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Optimization Of Critical Value Reporting By Medical Laboratory Technologists At Uptd Puskesmas Mampang

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Abstract : Puskesmas, as a primary healthcare facility, plays a crucial role in both public and individual health efforts, including through laboratory services that support diagnosis, treatment, and health recovery. Laboratory services at puskesmas aim to assist individual health efforts by providing accurate test results for patient management. The speed of patient care, especially for critical patients, heavily relies on effective communication between laboratory staff and doctors. Therefore, timely and properly documented reporting of critical values is essential to ensure patient safety. However, based on data from 2020 to 2022, there were issues related to the reporting and documentation of critical values at UPTD Puskesmas Mampang, where not all critical values were reported and properly documented in patients' medical records. This could hinder the follow-up care process, especially for critical patients who require prompt and precise treatment. Therefore, a solution is needed to improve the effectiveness of critical value reporting to avoid delays in patient care, which could have fatal consequences for patient safety. This study proposes an innovation in the form of the SIPIKA system (Critical Value Reporting Optimization System), which utilizes the TBaK method (Write, Read, Confirm) for communication between laboratory staff and doctors. This innovation includes the use of a TBaK stamp on patient medical records during critical value reporting, aimed at ensuring all critical values are properly reported and documented. The implementation of this system is expected to enhance patient safety by ensuring all critical values are accurately recorded and timely reported, as well as streamlining the follow-up care process.

Keywords: Optimalisasi Pelaporan, Nilai Kritis, Ahli Teknologi, Medik Puskesmas Mampang

INTRODUCTION

A.Background

According to the Minister of Health Regulation No. 43 of 2019, puskesmas is a primary healthcare facility that provides public health services and individual health services, with a focus on promotive and preventive efforts in its working area. Individual health efforts (UKP) refer to a series of healthcare activities aimed at improving, preventing, curing diseases, reducing suffering due to illness, and restoring individual health. In the implementation of community and individual health efforts (UKM and UKP), puskesmas also provides supporting services, one of which is laboratory services that function to assist in disease diagnosis, treatment, and health recovery. According to Minister of Health Regulation No. 37 of 2012, laboratory services in puskesmas include measurements, determinations, and tests of substances derived from humans to identify disease types, disease spread, health conditions, or factors that may affect individual andpublichealth. Laboratory services within the facility are integrated with individual health services. The laboratory test results are used by doctors to establish disease diagnoses, ensuring that patient management runs smoothly. The speed of patient handling greatly influences the success of healthcare delivery.

Quick management is critical for patient safety, especially in critical cases, as delays in treatment can have fatal consequences. Critical patients are those whose laboratory test results fall outside the established normalrange. To support patient safety in puskesmas, effective communication between laboratory staff and doctors is essential. The effective communication method used for reporting critical values is the TBaK method (Write, Read, Confirm). TBaK is a verbal communication technique involving telephone use, where the message is written, read aloud, and confirmed by the recipient. From 2020 to 2022, not all critical values were reported and documented properly. Some values were reported but not well documented in the patient's medical records. This could hinder the follow-up care process. To improve the reporting of critical values at UPTD Puskesmas Mampang, an innovation was implemented in the form of the "SIPIKA" system (Critical Value Reporting Optimization by Medical Laboratory Technologists - ATLM). This innovation involves using the TBaK stamp on patient medical records when reporting critical values to the doctor, ensuring that all critical values are reported and properly documented. B. Problem Formulation Based on the background above, it is known that TBaK is an effective communication method used for reporting critical values. From 2020 to 2022, not all critical values were reported and documented properly, prompting the implementation of the "SIPIKA" innovation by Medical Laboratory Technologists (ATLM). Therefore, to understand this innovation, this paper will describe the "SIPIKA" innovation at UPTD Puskesmas Mampang with the following research questions:

1. What is the input for the "SIPIKA" innovation at UPTD Puskesmas Mampang?
2. What is the process of the "SIPIKA" innovation at UPTD Puskesmas Mampang?
3. What are the outputs of the "SIPIKA" innovation at UPTD Puskesmas Mampang?

C. Objectives The objectives of this paper are as follows:

1. To identify the input for the "SIPIKA" innovation at UPTD Puskesmas Mampang.

2. To identify the process of the "SIPIKA" innovation at UPTD Puskesmas Mampang. 3. To identify the outputs of the "SIPIKA" innovation at UPTD Puskesmas Mampang.

