

ANALYSIS OF PROBLEMS IN THE FRAMEWORK OF THE DEVELOPMENT OF MEDICAL RECORD CONTROL SYSTEMS

Yunita Fitri Widiyawati, Hosizah Markam, Rina Mutiara

Master of Hospital Administration, Universitas Esa Unggul, Jakarta, Indonesia

Email: yunitafitri.widiyawaty@gmail.com, hozisah@esaunggul.ac.id,

rina.mutiara@esaunggul.ac.id

Keywords:

Return; Control; Development and Medical Records.

ABSTRACT

The number of delays in the cause of inpatient medical records in Indonesia is still high, in the range of 45.45% - 100%. Where the highest delay in return is caused by incompleteness in filling out the medical resume, this can potentially cause losses to the hospital due to delayed claim collection. This study aims to analyze the causes of the problem to develop an inpatient medical record control system model using the waterfall model method, including Requirements, Analysis, and Design at Aqidah Hospital, Tangerang City. This case study uses a qualitative approach with in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review of inpatient medical records for October – December 2021. The results showed that the delay in returning inpatient medical records in 2019 was 185 out of 280 (66.10%). In 2020 as many as 280 out of 410 (68.29%), and in 2021 as many as 228 out of 320 (71.25%).) thus, the highest percentage of delays in returning inpatient medical records will occur in 2021. While the writing of the primary diagnosis only reached the percentage of 1.25%, and the secondary diagnosis only reached 0.93%. For this reason, the researcher proposes a solution to the problem of delaying the return of medical records at Aqidah Hospital to develop a medical record control system model to improve the medical record management process.

Info Artikel

Artikel masuk, Direvisi 02 February 2023, Diterima 09 February 2023

Introduction

Medical records as a source of information require professional management to meet the needs of various aspects, including administration, law, finance, research, education, documentation, and public health. Medical record data processing produces health information through collecting, integrating, and analyzing primary and secondary health service data and presenting and disseminating useful information for planning and decision-making. Therefore, the Medical Record and Health Information service needs to be managed by someone competent and has the authority under applicable laws and regulations (Trisetyawan & Eryani, 2020).

How to cite:

Yunita Fitri Widiyawati, Hosizah Markam, Rina Mutiara, (2023). Analysis of Problems in The Framework of Development of Medical Record Control Systems, *Jurnal Health Sains*, 4(2). <https://doi.org/10.46799/jhs.v4i2.844>

E-ISSN:

2722-5356

Published by:

Ridwan Institute

Inpatient Medical Records must be kept for at least five years from the last date the patient was treated or discharged. After a limit of 5 years, medical records can be destroyed, except for a discharge summary and approval of medical action. Discharge summary and approval for medical treatment must be kept for ten years from the date the summary was made (Dwi, 2022).

Medical records must be returned on time. The more medical records that are returned on time, the faster the processing and reporting of medical records will be. Conversely, if many medical records are not returned on time, there will be a buildup of medical records in the processing and reporting section, so the officers' workload will increase. There is a time limit set for the return of medical records by the requesting individual, preferably at the end of the working day. Medical records of discharged patients must be sent to the medical record installation the day after the patient returns home. Medical record officers must follow up on service units that do not return medical records within the specified time (Adebayo, 2019).

Aqidah Hospital, which is located at Jalan Raden Fatah Jombang Raya No. 40 Parung Serab, Ciledug, Tangerang – Banten 15153, Aqidah Hospital was established on December 10, 2005, the forerunner of the Aqidah Hospital starting with the Mother and Child Hospital, and overtime on December 9, 2016, it became Aqidah General Hospital Type Class C, with a total bed capacity of almost 100.

The results of interviews and initial observations of researchers in May 2022, it is known that in 2021 the delay in returning inpatient medical records was 228 BRM (Medical Record Files) from a total of 320 BRM (Medical Record Files) (71.25%), while medical records outpatients as many as 14 BRM (Medical Record Files) out of a total of 210 BRM (Medical Record Files) (6.67%).

