Program Jaminan Kesehatan Nasional (JKN) Dalam Peningkatan Kualitas Pelayanan Kesehatan Di Rsu Haji Surabaya [Doctoral dissertation]. UNIVERSITAS AIRLANGGA.
- Saffer, D. (2010). *Designing for Interaction: Creating Innovative Applications and Devices*. New Riders.
- Sakti, R. (2007). *Sistem Informasi Manajemen*. Jakarta: Gramedia Pustaka Utama.
- Satibi. (2017). Manajemen Obat di Rumah Sakit.
- Stickdorn, M., Schneider, J., Andrews, K., & Lawrence, A. (2011). *This is Service Design Thinking: Basics, Tools, Cases*. Wiley.
- Sugiyono. (2007). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Suryagama, D., S. S. (2019). Analisis Perencanaan dan Ketersediaan Obat di A Chariri, & Imam Ghozal. (2007). Teori Akuntansi. Badan Penerbit Universitas Diponegoro.
- Tachjan. (2006). Implementasi Kebijakan Publik. AIPI.
- UU No.44. (2009). Tentang RUMAH SAKIT.
- von Eckartsberg, R. (1998). Existential-Phenomenological Research. Dalam *Phenomenological Inquiry in Psychology* (hlm. 21-61). Springer US. https://doi.org/10.1007/978-1-4899-0125-5_2