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METHODS

The research method used in this study is qualitative. Qualitative research is employed to explore the phenomenon of effective communication practices between laboratory staff and doctors, particularly in the context of laboratory critical value reporting at the Puskesmas. This study will focus on gaining a deep understanding of the communication process, the challenges faced in critical value reporting, and the implementation of the TBaK communication technique in enhancing patient safety.

The qualitative research method allows the researcher to conduct in-depth interviews, participatory observation, and document analysis to obtain more holistic information about the application of the TBaK communication technique in the critical value reporting system. This approach can be used to understand the perspectives of laboratory staff and doctors in terms of communication, how the critical value reporting flow is applied, and the challenges encountered during the reporting process.

Furthermore, the qualitative approach enables the researcher to analyze the data descriptively and provide a more detailed understanding of how effective communication can contribute to improved patient safety and timely reporting of critical values. Thus, the qualitative method can explore the dynamics of communication that occur and provide valuable insights for designing further improvements in the reporting system and patient safety at the Puskesmas.

RESULT AND DISCUSSION

A. Effective Communication

According to the Minister of Health Regulation (Permenkes) RI No. 11 of 2017, patient safety is a system that makes patient care safer, including risk assessment, identification and management of patient risks, incident reporting and analysis, the ability to learn from incidents and follow-up actions, as well as the implementation of solutions to minimize risks and prevent injuries caused by errors in carrying out an action or failing to take an action that should have been taken. The key to achieving patient safety is through communication between staff members. This can be accomplished by improving effective communication in line with patient safety goals.

Effective communication is communication that is performed in a timely, accurate, clear, and easily understandable manner by the recipient, so that it can reduce the rate of errors. One communication technique that can be used to improve effective communication is TBAK.

TBAK is a verbal communication technique, either directly or via telephone, which involves writing, reading repeatedly, and confirming the message received by the sender.

B. Critical Laboratory Values

Critical values are laboratory test results that are abnormal and indicate conditions or disorders that may threaten life and require immediate attention or action. Reporting critical values is the mechanism for reporting laboratory results that have the potential to threaten life, reported by the responsible personnel.

The critical threshold values that need to be reported according to the Ministry of Health of the Republic of Indonesia (2011) are as follows:

Critical Threshold Values for Neonates

Parameter	Low Limit	High Limit	Unit
Glukosa	30	325	mg/dl
Hemoglobin	8,5	23,0	g/dl
Leukosit	5.000	25.000	/ul

Critical Threshold Values

Parameter	Low Limit	High Limit	Unit
Clinical Chemistry			
Glukosa	40	500	mg/dl
Hematologi			
HB (Haemoglobin)	5,0	20,0	g/dl
Leukosit	2.000	50.000	/ul
Trombosit	20.000	1.000.000	/ul

C. Reporting of Critical Laboratory Values

According to the Ministry of Health of the Republic of Indonesia (2011), reporting critical laboratory results in outpatient units is the process of conveying critical values that require immediate attention and must be reported within 30 minutes of being read by the laboratory staff (ATLM) to the responsible doctor (DPJP).

a. Purpose of Reporting Critical Laboratory Values

he purpose of reporting critical laboratory values is as follows:

1. To improve patient safety.
2. To ensure that critical laboratory results are promptly reported to the responsible doctor for immediate follow-up action.

b. Criteria for Reporting Critical Laboratory Values

The critical laboratory values that need to be reported must meet the following criteria:

1. Every laboratory test result that falls under the critical category (according to the critical value list of each laboratory).
2. Only critical test results that were specifically requested should be reported.

D. Flow of Reporting Critical Laboratory Values

The flow of reporting critical laboratory values at UPTD Puskesmas Mampang, based on the Standard Operating Procedure (SOP) for Effective Communication (TBAK), is as follows:

1. The officer interprets the laboratory test results to determine whether they are critical values or not, based on the critical threshold for each test.
2. The officer duplicates or rechecks the test results.
3. The officer records the date, time of critical laboratory result reporting, and the name of the doctor contacted in the critical value reporting form/register.
4. The officer promptly communicates the critical results to the doctor for recording in the medical record and affixes the TBAK stamp. The doctor writes the critical lab results in the CPPT section, reads them, and the laboratory officer confirms them with a signature on the TBAK stamp as proof that the report has been received.