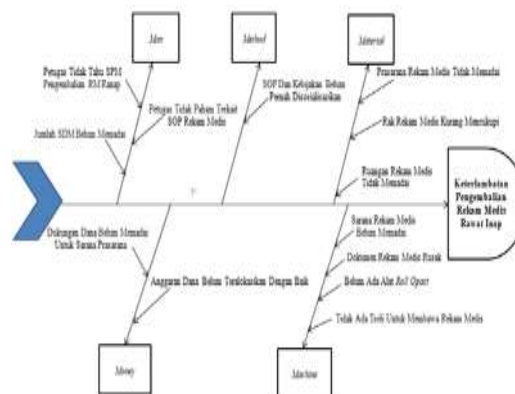
The main problem in the delay in returning inpatient medical records at the Aqidah Hospital in Tangerang City for the 2022 period is the need for a hospital information system (SIRS) in returning medical records. The problem with the performance of doctors and nurses based on initial observations at Aqidah Hospital shows that there are still problems regarding incompleteness in filling out inpatient medical resumes or CPPT (Integrated Patient Progress Records) (Haqqi et al., 2020). Officers need to learn the minimum service standards (SPM) regarding the return of inpatient medical records. Officers need to understand the SOP and policies regarding the return of inpatient medical records. Then there are other problems with inadequate facilities and infrastructure because financial support needs to be allocated properly. The system for returning inpatient medical records still uses a manual system using a medical record return expedition book. The problem of inaccuracy in returning medical records can lead to delays in the BPJS claim process, internal and external hospital reporting processes, and delays in providing medical records when patients control post-treatment (Hikmah et al., 2019).

Based on the background description at the Aqidah Hospital, Tangerang City, an information system for returning inpatient medical records is needed that can be used to help facilitate the entry and exit of inpatient medical record documents and reduce the

risk of difficulty in finding medical records. The medical record return system can be perfected by implementing computer technology by developing an integrated information system model to make it easier and faster for officers to find and provide medical records for services so that researchers take the title "Analysis of Causes of Problems in the Framework of Developing a Model for Outpatient Medical Record Control Systems. Stay at Aqidah Hospital, Tangerang City". In making this control system using the waterfall model software development method. The method was chosen because it suits the needs and is easy to implement (Simarmata et al., 2021).

Based on the description above, the researcher is interested in analyzing the causes of the problem in order to develop a model of an inpatient medical record control system at Aqidah Hospital, with the title "Analysis of the Causes of Problems in the Framework of Developing a Model of Inpatient Medical Record Control System at Aqidah Hospital, Tangerang City".

Figure 1. Fishbone Theory Framework



Method

This type of research is qualitative and case study research design. This research was conducted through in-depth interviews, FGD, document review and observation. Qualitative studies are scientific activities using a conscious and controlled procedure (Afrizal & Yulistiyanti, 2015).

This study uses deductive analysis, namely analyzing several variables studied by Human Resources (Number of Human Resources, HR Qualifications, Job Descriptions and Duties), Methods (SOPs and Policies), Money (Budget Costs), Materials (Infrastructure), Machine (Means), and the delay in the medical record file. By referring to several requirements or theories stated in the literature review, the study variables are qualitative data, which will be described to obtain adequate information to obtain more in-depth information as initial research by conducting focus group discussions (FGD) and interviews. In-depth research and observations to obtain more in-depth information about the Causes of Problem Analysis in the Framework of Developing a Model of an Inpatient Medical Record Control System at Aqidah Hospital, Tangerang City.

Results and Discussion

A. Research Result

This research was conducted from May 2022 to July 2022, and data collection activities began in May 2022. Researchers collected secondary data at the Medical Records Unit and Inpatient Installation of AQIDAH Hospital, Tangerang City. The Medical Record Unit consists of the Head of the Medical Record Unit, the Medical Record Coordinator, and the Medical Records Implementing Staff. The Inpatient Installation Room consists of the Head of the Inpatient Room, Inpatient Doctors, and Inpatient Nurse Staff. As a first step, the researchers took secondary data by reviewing the expedition book in the medical record unit and patient medical records at the inpatient installation from October 1 to December 31, 2021.

