



The Role of Nurses in the Management of Pharmaceutical Supplies on Emergency Trolleys in the Palangka Raya City Region Hospital in 2024

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ABSTRACT

Hospital Pharmaceutical Services require a good pharmaceutical supply management system in order to provide the best service for patients. Pharmaceutical services require adequate pharmaceutical supply support such as drugs, medicinal materials, medical devices, reagents, pharmaceutical radios and medical gases as well as Consumable Medical Materials (BMHP). In addition, the Hospital also implements the Regulation of the Minister of Health of the Republic of Indonesia Number 47 of 2018 concerning Emergency Services for services to patients in emergency conditions. The regulation requires the role of all parties such as pharmacists, medical parties such as doctors and nurses. Nurses have a role in health services for patients in accordance with Law 38 of 2014 concerning nursing. The purpose of this study is to conduct a descriptive assessment related to the role of nurses in the management of pharmaceutical supplies in the emergency trolley of hospitals in the Palangka Raya city area in 2024. This research was carried out by making a questionnaire measuring tool that was in accordance with the data of the research variables. The research questionnaire measuring tool will be distributed to nurses in hospitals in the Palangka Raya city area, and in accordance with the inclusion criteria. All respondents' answers will be grouped and processed. The results of the processing of respondents' answer data will be included in the table of descriptive criteria for percentages that have been made, so that conclusions can be drawn. This study obtained the results of the final average value, namely the knowledge aspect of 23.44 points (73.26%), the aspect of administering drugs from the Emergency Trolley of 17.37 points (91.41%), the aspect of procedures and management of drugs in the Emergency Trolley of 25.13 points (86.64), the aspect of drug documentation in the Emergency Trolley of 3.48 points (87.03%), the aspect of training on drugs available in the Emergency Trolley of 10.34 points (60.83%) and the aspect of managing expired or damaged drugs of 3.16 points (79.11%). The results of this study found that nurses have a role in the management of pharmaceutical supplies on the Emergency Trolley in good criteria with a scale of 78.98%..

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INTRODUCTION

Pharmaceutical service is a direct and responsible service to patients related to pharmaceutical preparations with the intention of achieving definite results to improve the quality of life of patients (Menteri Kesehatan Republik Indonesia, 2016). These services need to be supported by a good pharmaceutical supply management system in order to provide the best benefits for the community. Pharmaceutical supplies include drugs, medicinal materials, medical devices, reagents, radio pharmaceuticals and medical gases (Menteri Kesehatan Republik Indonesia, 2004). The management of pharmaceutical supplies and Medical Consumables (BMHP) has been regulated in the technical guidelines for pharmaceutical service standards in hospitals in 2019. The technical guidelines state that the management of pharmaceutical supplies and BMHP must be carried out in a multidisciplinary, coordinated manner and use effective processes to ensure quality control and cost control (Menteri Kesehatan Republik Indonesia, 2016). The coordination and multidisciplinary aspects are the basis for reference that the management of pharmaceutical supplies is closely related to other health workers. Pharmaceutical supplies require coordination with other health workers. This is in accordance with the regulations stipulated in the Regulation of the Minister of Health of the Republic of Indonesia Number 47 of 2018 concerning Emergency Services. The regulation states that emergency conditions require coordination between health workers, namely doctors, dentists, nurses, and other health workers, and if necessary non-health workers (Menteri Kesehatan Republik Indonesia, 2018). This coordination must be done well so that it does not become a problem in guaranteeing health services, including in emergency conditions.

One of the health services in emergency conditions is the guaranteed management of emergency equipment (trolley) in the hospital. There are research cases in hospitals related to the management of emergency kits (trolleys). One of them is the Management of Emergency Kit (Trolley) at the Regional General Hospital (RSUD) dr. Hasri Ainun Habibie. The management of the hospital's emergency kit is still not optimal, one of which is caused by the aspect of recording and reporting emergency kits that is not fully good. This is because the performance of the hospital pharmacy staff has not been maximized due to excessive workload, regulations and strict supervision of all aspects of the management of emergency pharmaceutical supplies such as trolley emergency kits, request procedures and replacement of supplies that have not been standardized (Abdulkadir et al., 2021). Therefore, coordination of all parties in the management of trolley emergency kits needs to be carried out in a disciplined, standardized and synergistic manner in order to overcome these problems so that health services can continue and improve quality.