Innovation Activities

With the author being assigned as an ATLM (Medical Laboratory Technology Expert) at the laboratory of the UPTD Puskesmas Mampang, this has become a challenge for the author to participate in improving the quality and safety of patients. The effort made is to ensure that critical value reporting is carried out through the SIPIKA innovation (Optimization of Critical Value Reporting by Medical Laboratory Technology Experts). In this innovation activity, the author collaborates with doctors. Below are the inputs, processes, and outputs of the SIPIKA innovation at the UPTD Puskesmas Mampang:

A. Input

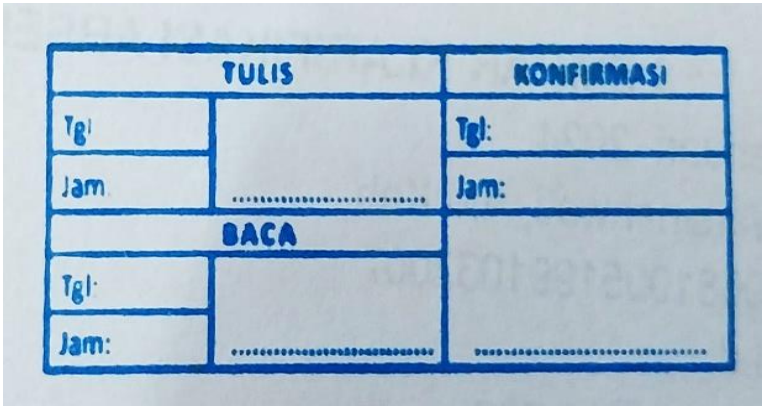
In this innovation, the input consists of human resources, including ATLM officers

and doctors. The method used in this SIPIKA innovation involves TBAK, which stands for "Write, Read, and Confirm Again." To ensure that critical values are reported, a tool is used in the form of a stamp containing the words "Write, Read, and Confirm." Additionally, the critical value results are recorded in the critical value monitoring form. The cost incurred for this innovation is IDR 50,000.00 for the creation of the stamp.

Here are the tools used in the SIPIKA innovation:

1. TBAK Stamp

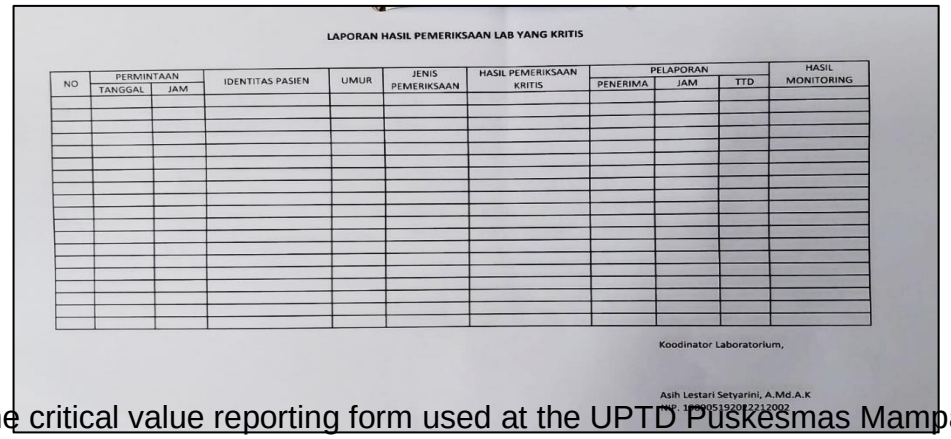
The TBAK stamp is used when the officer reports the critical values to the doctor. The TBAK stamp is affixed to the patient's medical record and will later be filled out by the doctor when TBAK is performed.



The TBAK stamp used at UPTD Puskesmas Mampang

2. Critical Laboratory Test Report Form

Laboratory test results that fall under critical values are recorded in the critical laboratory test report form by the laboratory officer to ensure proper documentation and verify that the critical values have been reported. The contents of the form include the request time for the test, patient identity, patient's age/date of birth, type of test, critical test results, report recipient, reporting time, signature of the recipient, and monitoring results.


LAPORAN HASIL PEMERIKSAAN LAB YANG KRITIS

NO	PERMINTAAN		IDENTITAS PASIEN	UMUR	JENIS PEMERIKSAAN	HASIL PEMERIKSAAN KRITIS	PELAPORAN			HASIL MONITORING
	TANGGAL	JAM					PENERIMA	JAM	TTD	

Koodinator Laboratorium,

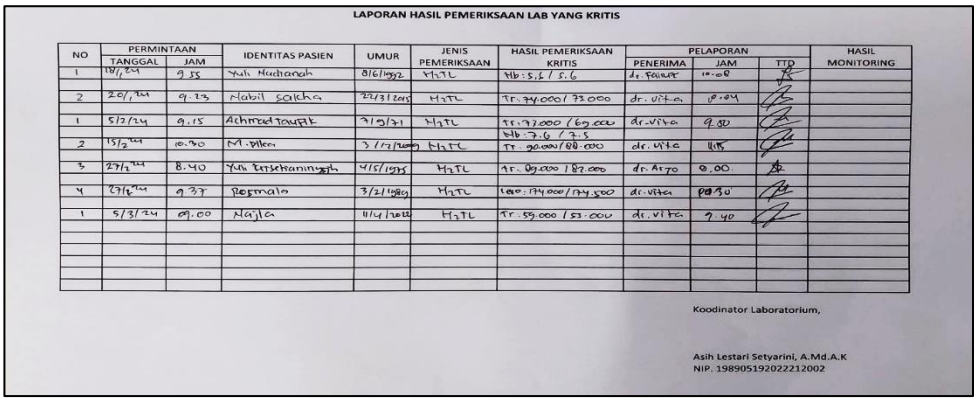
Asih Lestari Setyarini, A.Md.A.K

The critical value reporting form used at the UPTD Puskesmas Mampang.

B. Process

Critical value reporting at the Puskesmas Mampang is carried out according to the SOP with the following steps:

1. The officer interprets the laboratory test results to determine whether they fall under critical values based on the critical threshold for each test.
2. The officer duplicates or rechecks the test results.
3. The officer records the date, time of reporting critical laboratory results, and the name of the doctor contacted in the critical value reporting form/register.
4. The officer promptly communicates the critical results to the doctor to be recorded in the medical record and stamped with the TBAK stamp. The doctor writes the critical lab results in the CPPT section, reads them, and the laboratory officer confirms with a signature on the TBAK stamp as proof that the report has been received.



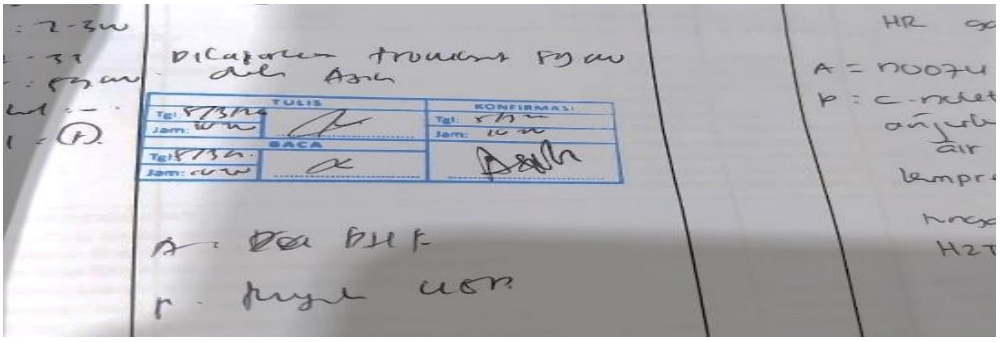
LAPORAN HASIL PEMERIKSAAN LAB YANG KRITIS

NO	PERMINTAAN TANGGAL	PERMINTAAN JAM	IDENTITAS PASIEN	UMUR	JENIS PEMERIKSAAN	HASIL PEMERIKSAAN KRITIS	PELAPORAN PENERIMA	PELAPORAN JAM	PELAPORAN TTD	HASIL MONITORING
1	19/1	9.35	Yuli Hachanah	8/6/1992	HbTL	Hb: 5,6 / 5.6	dr. Faisal	10.08		
2	20/1	9.23	Nabil Salcha	27/3/2015	HbTL	Tr: 74.000 / 73.000	dr. Vita	10.04		
1	5/2/24	9.15	Ahmad Taufik	7/9/71	HbTL	Tr: 72.000 / 69.000 Hb: 7.6 / 7.5	dr. Vita	9.30		
2	15/2	10.30	M. Iklas	3/12/2009	HbTL	Tr: 90.000 / 88.000	dr. Vita	11.15		
3	27/2	8.40	Yuli Retnaningsih	4/5/1975	HbTL	Tr: 89.000 / 87.000	dr. Ari	9.00		
4	27/2	9.37	Rosmala	3/2/1989	HbTL	Tr: 174.000 / 174.500	dr. Vita	09.30		
1	5/3/24	09.00	Najla	11/4/2022	HbTL	Tr: 55.000 / 53.000	dr. Vita	9.40		

Koodinator Laboratorium,

Asih Lestari Setyarini, A.Md.A.K
NIP. 198905192022212002

In addition, the laboratory officer also affixes the TBAK stamp to the patient's medical record and signs it as proof that the report has been carried out. The responsible doctor will then sign in the available column as evidence that the critical value report has been written and reread.

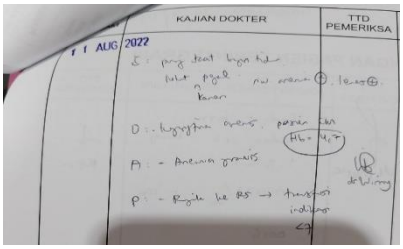


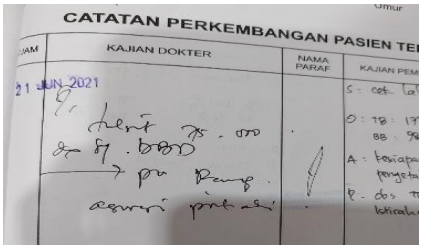
C. Output

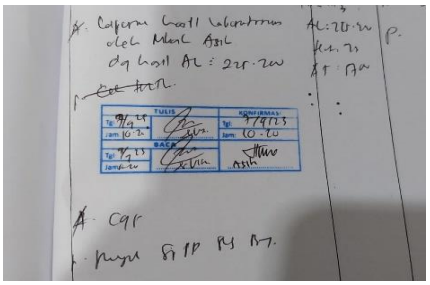
After the implementation of the SIPIKA innovation, the output achieved includes compliance with reporting and documentation of all critical values. This can be seen from the recording in the critical value reporting form and the patient's medical records. In 2021, it was found that the documented reporting of critical values involved 12 patients. There was an increase in the documented reporting of critical values in 2022 and 2023, with 21 and 19 patients, respectively. As of February 2024, the documented reporting of critical values involved 7 patients.

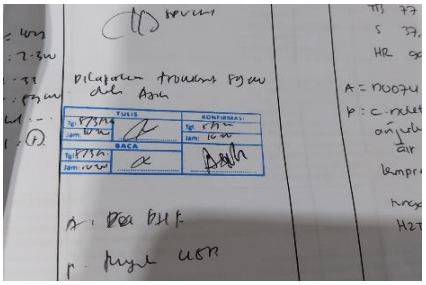
Additionally, there was a difference in the documentation of critical value reporting among the patient's medical team. An additional "TBAK" stamp was added to the

patient's medical records for lab results with critical values from 2022 to 2024 as a tool to ensure that the lab results had been written, read aloud, and confirmed. Below is the documentation of critical value reporting in the patient's medical records from 2021 to 2024 at the UPTD Puskesmas Mampang:









CONCLUSIONS

1. The input for the SIPIKA innovation includes human resources consisting of laboratory technicians (ATLM) and doctors, the TBAK method, tools/materials such as the stamp and the critical value monitoring form, as well as a cost of Rp 50,000 for creating the TBAK stamp.
2. The process of SIPIKA innovation is in accordance with the Standard Operating Procedure (SOP) for reporting critical values at Mampang Health Center, involving laboratory staff and doctors.
3. The output of the SIPIKA innovation is an increase in compliance with reporting and the documentation of all critical values, as evidenced by the TBAK documentation in the patient's medical records.

ACKNOWLEDGEMENT

Penulis Praise be to Allah SWT, for His blessings and grace, which have enabled the authors to complete this innovation paper entitled "Optimization of Critical Value Reporting by Medical Laboratory Technology Experts" successfully. This paper is prepared as part of the submission for the exemplary health worker innovation award at the City of Depok level in 2024.

The authors realize that they have received significant support from various parties that have made it possible for them to complete this innovation paper "SIPIKA." Therefore, on this occasion, the authors would like to express their deepest gratitude to their family, the head of UPTD Puskesmas Mampang, and colleagues from various programs at UPTD Puskesmas Mampang.

The authors acknowledge that there are still many shortcomings in the preparation of this paper. Therefore, any constructive criticism and suggestions are highly appreciated and will be used as valuable learning and feedback for the authors

in the future. In conclusion, the authors hope that this innovation paper can add to the knowledge of fellow healthcare workers and be beneficial to all parties who read it.

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