The review of the medical record expedition book document and medical resume of inpatients is carried out after the patient is declared discharged from the hospital. Then the researcher opened their respective medical records to check the completeness of the contents of the medical resume, including the completeness of filling out the patient's medical resume CPPT (Integrated Patient Progress Record), SOAP, Initials DPJP. Data were taken from the medical record expedition book is the number of delays in returning medical record files from the inpatient installation to the medical record unit. Furthermore, the researchers collected the delay in returning inpatient medical records. The data obtained from the study results are then entered into an excel template to analyze the causes of delays in returning inpatient medical records. The medical record data that has been collected is 228 BRM (Medical Record Files) from a total of 320 BRM (Medical Record Files) or as much as 71.25% delay in returning inpatient medical records.

After reviewing the medical record documents and medical resumes of inpatients, the researcher took qualitative data through in-depth interviews and then continued with FGD (Focus Group Discussion) with informants related to the research topic. In-depth interview informants in this study were the Head of the Medical Record Unit, the Medical Record Coordinator, the Medical Record Executing Staff, the Inpatient Installation Room, the Inpatient Doctor, and the Inpatient Nurse Staff. Moreover, the informants in the PPA FGD group consisted of Inpatient Doctors and Inpatient Nurses. and the Medical Recorder/Admin group, namely the Head of the Medical Record Unit, the Medical Record Coordinator, the Medical Record Implementing Staff, the Inpatient Admin Staff, the Inpatient Admin Nurse, each group consists of 9 participants. The characteristics of informants in this study can be seen in table 1. below:

Table 1. Characteristics of Informants (In-depth Interview)

No.	Occupation	Gender	Age	Education	Length of Work at the Hospital
1	Head of Medical Records	Woman	30 years	D3	Three years
2	Coordinator Medical record	Woman	35 years	D3	Two years
3	Medical Record Staff	Woman	25 years	D3	One year

4	Nursing Doctor Stay	Woman	42 years	S1	Two years
5	Head of Inpatient Room	Woman	30 years	D3	Seven years
6	Inpatient Nursing Staff	Woman	38 years	D3	Four years

Data Source: Aqidah Hospital, Tangerang City

Table 2. Characteristics of Informants (FGD PPA Group)

No.	Occupation	Gender	Age	Education	Length of Work at the Hospital
1	Inpatient Doctor	Woman	27 years	S1	Three years
2	Inpatient Doctor	Man	32 years	S1	Two years
3	Inpatient Doctor	Man	30 years	S1	One year
4	Inpatient Doctor	Woman	29 years	S1	One year
5	Inpatient Doctor	Woman	35 years	S1	Two years
6	Inpatient Nursing Staff	Man	30 years	D3	Four years
7	Inpatient Nursing Staff	Woman	27 years	D3	Three years
8	Inpatient Nursing Staff	Woman	25 years	D3	One year
9	Inpatient Nursing Staff	Woman	32 years	D3	Two years

Data Source: Aqidah Hospital, Tangerang City

Table 3. Characteristics of Informants (FGD Group Admin/Medical Recorder)

No.	Occupation	Gender	Age	Education	Length of Work at the Hospital
1	Head of Medical Records Unit	Woman	30 years	D3	Three years
2	Medical Record Coordinator	Woman	35 years	D3	Two years
3	Medical Record Executing Staff	Woman	25 years	D3	One year
4	Head of Inpatient Room	Woman	30 years	D3	One year
5	Inpatient Nursing Staff	Woman	35 years	D3	Two years
6	Inpatient Nursing Staff	Woman	30 years	D3	Four years
7	Inpatient Nursing Staff	Woman	27 years	D3	Three years
8	Inpatient Nursing Staff	Man	35 years	D3	One year
9	Inpatient Nursing Staff	Woman	32 years	D3	Two years

Data Source: Aqidah Hospital, Tangerang City

Data on Delay in Returning Inpatient Medical Records in 2019 – 2021

The results of the Inpatient Medical Record Document Review through the medical record Expedition book regarding data on delays in returning inpatient medical records in 2019-2021 can be seen in Figure 2. below:

Figure 2. Graph of Delay in Returning Inpatient Medical Records at Aqidah Hospital



In Figure 2. the graph of the delay in returning inpatient medical records at the Aqidah Hospital explains that there 185 of the total 280 (66.10%) 280 out of 410 (68.29%) inpatient medical records in 2019) and 2021, as many as 228 of a total of 320 (71.25%) incidents of delays in returning inpatient medical records at Aqidah Hospital Tangerang City.