Nurses themselves have a role in managing the emergency trolley available in the patient care room. This is in accordance with several examples of the application of the role of nurses, namely the emergency medicine guide by the Sumberejo general hospital in 2022 and the Standard Operating Procedures (SPO) of Dr. M. Zein Painan Hospital Number 012/SPO-RSUD/ 07/I/2019 dated January 4, 2019. The SPO states that "health workers (including nurses and doctors) who use drugs, must record the amount used, the patient's name, the name of the doctor who instructed, the date of use and the officer's signature on the usage sheet and emergency trolley turnover". Meanwhile, the guideline is addressed to those who need medicines in the emergency trolley available (RSUD Dr. M. Zein Painan, 2019; RSUD Sumberrejo, 2022). It is intended that the action of using emergency trolley drugs can be used in a disciplined and guaranteed manner. Therefore, the role of nurses is very important in the management of emergency trolleys available in hospital patient care rooms. The problem to be studied is how the

role of nurses in the management of pharmaceutical supplies on emergency trolleys in Palangka Raya city hospitals in 2024. The purpose of this study was to determine the role of nurses in the management of pharmaceutical supplies on emergency trolleys in Palangka Raya city hospitals in 2024.

METHODS

This research is a descriptive qualitative study with primary data collection using a questionnaire tailored to the research variable data. The questionnaire is equipped with a respondent's consent sheet. Respondents of this study were nurses who were in the Palangka Raya city hospital in 2024. This research instrument is a questionnaire made in accordance with the respondent. The questionnaire was used to collect data from patients, and to measure knowledge, and compliance related to the management of pharmaceutical supplies carried out. The questionnaire can be distributed through the Google-form feature and can be distributed to respondents.

This study has exclusion and inclusion criteria for respondents who take part in this study. Inclusion criteria for this study are nurses, currently or have worked in a hospital health facility, and are willing to fill out the questionnaire. The exclusion criteria for this study are not nurses, have not or do not work in hospital health facilities, and or are not willing to fill out the questionnaire. Respondents will be included in the study if they meet all inclusion criteria and none of the exclusion criteria. The place of research is in hospitals in the Central Kalimantan region, especially Palangkaraya City, with the total duration of this study is January to December 2024.

This research data analysis is a descriptive percentage analysis method. This method is used to determine the role of nurses in managing emergency trolley in hospitals. The results of the percentage analysis will be interpreted in the descriptive percentage criteria table. The descriptive criteria for the percentage of the nurse's role can be seen in table 1.

Table 1. Percentage Descriptive Criteria

| Interval Persentase (%) | Assessment criteria |
|-------------------------|---------------------|
| 80-100 | Very Good |
| 66-79 | Good |
| 56-65 | Average |
| 40-55 | Deficient |
| ≤40 | Unsufficient |

RESULTS AND DISCUSSION

This study is aresearch with a novice research scheme involving nurses in the management of emergency drugs on the emergency trolley in the hospital. This study used a survey research questionnaire made by the researcher. This study has exclusion and inclusion criteria for respondents who take part in this study. Inclusion criteria of this study are nurses, currently or have worked in hospital health facilities, and are willing to fill out the questionnaire. The exclusion criteria for this study are not nurses, have not or do not work in hospital health facilities, and or are not willing to fill out the questionnaire. Respondents will be included in the study if they meet all inclusion criteria and none of the exclusion criteria. This study uses this research instrument, namely a survey questionnaire made according to the respondents.

This survey questionnaire covers aspects of Trolley Emergency knowledge, procedures for drug administration in Trolley Emergency, procedures and management of drugs in Trolley Emergency, drug-related training in Trolley Emergency, and Trolley Emergency documentation. In addition to the survey section, the questionnaire also contained questions relating to general information related to the drugs in the Trolley Emergency. The questionnaire was distributed through a questionnaire sheet or Google-form feature to respondents. The questionnaire had an informed consent section and research questionnaire items. The research questionnaire form and the informed consent section can be accessed through the following links <https://forms.gle/xnY2rP1PZENuphvp6>.