B. Discussion

1. Delay in Returning Medical Records

Based on the study results, the number of delays in returning inpatient medical records at Aqidah Hospital Tangerang City in 2019 reached 66.10%, in 2020 with a percentage of 68.29%, and in 2021 with a percentage of 71.25%. Thus, the largest percentage of delays in returning inpatient medical records at Aqidah Hospital Tangerang City will occur in 2021. The highest percentage of delays in inpatient classes 1, 2 and 3 reached a percentage of 82.10% delays were caused by incompleteness in filling out medical resume numbers. The highest incompleteness in the Physical Examination was 84,37%, the Support Examination was 79,68%, and the Indications for admission were 73.43%. While the writing of the primary diagnosis only reached the percentage of 1.25%, and the secondary diagnosis only reached 0.93%.

From the discussion above, the researcher proposes a solution to the problem of resolving the delay in returning medical records at Aqidah Hospital to conduct socialization with all DPJP regarding the completeness of filling out medical resumes so that all officers can understand.

2. Human Resources as the Cause of Delay in Returning Medical Records

Based on the study's results, information was obtained related to human resources (HR) knowledge. All informants, including DPJP, already understood the importance of medical resumes in the JKN era (Erawantini et al., 2021). The informants believed that a complete medical resume starting from the patient's identity, date of admission, date of patient discharge, doctor's initials, diagnosis, and CPPT, along with therapy or treatment and actions carried out by PPA to patients, is the basis for producing complete data for the process of claiming BPJS health which will be a source of hospital income.

Doctors at Aqidah Hospital are not required to complete a diagnosis or procedure in a medical resume. Doctor's behaviour by not completing the CPPT medical resume, SOAP, doctor's initials, therapy, and actions taken.

From the discussion above, the researcher proposes a solution to the problem of lateness in returning medical records at Aqidah Hospital to conduct training for all medical record units and inpatient installation officers regarding

the completeness of filling out medical resumes so that all officers can understand.

3. The method is the Cause of the Delay in Returning Medical Records.

Based on the study results, information was obtained that in supporting the completeness of filling out medical resumes, Aqidah Hospital has implemented SOPs and policies. However, it has not run optimally in practice because it has never been thoroughly socialized to inpatients and medical records (Al Aufa, 2018). This can be entered as a doctor's performance and calculated as remuneration points.

From the discussion above, the researcher proposes a solution to the problem of solving the problem of delays in returning medical records at Aqidah Hospital to conduct socialization of SOPs and policies to all officers, both medical record units and inpatient installation officers.

4. Funding as the Cause of Late Return of Medical Records

Based on the results of the study, information was obtained that in terms of funding, it was known that the medical record unit as a medical record management unit in the process of returning medical records did not receive financial support from the management of Aqidah Hospital in terms of repairing existing facilities and infrastructure, such as inadequate medical record unit rooms. small, inadequate medical record storage racks have been damaged, many have been damaged, and the number of shelves is limited, so many medical records are scattered on the floor. Some are placed in cardboard boxes, causing many medical record documents to be torn and making it difficult for PPA (doctors and nurses) to read patients' medical resumes. In addition, there is only one computer limitation, which is used interchangeably with the registration unit (Mirfat et al., 2017). And the absence of a trolley to carry patient medical records is still manual by hand. And there is no roll opacity tool, in this case, due to the lack of financial support from the hospital management to improve facilities and infrastructure.

Until now, Aqidah Hospital has not implemented a reward and punishment system for PPAs (doctors and nurses) regarding the completeness of the contents of the medical resume. Applying the reward and punishment system is one way to maintain a commitment to the completeness of the contents of the medical resume (Al Aufa, 2018). (Apriyantini, 2018) His research states that the compensation factor is the most dominant one related to the completeness of the medical resume (Apriyantini, 2018).

From the discussion above, the researcher proposes a solution to the problem of delaying the return of medical records at the Aqidah Hospital is to hold a coordination meeting with the management of the Aqidah Hospital regarding the procurement of budget funds to improve existing facilities and infrastructure in the medical record unit and inpatient installations in supporting the medical record management process so that running well and in accordance with existing regulations and SOPs.

5. Means as the Cause of Delay in Returning Medical Records

Based on the results of the study, information was obtained that the availability of facilities at the Aqidah Hospital was not adequate, such as the

absence of a trolley to carry medical records, the absence of a roll opacity tool that was still manual using medical record storage racks, the condition of the shelves was inadequate, many were damaged, so many medical records scattered on the floor, and some documents were placed in cardboard boxes, resulting in many damaged and torn medical record documents, this made it difficult for PPAs to read patient medical resumes, as well as limited computers in the medical record unit which were used interchangeably with the registration unit (Wirajaya & Rettobjaan, 2021).

From the discussion above, the researcher proposes a solution to the problem of delaying the return of medical records at the Aqidah Hospital is to hold a coordination meeting with the management of the Aqidah Hospital regarding the procurement of budget funds to improve existing facilities and infrastructure in the medical record unit and inpatient installations in supporting the medical record management process so that running well and under existing regulations and SOPs.

6. Infrastructure as the Cause of Delay in Returning Medical Records

Based on the results of the study, information was obtained that the availability of infrastructure at the Aqidah Hospital was not adequate, the medical record unit room was not adequate and very small, the condition of the storage racks was damaged, and the number of medical record storage racks was insufficient so that many medical records were scattered (Oktorina et al., 2019). There was accumulation on the floor. Some medical record documents were placed in cardboard boxes, so many medical record documents were damaged and torn. This makes it difficult for PPAs to read patient medical resumes and the limitations of computers in the medical record unit, which are used interchangeably with the registration unit (Ariyanto et al., 2022).

From the discussion above, the researcher proposes a solution to the problem of delaying the return of medical records at the Aqidah Hospital is to hold a coordination meeting with the management of the Aqidah Hospital regarding the procurement of budget funds to improve existing facilities and infrastructure in the medical record unit and inpatient installations in supporting the medical record management process so that running well and per existing regulations and SOPs (Rusyani & Afandi, 2018).

7. Medical Record Control System Model Development

The results of interviews and FGDs revealed a need for a medical record control system to solve delays in returning medical records. Using the waterfall method of medical record control system, as follows:

From the discussion above, the researcher proposes a solution to the problem of delaying the return of medical records at the Aqidah Hospital to develop a model of the medical record control system at the Aqidah Hospital in order to overcome the problem of delays in returning inpatient medical records, assisting officers both in the medical record unit and inpatient installation officers. Stay in checking the completeness of the medical resume and find out the existence of documents for managing medical records for the better.

C. Research Limitations

This study has limitations in developing a medical record control system model, where researchers only carry out the waterfall model development stage, starting from the Requirements stage to Testing. Maintenance will be recommended

to the Management of Aqidah Hospital for the next stage. In order to improve the information system that already exists at the Aqidah Hospital is currently better and can help medical record officers and inpatients manage medical records.

Conclusion

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review that has been carried out prove that there is a delay in returning inpatient medical records at Aqidah Hospital.

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review prove that the Human Resources variable has a significant influence on the delay in returning inpatient medical records at Aqidah Hospital. In practice, many officers need help understanding the SOP. Regarding training, all officers have never received training on improving the quality of medical records.

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review that has been carried out prove that there is a significant effect of the Method variable on the delay in returning inpatient medical records at Aqidah Hospital. The existing SOP has never been socialized.

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review that has been carried out prove that there is a significant influence of the Funding variable on the delay in returning inpatient medical records at Aqidah Hospital.

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review prove that the Sarana variable has a significant effect on the delay in returning inpatient medical records at Aqidah Hospital.

The results of analysis and data collection through in-depth interviews, FGD (Focus Group Discussion), Observation and Document Review prove that the Infrastructure variable has a significant influence on the delay in returning inpatient medical records at Aqidah Hospital.