Survey method research is a study that can use a variety of instruments such as questionnaires, interviews, and observations. Survey method research can provide convenience for researchers to obtain information and research data that is shorter, representative and valid in accordance with conditions in the field. Survey method research is suitable for social research or concerns many people. This is in accordance with previous research which states that the depiction of social phenomena is obtained 75% accuracy with limited depth of information 20%. Therefore, survey research is suitable for efficient data collection with limitations in extracting more detailed information (Kurniawati & Rindrayani, 2025). Social research is a broad and complex field of research that focuses on understanding human behavior and social structures. Using a variety of methodologies and approaches, it aims to collect and analyze data about societies, groups and individuals. Social research aims for researchers to understand, explain, and predict human behavior and the social dynamics that surround it. In addition, social research aims to obtain information to solve social problems, inform public policy, and improve understanding of the society within the scope of the research (Husein et al., 2024).

This study was conducted in several hospitals in Palangka Raya city involving all nurses related to Trolley Emergency. Respondents of this study are nurses who are very closely adjacent to the Emergency Trolley on the hospital ward. One example of a patient care ward room that has an Emergency Trolley is the Emergency Room (Emergency Room Installation), and ICU (Intensive Care Unit). It is appropriate because the level of unexpected and dangerous events for patients, often occurs in the treatment ward. In addition, the existence of Trolley emergency becomes a very important item in order to save the lives of patients and help maximize the therapy provided.

Few hospitals have an emergency Trolley in the surgical room or operating room. This is because the availability of Trolley Emergency aims to help the handling of patients who experience worsening conditions during the surgical process and does not allow to get out of the room. A hospital needs to procure an emergency trolley containing pharmaceutical emergency preparations by considering aspects of speed in emergency conditions and safety aspects in storage because it is stored outside the pharmaceutical installation. Therefore procurement and management in emergency facilities are very important in hospitals (Cahyani et al., 2024). In addition, nurses have a role as a professional provider of nursing services, initial clinical decision makers, patient protectors or client advocates, patient case managers, rehabilitators, providers of comfort for the patient's healing process, communicators, instructors and as educators (Menteri Kesehatan Republik Indonesia, 2016).

Emergency trolley is a medicine trolley with the aim of saving the patient's life or lifesaving so that the management of emergency Trolley Emergency is important for emergencies, sudden worsening of the patient's clinical condition, risk of death, or causing long-term health so that

immediate intervention or other special measures are needed. Trolley Emergency management accuracy can improve the quality of health services, especially in emergency services and prevention of adverse events to patients in medical services in hospitals (Menteri Kesehatan Republik Indonesia, 2004). Trolley Emergency also requires the responsibility of a nurse in its management. This is because nurses are responsible for ensuring patient safety in all situations and including emergency situations. From this responsibility, nurses can play a role in the aspects of checking and readiness of the Emergency Trolley, communicative and coordinating attitudes and fast-acting attitudes in patient safety.

Some hospitals have management and logistics flow for the use of emergency drugs or BMHP stored in the emergency room trolley. When an emergency event occurs, the room nurse will unlock the disposable seal with the register number on the emergency trolley by cutting it with scissors or other cutting tools. After that, the nurse takes the medicine or emergency BMHP that is needed immediately for handling the patient's emergency. When the patient has passed the emergency treatment period, the room nurse must report and record the use of emergency drugs or BMHP that have been used to the nursing team which will be forwarded to the hospital pharmacy installation.

Furthermore, the process of replacing emergency pharmaceutical supplies needs to be done as soon as possible to prevent emergencies from occurring at other times. Hospital pharmacy installation officers obtain reports on the use of emergency stock through prescription letters or emergency BMHP, emergency trolley records or drug floor stock mechanisms. Then, IFRS officers will prepare emergency drugs that have been used according to the reporting data or records and secure the emergency trolley with a seal or lock that is safe, suitable for use and can be accessed in emergency conditions (Cahyani et al., 2024).

Research on the role of nurses on drugs on the Emergency Trolley has the results of survey observations conducted in several hospitals in the city of Palangka Raya in 2024 with 79 respondents who fit the research inclusion criteria. The results of this study can be seen in Table 1 about the results of the study. This study has a total score of 105 points. From the knowledge aspect, the questionnaire has 8 questions with an average point value per question of 2.93 points. The total points of aspect A on the knowledge aspect were 1852 points with an average total points/respondent of 23.44 points (73.26%). The purpose of the knowledge aspect of this study is the accuracy and safety of drug administration is part of the nurse's responsibility.

The accuracy and safety of drugs must be mastered by nurses because it is related to how drugs work and the side effects of drugs, administering drugs, monitoring patient responses after being given drugs and helping patients recover (Menteri Kesehatan Republik Indonesia, 2016). The results of the knowledge aspect get the highest total score on questions related to the route of administration of emergency drugs in the Emergency Trolley. The lowest score in the knowledge aspect is a question related to the source of nurses' knowledge about the indications of drugs available on the Emergency Trolley. This is because the source of the nurse's knowledge is based on experience working with emergency trolley drugs and literature from written guidelines. However, these results are in accordance with the principles of education, namely the level of education, work experience, and periodic formal training, so that these principles affect the level of knowledge of a nurse (Menteri Kesehatan Republik Indonesia, 2016).

Table 2. Results of Survey Responses on the Role of Nurses in Emergency Medicine on the Emergency Trolley

| Information (79 Respondents) | A (8 Question) | B (4 Question) | C (7 Question) | D (1 Question) | E (4 Question) | F (1 Question) | Total |
|--|-------------------|-------------------|-------------------|-------------------|-----------------------|-------------------|----------|
| Number of Points | 1852 | 1372 | 1985 | 275 | 817 | 250 | 6551 |
| Average Number of Points/Respondents | 23.44 | 17.37 | 25.13 | 3.48 | 10.34 | 3.16 | - |
| Maximum Number of Points | 32 | 19 | 29 | 4 | 17 | 4 | 105 |
| Percentage of Total Points/Respondents | 73.26% | 91.41% | 86.64% | 87.03% | 60.83% | 79.11% | - |
| Average Points/Questions | 2.93 | 4.34 | 3.59 | 3.48 | 2.59 | 3.16 | - |
| | | | | Maximum Points | Number of Respondents | | Total |
| Maximum Total Points for All Respondents | | | 105 | | 79 | | 8295 |
| | | | | | | | TOTAL |
| The Value of the Role of Nurses in Drug Management in Emergency Trolleys | | | | | | | 0.789753 |
| Percentage of Nurses' Role in Drug Management in Emergency Trolleys | | | | | | | 78.98% |

The aspect of Trolley Emergency drug administration procedures or aspect B received a total of 1374 points with the average number of points per respondent being 17.37 points (91.37%). The purpose of this aspect is to determine the role of nurses in drug administration procedures before being given to patients. Respondents' answers obtained a high response because nurses already have the right procedures in administering emergency drugs to patients. The highest score in this aspect is the question related to the responsibility of checking the medicine on the emergency trolley carried out by the pharmacist, before the Emergency Trolley is opened and used. The lowest value of this aspect is on questions related to nurses' knowledge regarding the condition of the emergency trolley that has been checked or has not been checked. In general, respondents answered that it was because there was a special sign on the Emergency trolley or the Trolley inspection logbook system. Others, respondents answered that there was a notification of information from the Trolley Emergency examiner to the nurse on duty after the inspection process was completed. Emergency Trolley special sign can be in the form of cable ties, seals or safety locks on the physical part of the Emergency Trolley. With this special sign, Trolley emergency becomes safe and avoid unwise actions such as damage and loss in emergency conditions (Nandha et al., 2023).

Another study suggested that the maximum time for changing and sealing emergency trolleys should not exceed 12 hours and is still under the responsibility of the nurse until all changes of drugs or BMHP have been replaced and sealed by the hospital's pharmaceutical installation (Candradewi, 2019). This is in accordance with other research which states that the Emergency Trolley must have a security lock that works well and accompanied by the Trolley Emergency inspection document, so that when used the contents of the Emergency Trolley are always complete and ready to use (Abdulkadir et al., 2021). This is in accordance with other research which states that the Emergency Trolley must have a security lock that works well and accompanied by the Trolley Emergency inspection document, so that when used the contents of the Emergency Trolley are always complete and ready to use (Menteri Kesehatan Republik Indonesia, 2018).

Aspect C or the Emergency Trolley drug management procedure aspect received a total of 1985 points with an average number of points of 25.13 points (86.64%) per respondent. The purpose of this aspect is to determine the management of drugs when they are about to be used

by nurses. The highest score in this aspect is about the recording of drugs in the Emergency Trolley carried out by nurses. While the lowest value is related to the nurse's immediate attitude in overcoming the situation of drug side effects related to emergency medicine. This is in accordance with the role of nurses, which is to monitor every effect of the drug after its administration, so that nurses can take preventive or immediate action so that it is not dangerous for patients (Abdulkadir et al., 2021). The majority of respondents answered that if side effects of drugs occur, they must inform the doctor in order to get action related to patient safety. It is recommended that nurses immediately stop the administration of drugs suspected of being associated with side effects, take anticipatory action and document it with the doctor. Another study mentioned that nursing groups need to improve their knowledge related to monitoring patient side effects. Therefore, training and observation of patients need to be honed and learned (Jannah et al., 2024).

Adverse drug events have several factors, namely patient factors and drug factors. Patient factors include age, genetic factors, and the patient's medical history. Intrinsic drug factors are the properties or potential of drugs to cause side effects such as drug selection, duration of drug use, and interactions between drugs. Some side effects of drugs are palpitations, abdominal pain, nausea, headache, weakness, and others. Based on the principles of pharmacotherapy, the rational management of side effects is based on the symptoms and signs of the disease, the diagnosis of the disease, the therapy used, the drug product, and the monitoring and evaluation of the treatment response. In addition, there are other principles related to the handling of side effects, namely the right indication, the right patient, the right drug, the right dose and side effect alert. Side effects of drugs are unwanted effects of drugs as disease therapy, but some side effects can still be used as the main purpose or harm the patient's condition (Bone & Usiono, 2023).

Next is aspect D or the documentation aspect which gets a total of 275 points with an average score of 3.48 points (87.03%). The purpose of this aspect is to determine the recording or documentation actions related to drug management in the Emergency Trolley. With the average number of points obtained, these results illustrate that respondents have compliance to document all activities related to emergency medicine on the Emergency Trolley. This is in accordance with the responsibility of nurses to carry out monitoring in a swift and continuous manner.

In the emergency department, nurses must fulfill the documentation of nursing services provided to patients in emergency conditions. There are individual factors and other factors that can influence nurses to complete all nursing service documentation in emergency situations. The individual factors are age, gender, education level, length of service, training on nursing documentation, and knowledge. Other factors are psychological factors of nurses and organizational system factors in the workplace such as work culture, appreciation, format facilities and workload of the nurse. The nurse's workload factor is the most influential factor on the completeness of documentation for the quality of nurse services. Workload describes nursing services provided by nurses with full responsibility (Andri et al., 2015). Therefore, there is a need for a performance system that is able to optimally manage nurses' workload and ensure the quality of service documentation provided, including documentation in emergency conditions.

Next is aspect E or the aspect of training related to emergency medicine on the Emergency Trolley. This aspect gets a total of 817 points with an average number of points is 10.34 points (60.83%). This aspect gets the lowest score compared to other aspects. This is because many respondents who answered related to the absence of special training related to emergency drugs on the Emergency Trolley and the frequency of such training in order to keep updated

information related to emergency drugs on the Emergency Trolley. Therefore, nurses must continue to update information related to emergency drugs or for nurses who still need more experience should get the training in order to gain new skills and knowledge. Not only new information, but also can increase the role of nurses in managing emergency trolleys in emergency services. this is in accordance with other studies which state that training in the management of emergency trolleys and emergency drugs to nurses on a regular basis can increase the role of nurses in managing and monitoring emergency drugs in emergency trolleys. in addition to training, a good communication system between nurses and the hospital pharmacy installation is also needed (Candradewi, 2019).

The last aspect is aspect F or the aspect of managing damaged or expired emergency medicine stocks in the Emergency Trolley. This aspect received a total of 250 points with an average number of points of 3.16 points (79.11%). These results show that nurses have a good role in managing damaged or expired drug stocks. All aspects of this research received a total of 6551 points (78.98%), with a maximum number of points that can be obtained of 8295 points. From these data, the results of this study are included in the assessment criteria that fall into the good category. These results can be input for nurses and related parties to continue to learn and develop to improve the quality of emergency medicine management on the Emergency Trolley.

CONCLUSION

The results of research on the Role of Nurses in the Management of Pharmaceutical Supplies on the Emergency Trolley at the Palangka Raya City Region Hospital in 2024, obtained conclusions that meet the good criteria. This shows that nurses have adequate competence in ensuring the availability, arrangement, and monitoring of pharmaceutical supplies on the emergency trolley, thus supporting optimal health service readiness in the hospital.

REFERENCES

- Abdulkadir, W., Tuloli, T. S., & Pakaya, A. (2021). Gambaran Pengelolaan Emergency Kit (Trolley) Di Rumah Sakit Umum Daerah (RSUD) dr. Hasri Ainun Habibie Kabupaten Gorontalo. *Indonesian Journal of Pharmaceutical Education*, 1(1), 47–56. <https://doi.org/10.37311/ijpe.v1i1.10122>
- Andri, F., Indra, R., & Susmarini, D. (2015). Analisis Faktor- Faktor yang Mempengaruhi Perawat Dalam Memenuhi kelengkapan Dokumentasi Keperawatan di IGD Rumah Sakit Wilayah Pontianak Kalimantan Barat. *Jurnal Medika Respati*, X, 49–60.
- Bone, N. R., & Usiono. (2023). Systematic Literature Review : Efek Samping Obat Pada Kesehatan Tubuh. *Jurnal Pendidikan Tambusai*, 7(3), 31030–31034.
- Cahyani, R., Rooswita, P. A., & Zazuli, Z. (2024). Gambaran dan Kesesuaian Pengelolaan Emergency trolley di Rumah Sakit Umum Daerah Pringsewu Lampung An Overview and Appropriateness of Emergency trolley Management at Pringsewu Regional General Hospital Lampung PHARMACY : Jurnal Farmasi Indonesia. *PHARMACY: Jurnal Farmasi Indonesia*, 21(02), 75–80.
- Candradewi, S. (2019). *Distribusi Dan Penyimpanan Obat Dalam Troli Emergensi Rawat Inap Di Rumah Sakit X*. Universitas Brawijaya.
- Husein, M. N., Herman, L. O., & Ibrahim, C. (2024). Pengantar Penelitian Sosial. In *PT. Literasi Nusantara Abadi Grup*.
- Jannah, M., Sari, Y., & Almasdy, D. (2024). Study Of the Adverse Drug Reaction (ADR) On Geriatric Patients in Internal Medicine Inpatient at A Private Hospital in Bukittinggi City,

- West Sumatera. *Jurnal Farmasimed (Jfm)*, 6(2), 178–185.
<https://doi.org/10.35451/jfm.v6i2.2142>
- Kurniawati, E., & Rindrayani, S. R. (2025). Pendekatan Kuantitatif dengan Penelitian Survei : Studi Kasus dan Implikasinya. *Sosial: Jurnal Ilmiah Pendidikan IPS*, 3(1), 65–69.
<https://doi.org/https://doi.org/10.62383/sosial.v3i1.596>
- Menteri Kesehatan Republik Indonesia. (2004). *Keputusan Menteri Kesehatan RI No 1197/MENKES/SK/X/2004 Tentang Standar Pelayanan Farmasi di Rumah Sakit* (pp. 14–15).
- Menteri Kesehatan Republik Indonesia. (2016). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 72 Tahun 2016 Tentang Standar Pelayanan Kefarmasian Di Rumah Sakit*.
- Menteri Kesehatan Republik Indonesia. (2018). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 47 Tahun 2018 Tentang Pelayanan Kegawatdaruratan*.
- Nandha, Helsawati, Fridewini, A., Rahmi, N., Sari, O. M., Sandi, D. A. D., Jenah, R. A., & Hafizah, N. (2023). Pelaksanaan Pengelolaan Troli Emergensi di Ruang Rawat Inap Salah Satu Rumah Sakit di Kalimantan Selatan. *Jurnal Inovasi Farmasi Indonesia*, 4(2), 88–97.
<https://doi.org/10.30737/jafi.v4i2.4607>
- RSUD Dr. M. Zein Painan. (2019). Standar Prosedur Operasional (SPO) Pengelolaan Obat Emergensi RSUD Dr. M. Zein Painan. In *RSUD Dr. Zein Painan*.
- RSUD Sumberrejo. (2022). *Panduan Obat Emergency*. Rumah Sakit Umum Daerah Sumberrejo.