BIBLIOGRAFI

- Adebayo, T. T. (2019). The Management Of Health Records Libraries Through The Lens Of Ranganathan's Theory. *Management*, 12, 7–2019.
- Afrizal, T., & Yulistiyanti, D. (2015). Analisis Perancangan Sistem Informasi Pendataan Pendidikan Kota "D." *Semnasteknomedia Online*, 3(1), 1–2.
- Al Aufa, B. (2018). Analisis Faktor Yang Berpengaruh Terhadap Ketidaktepatan Waktu Pengembalian Berkas Rekam Medis Rawat Inap Di Rs X Bogor. *Jurnal Vokasi Indonesia*, 6(2), 41–46.
- Apriyantini, D. (2018). Analisis Hubungan Kelengkapan Pengisian Resume Medis Terhadap Kesesuaian Standar Tarif Ina-Cbg's Instalasi Rawat Inap Teratai Rsup Fatmawati Jakarta. *Jurnal Administrasi Rumah Sakit Indonesia*, 2(3).
- Ariyanto, Y. S. B., Rumana, N. A., Yulia, N., & Putra, D. H. (2022). Gambaran Ketepatan

- Waktu Pengembalian Rekam Medis Rawat Inap Di Rsup Dr. Sitanala Kota Tangerang. *Insologi: Jurnal Sains Dan Teknologi*, 1(2), 104–108.
- Dwi, K. S. (2022). *Gambaran Perhitungan Kebutuhan Rak Penyimpanan Dokumen Rekam Medis Di Ruang Filing Rsud Prof. Dr. Ma Hanafiah Sm Batusangkar*. Universitas Muhammadiyah Sumatera Barat.
- Erawantini, F., Km, S., Suryana, A. L., Khoirunnisa'afandi, S., & Kom, M. (2021). *Rekam Kesehatan Elektronik Dengan Clinical Decision Support System (Cdss)*. Upt Penerbitan & Percetakan Universitas Jember.
- Haqqi, A., Aini, N. N., & Wicaksono, A. P. (2020). Analisis Faktor Penyebab Keterlambatan Pengembalian Berkas Rekam Medis Rawat Inap Di Rs Universitas Airlangga. *J-Remi: Jurnal Rekam Medik Dan Informasi Kesehatan*, 1(4), 492–501.
- Hikmah, F., Wijyantini, R. A., & Rahmadtullah, Y. P. (2019). Penentu Prioritas Dan Perbaikan Masalah Keterlambatan Pengembalian Berkas Rekam Medis Rawat Inap Di Rsd Kalisat. *Jurnal Manajemen Informasi Kesehatan Indonesia (Jmiki)*, 7(1), 58.
- Mirfat, S., Andadari, N., & Indah, Y. N. N. (2017). Faktor Penyebab Keterlambatan Pengembalian Dokumen Rekam Medis Di Rs X Kabupaten Kediri. *Jurnal Medicoeticolegal Dan Manajemen Rumah Sakit*, 6(2), 149–158.
- Oktorina, R., Wahyuni, A., & Harahap, E. Y. (2019). Faktor-Faktor Yang Berhubungan Dengan Perilaku Pencegahan Ulkus Diabetikum Pada Penderita Diabetes Mellitus. *Real In Nursing Journal*, 2(3), 108–117.
- Rusyani, Y., & Afandi, M. (2018). Pengaruh Pelatihan Quality And Safety Education For Nurses (Qsen) Terhadap Kompetensi Patient Centered Carepreceptor Di Rsup Dr. Soeradji Tirtonegoro Klaten. *Jurnal Penelitian Keperawatan*, 4(1).
- Simarmata, J., Romindo, R., Samala, A. D., Gustiana, Z., Yuswardi, Y., Pakpahan, A. F., Limbong, A., Ardiana, D. P. Y., Latif, N., & Wanita, F. (2021). *Metodologi Riset Bidang Sistem Informasi Dan Komputer*. Yayasan Kita Menulis.
- Trisetyawan, R., & Eryani, S. (2020). Hubungan Ketepatan Kode Diagnose Dyspepsia Dengan Klaim Bpjs Di Rumah Sakit Rafflesia Bengkulu. *Mitra Rafflesia (Journal Of Health Science)*, 10(2). <https://doi.org/10.51712/Mitrarafflesia.V10i2.10>
- Wirajaya, M. K. M., & Rettobjaan, V. F. C. (2021). Faktor Yang Memengaruhi Keterlambatan Pengembalian Rekam Medis Pasien Rawat Inap Di Rumah Sakit: Kajian Literatur. *Jurnal Kesehatan Vokasional*, 6(3), 147–158.

Copyright holder:

Yunita Fitri Widiyawati, Hosizah Markam, Rina Mutiara (2023)

First publication right:

Jurnal Health Sains

This article is licensed under the following:

