ROOT CAUSE ANALYSIS (RCA) OF E-CATALOGUE PROCUREMENT OF MEDICINE USING E-PURCHASING IN PUBLIC HEALTH CENTER IN KLATEN REGENCY OF CENTRAL JAVA

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ABSTRACT

E-catalogue procurement of medicine is a method of electronic procurement using a particular website developed by the Government to increase the effectiveness, efficiency, and transparency of medicine procurement. In Klaten Regency, e-catalogue procurement of medicine in the Public Health Center (PHC) experiences obstacles. The study aimed to evaluate performance of e-catalogue procurement of medicine, analyze the root problem and formulate strategies to improve the performance based on the root problems. This descriptive study involved seven PHCs with data on medicine procurement in 2021. Quantitative data analysis was conducted by evaluating six performance indicators of medicine procurement. Qualitative data analysis was conducted by interviewing 17 respondents, analyzing root problems, and formulating improvement strategies The study showed that all PHCs had good medicine availability at 87.71% average, but low realization of e-catalogue procurement occurred in two PHCs. Lead time beyond the contract period occurred in two PHCs. All PHCs experienced low suitability of procurement funds and percentage of procurement through e-catalogue. Percentage of budget allocation for medicine procurement varied between 1.59% to 7.29%. Analysis of the root problem showed obstacles in human resources, mechanism of procurement, policies, system, budget, and environment aspect. It was concluded that the obstacles rooted on the lack of team role and synergy of PHC, District Pharmacy Unit, and District Health Office according to their authority, the lack of pharmaceutical industry and distributor commitments in the provision of e-catalogue medicine for PHC, and also the urgent needs of system and regulatory improvement by the Government.

Keywords: E-catalogue procurement of medicine; Performance of Medicine Procurement; Root Cause Analysis

1. INTRODUCTION

Medicine is one of the main commodities in health service. Government is responsible for the medicine availability, affordability, quality, and safety in public health services as mentioned in National Drug Policy (Departemen Kesehatan RI, 2006). In order to increase the effectiveness and efficiency of medicine procurement, government build e-purchasing as one of the procurement methods that are mandatory and implemented by Public Health Centers (PHC) for the National Health Insurance Program. E-purchasing is a procurement method by choosing the e-catalogue drug list in the National Procurement Portal (Kementerian Kesehatan RI, 2013).

E-catalogue procurement of medicine is the answer to a transparent, efficient, and cost-effective procurement process. Cost-effectiveness and qualified providers in the e-catalogue system become the solution for Government to control quality and cost in public procurement of

medicine (Dwiaji et al., 2016). Convenience in the transaction process is also one of the advantages so that it becomes the main choice for public procurement of medicine.

Various studies showed obstacles to e-catalogue procurement of medicines. Planning inaccuracy of quantity or schedule indicated internal obstacles in a number of studies (Aisah & Suryawati, 2020; Risa et al., 2020; Sulistyowati et al., 2020; Syamsul et al., 2021). Other research showed a lack of pharmacists in a number or competence (Amiluddin et al., 2019; Kusmini et al., 2016). No supportive regulations at the level area, lack communication with providers, and lack of monitoring from the Department of Health also became constraints (Rahma, 2018). The external obstacle to the provider's low commitment to the contract was expressed in several studies (Aisah & Suryawati, 2020; Rahma, 2018). One of the system weaknesses was that not all medicine in National Formulary exist in e-catalogue so that health facilities were forced to use other medicine procurement mechanisms (Dwiaji et al., 2016). Stock out of medicine in the Pharmaceutical Industry also became a constraint (Aisah & Suryawati, 2020; Syamsul et al., 2021).

Availability of public medicine in Klaten Regency depends on Spesific Allocation Fund medicine distribution of the particular program, and buffer stock from Health Ministry. PHC manages the budget of the JKN Program that could be allocated for the fulfillment of medicine (Kementerian Kesehatan RI, 2014). Considering that DAK is very limited in value and flexibility, PHC is encouraged to do medicine procurement, especially through e-purchasing. So far there were still many obstacles to medicine procurement in PHC. With Root Cause Analysis (RCA) method using Fishbone Diagram, this study aimed to map the root problems of e-catalogue procurement of medicine so that problem-solving strategy could be taken by stake holders. The study was important as an effort to support medicine availability in PHC in Klaten Regency.

2. METHOD

2.1. Type of Study

The study was a descriptive study, using a combination of quantitative and qualitative data. This study involved seven PHCs in Klaten Regency that were selected non-randomly by taking the representative of in-patient care and out-patient care PHCs, as well as PHCs with a low and high budget of JKN. Analyzed data were e-catalogue procurement of medicine data of PHC in the year 2021.

2.2. Quantitative Data Analysis

The quantitative data analysis of E-catalogue medicine procurement performance evaluation in PHC is displayed in **Table 1**.

2.3. Qualitative Data Analysis

Qualitative data was obtained from an interview with the respondents who were directly involved and understood about e-catalogue procurement of medicine in PHC. The interview was conducted with an interview instrument that has been tested its validity by professional judgment from two experts. The number of 17 respondents consisted of the Heads of PHC as commitment-making officials and budget users, Pharmacists of PHC, Procurement officers, Treasurers Expenditure of PHC, and representatives of the Pharmaceutical Industry and Distributor as providers of e-catalogue medicines. The result of the interview was analyzed by means of content analysis to observe obstacles to e-catalogue procurement of medicine. Root Cause Analysis (RCA) was conducted with Fishbone Diagram to make a recommendation of improvement strategy for procurement performance of PHC. Recommendation was discussed in a Focused Group Discussion forum attended by stake holders, as well as conducted signing the commitment declaration to implement the performance improvement strategy.

Table 1. Quantitative Data Analysis of E-catalogue Medicine Procurement Performance Evaluation in PHC

No	Indicator	Goal	Data Calculation	Achievement
Main Indicators				
1	Percentage of medicine availability level	To observe the adequacy of medicine supply Note: medicines observed were 40 items of medicine indicators determined by Health Ministry	Medicine availability level: quantity of a year's stock divided the average use of medicines per month (in month unit) Percentage of availability level: number of medicine item with availability > 12 months divided by the total item of medicine indicators multiplied by 100%	> 80% medicines have the availability > 12 months = good < 80% medicine have availability > 12 months = less (Kementerian Kesehatan RI, 2020; Maspekeh et al., 2018)
2	Percentage of e-catalogue medicine procurement realization	To observe the success level of e-catalogue procurement of medicine compared with the planning	Percentage of e-catalogue procurement of medicine realization: item of purchased e-catalogue medicine divided by the planned items multiplied by 100%	Percentage of realization > 80% = good Percentage realization < 80% = less (Anggriani et al., 2020)
3	Percentage of the suitability of e-catalogue medicine procurement fund	To observe the budgeting effectiveness of e-catalogue procurement of medicine	Percentage of the suitability of e-catalogue procurement of medicine fund: the value of realization budget of e-catalogue procurement of medicine divided by the value of budget allocation for e-catalogue procurement of medicine multiplied by 100%	Percentage of suitability of fund > 80% = good Percentage suitability of fund < 80% = less (Anggriani et al., 2020)
4	Lead time	To observe the time accuracy of e-catalogue medicine delivery compared with the contract	Lead time: delivery time of e-catalogue medicine Percentage of medicine delivered on time: amount of medicine delivered during the contract period divided by the total amount of purchased medicine multiplied by 100%	Percentage of medicine delivered on time >80% = good Percentage of medicine delivered on time <80% = less
Additional Indicators				
5	Percentage of medicine procurement through the e-catalogue	To observe the trend of medicines procurement mechanism used in PHC	Percentage of medicine procurement through e-catalogue: medicine items purchased via e-catalogue divided by the total medicine items purchased multiplied by 100%	No achievement, only to evaluate comparison among medicine procurement through e-catalogue and non-e-catalogue in PHC
6	Percentage of allocation of medicine procurement fund	To observe the comparison of JKN budget allocated for medicine with the total JKN budget	Percentage of allocation of medicine procurement fund: medicine procurement fund divided by the total JKN budget in PHC multiplied by 100%	No achievement, only to evaluate the proportion of the budget for medicine procurement in PHC

3. RESULTS AND DISCUSSION

3.1. Medicine Procurement Performance Evaluation in PHC

Medicine Procurement performance in PHC is influenced by internal and external factors. The evaluation data of medicine procurement in PHC in Klaten Regency in **Table 2** showed that all PHC had a good percentage of medicine availability, with an average of 87.71% indicator medicines in PHC had the availability bigger or same as 12 months. Though there were constraints in e-catalogue procurement of medicine, the percentage of medicine availability remained good. It was likely because District Pharmacy Unit distributed adequate amounts of medicines for PHC through regular distribution throughout 2021.

Table 2. Medicine Procurement Performance Evaluation Data in PHC in Klaten Regency of Central Java in 2021

No	Phc Code	Main Indicators				Additional Indicators	
		Percentage of Availability of Indicator Medicines	Percentage of Realization of E-Catalogue Medicine Procurement	Percentage of Suitability of E-Catalogue Medicine Procurement Fund	Lead Time (Percentage of Medicine Delivered on Time)	Percentage of Medicine Procurement Through E-Catalogue	Percentage of Allocation of Medicine Procurement Budget
1	PKM 01	85% Good	100% Good	21% Less	100% Good	22%	3.96%
2	PKM 02	93% Good	100% Good	24% Less	100% Good	34%	1.59%
3	PKM 03	88% Good	75% Less	23% Less	100% Good	44%	6.83%
4	PKM 04	83% Good	0% Less	0% Less	_E-Catalogue Failure	0%	6.63%
5	PKM 05	95% Good	100% Good	12% Less	100% Good	33%	7.29%
6	PKM 06	80% Good	100% Good	26% Less	0% Less	38%	5.01%
7	PKM 07	90% Good	100% Good	17% Less	70% Less	36%	3.32%
	Average	87.71%	82.14%	17.57%	78.33%	29.57%	4.95%

Note:
- Indicator medicines are 40 items of availability indicator medicines determined by the Indonesian Ministry of Health, except particular program medicines supplied from the Indonesian Ministry of Health.
- Lead time is medicine delivery time. Lead time performance is calculated from the percentage of medicine that is delivered in accordance with the contract period

Data of e-catalogue medicine procurement realization showed that there were two PHCs with achievements below 80%, which were due to human resources and e-purchasing process constraints. On one PHC, the new Procurement Officer did not have e-purchasing access so the officer could not process all e-catalogue medicine procurement in 2021. At the other PHC, there were some rejected medicine orders by Pharmaceutical Industry, and some others were not followed up by the distributor.

Lead time or medicine delivery time was set as the measuring performance because the lateness arrival of medicine could cause the medicine to stock out in PHC. It was categorized as good lead time achievement in this study if the percentage of medicine delivered during the contract period is equal to or greater than 80%. The study showed that the average of medicine delivered on time in 7 PHC was 78.33%, which called underachievement. Incident of medicine delivery overdue occurred in two PHCs, that were 0% and 70%. Ideally, medicine provider adheres to the contract period. The overdue reflected a lack of the provider's commitment and preparedness to the contract that had been agreed. Besides, the overdue indicated the lack of PHC Commitment Making Officer's role to control the contract.

All PHCs in this study faced the problem of low suitability of procurement budget with the realization, where the average budget used was only 17.57%. This low used budget indicated ineffective planning, then resulted in a lot of remaining budgets. Less optimal budget utilization is one of the medicine procurement problems (Faradiba et al., 2022). This problem occurred because medicine prices approved in Regency Price Standard, that used as a reference in Budget Implementation Document input, were much higher than e-catalogue prices.

The percentage of medicine procurement through e-catalogue was an additional indicator to observe the trend of the medicine procurement mechanism held by the PHC. Medicine procurement mechanism other than e-catalogue, such as manual direct procurement, is allowed as long as they are conducted in accordance with applicable regulations (Kementerian Kesehatan RI, 2019). However, the price of non-e-catalogue medicines is more expensive than e-catalogue, making e-catalogue a more efficient way (Kusmini et al., 2016). The percentage of medicine items held through e- catalogue still very low which was about 29.57%, which meant that PHC tends to use a direct procurement mechanism than e-purchasing. It was very related to incomplete medicine items displayed or could be bought in the e-catalogue.

Percentage allocation of medicine procurement fund in PHC was an additional indicator that was used to evaluate the value of the JKN fund allocated to ensure medicine availability. The study showed that the percentage of medicine budget allocation varied between 1.59 to 7.29% of the total JKN budget. The needs for medicine budget of course different in each PHC, depending on the number of patients and medicine distribution from the District Pharmacy Unit.

3.2. Root Cause Analysis of e-catalogue procurement of medicine in PHC

The study result of the medicine procurement performance evaluation in PHC showed that there were obstacles to the implementation of e-catalogue medicine procurement. Interview with 17 respondents was conducted to probe more obstacles. The characteristic of respondents is displayed in **Table 3**. Then, Fishbone Diagram (Figure 1) was arranged to map root causes and formulate strategies to cope with the problems.

Table 3. Respondents' Characteristics of Root Cause Analysis Study of E-catalogue Procurement of Medicine in Klaten Regency of Central Java in 2021

	Characteristics	Frequency (N=17)	%
Age	20-30 years old	1	5.88
	30-40 years old	8	47.06
	40-50 years old	7	41.18
	50 years and over	1	5.88
Sex	Man	3	17.65
	Woman	14	82.35
Education	Associate degree	3	17.65
	Bachelor degree	14	82.35
Working time	2-5 years	8	47.06
	5-10 years	3	17.65
	10 years and over	6	35.29
Position	Pharmacist of PHC	7	41.18
	Head of PHC	2	11.76
	Procurement Officer	2	11.76
	Treasurer Expenditure	2	11.76
	Pharmaceutical Distributor employees	2	11.76
	Pharmaceutical Industry employees	2	11.76

Based on the interview, it was known that there were obstacles in e-catalogue procurement of medicine in PHC in Klaten Regency. Obstacles were grouped in six aspects as human resources, mechanisms, policy, system, budget, and environment, as shown in **Figure 1**.

3.2.1. Problem in Medicine Budgeting

PHC as a Regional Business Service Agency (Badan Layanan Usaha Daerah/ BLUD) has authority and flexibility to spend the budget, one of which is medicine provision (Kementerian Kesehatan RI, 2014). However, for PHCs that have a low budget for JKN, budget management becomes challenging. Sometimes initial estimation of yearly income turns out no accordance with the income realization. It causes expenses budget trimming, including for medicine.

The COVID-19 pandemic condition affected expenses posture in PHC. A number of PHCs had to cut the medicine budget for countermeasures activity of COVID-19. Luckily the budget

trimming did not disturb medicine availability during 2021. This was possibly because of the decrease in patient visits during the pandemic so medicine consumption was also low. Moreover, the COVID-19-related medicines and materials were mostly distributed from District Pharmacy Unit.
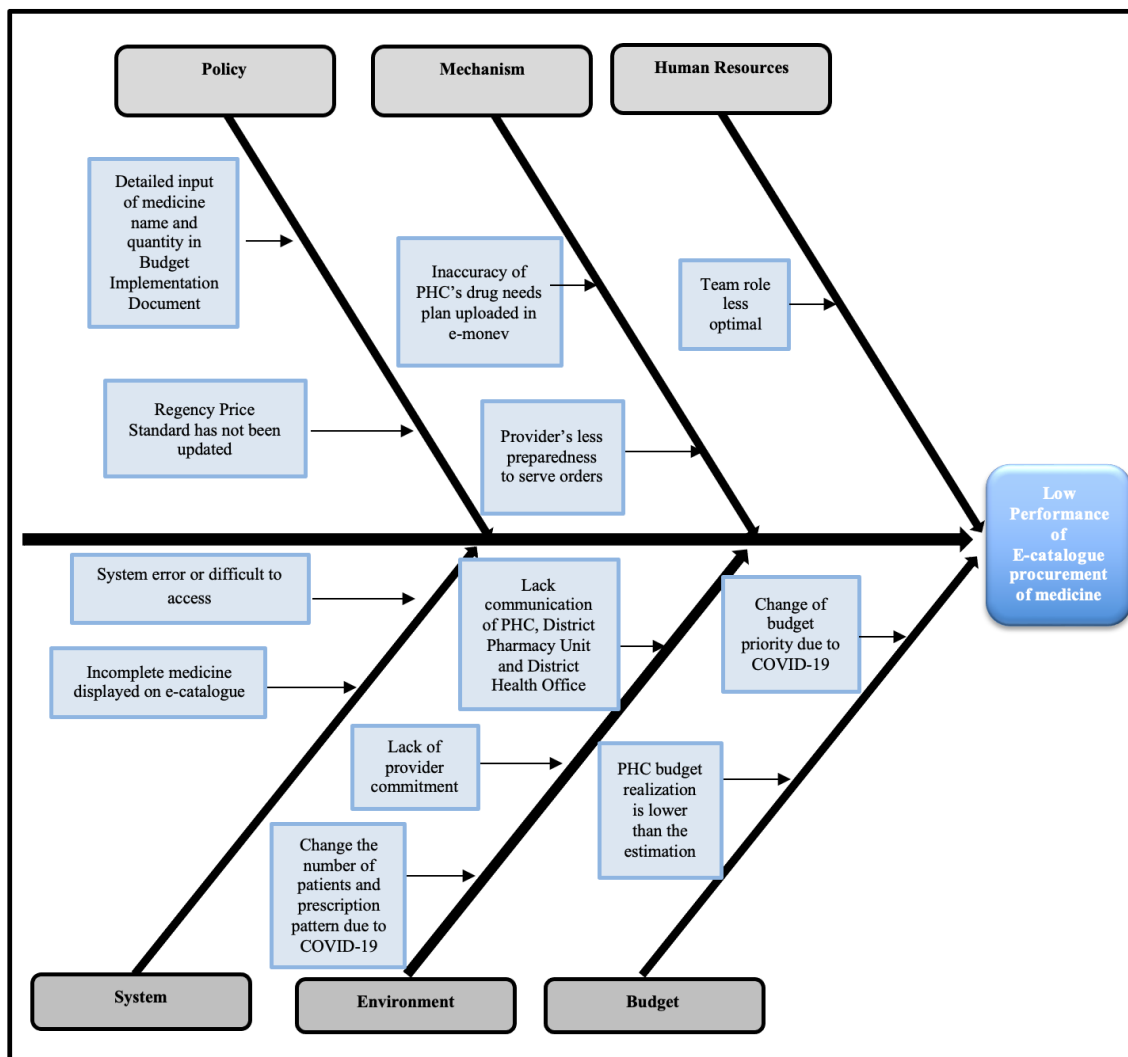

Figure 1. Root Cause Analysis of PHC's E-catalogue Procurement of Medicine in Klaten Regency of Central Java in 2021

3.2.2. *Problem of Human Resources*

The capacity and capability of human resources supported by committed management are very influential in the running of an organization (Rahmawati et al., 2021). Research showed that there were obstacles in the aspect of human resources in e-catalogue procurement of medicine. The new procurement officer did not have user name and password to enter the e-purchasing system so she could not process e-catalogue medicine procurement. Lack of communication with the Regional Procurement Service Agency caused the obstacle drag on until the end of the year. Besides, the Pharmacist was not fully involved to oversee the medicine procurement process. In some PHCs, the role of the team involved in medicine procurement was not optimal and made procurement process delayed. Lack of the number of team involved also caused teamwork less optimal (Faradiba et al., 2022).

3.2.3. *Problem of Policies*

The policy of the Regency Price Standard is very influential in procurement performance. The problem of low realization budget of medicine procurement is rooted in obsolete – needs to be updated - Regency Price Standard in accordance with real e-catalogue medicine price. As

known that the price of e-catalogue medicine far more inexpensive compared with medicine prices on the market (Kusmini et al., 2016), making the remaining budget was too much. Another related issue caused by the un-updated Regency Price Standard was that there were some lower Regency Price Standard medicines compared with medicine prices on the market, which caused the failure of medicine procurement. The need to update Regency Price Standard based on the latest e-catalogue or market survey price become important to support optimal budget utilization.

The policy of composing medicine budget expenses by detailed items and quantities in the Budget Implementation Document greatly reduced the flexibility of medicine planning if a change of disease and prescription pattern happened. Though the BLUD budget is flexible enough to accommodate shifts/ changes in the middle of the year, it has its own challenge for planning accuracy. Dealing with this situation, PHC should compile drug needs plan accurately, and review it several times a year especially when there is an opportunity to change/ shift the budget.

3.2.4. Problem of System

E-purchasing system simplifies the medicine procurement process, however, still needs to be upgraded to accommodate health facilities' necessities (Dianingtyas & Ilyas, 2022). Many medicines in National Formulary were not displayed in the e-catalogue so that they must be purchased through manual direct procurement with higher prices (Anggriani et al., 2020; Dianingtyas & Ilyas, 2022). Gap between National Formulary with drug needs plan, and drug needs plan with e-catalogue expanded in 2019 (Soewondo et al., 2021). Incompatibility among National Formulary and e-catalogue medicine lists become a risky problem considering that both of them are the quality and cost control for JKN Program (Ariati, 2017). Stock out in Pharmaceutical Industry, the winner of e-catalogue medicine supplier, usually caused by obstacles or auction failures in National Procurement Policy Agency and medicine estimated price discrepancy that is used for auction reference (Dwiaji et al., 2016).

Another issue disclosed by the respondent was that the medicine stock value displayed in the e-catalogue system wasn't valid or not in accordance with the real availability. Other studies said that the stock information in e-catalogue was not a real-time information (Dianingtyas & Ilyas, 2022). In fact, the stock value displayed in the e-catalogue system is not the real availability stock in Pharmaceutical Industry, but the remains of estimated drug needs plan from an e-monev system that has not been ordered by the health facilities yet. Thus, it becomes a misperception for e-catalogue users.

Problems of system error or difficulty to be accessed in the e-purchasing system still often occurred and caused delays in the procurement process. E-purchasing website was frequently down and slow in access speed (Dianingtyas & Ilyas, 2022). Whereas incomplete features and unreliable system influence utilization of the system information (Petter et al., 2008).

3.2.5. Problems in Procurement Mechanism

Delay of procurement process frequently happened because PHC had to wait for provider's confirmation of order approval or wait for medicine delivery by the distributor. Communication with Pharmaceutical Industry or Distributor was very important to solve this problem. It was also related to the role of the procurement team in PHC that had not been optimally run to oversee the procurement process.

The lateness of medicine delivery reflected problems in Pharmaceutical Industry or Distributors. Respondents from Pharmaceutical Industry and Distributor said that they had overload orders so that medicine stock and raw materials were less or empty. This stock-out reflected the unpreparedness of the Pharmaceutical Industry as an e-catalogue medicine provider to fulfill medicine orders from all over the Country (Kusmini et al., 2016). Another problem that caused the delay in the e-catalogue process was the lateness of the auction to choose e-catalogue medicine providers held frequently by National Procurement Policy Agency, so PHC had to wait for the appointed provider to start e-catalogue procurement of medicine (Winda, 2018).

Failures of the e-catalogue process experienced by PHC were due to medicine stock out in Pharmaceutical Industry or not enough order value from the minimum value required by Pharmaceutical Industry. Based on information from Pharmaceutical Industry respondents, the cause of medicine stock out was because of the inaccuracy of drug needs plan uploaded in the e-monev system by users a year before the procurement process. The health facility's data of drug needs plan in e-monev was used by Pharmaceutical Industry to calculate and prepare medicine production, so it could be said that the e-monev report is one of the keys to the implementation of e-purchasing (Andi et al., 2018). If the order is bigger than the report, Pharmaceutical Industry or Distributor is going to experience an overload order and the stock is not enough or empty. On the contrary, if the order is lower than the report, then Pharmaceutical Industry or Distributor will bear overstock and suffer from the loss (Dwiaji et al., 2016). Unintegrated system information of e-purchasing and e-monev induce difficulty to monitor the suitability of drug needs plan report with the order realization from health facilities (Winda, 2018).

3.2.6. Problem from PHC's Environment

PHC faced a lack of commitment from the Pharmaceutical Industry or Distributor in the e-catalogue procurement of medicine processes, such as uncertain delivery time of order, nonconformity of quantity delivered with the contract, or medicine stock out. Order rejection in the e-catalogue process by the provider caused a decrease in the user's trust level (Soewondo et al., 2021). Medicine procurement with small quantities and required many documents in PHC made the distributor reluctant. Provider refused to give a guarantee letter to exchange close-to-expiration medicine, whereas Government requires that medicine received by PHC should have at least two years of the expiry date (Kementerian Kesehatan RI, 2008).

Low cost of e-catalogue medicine prices on one side is profitable for e-catalogue users, but on the other hand affecting commitment, medicine, and service quality of the Pharmaceutical Industry, as well as impacting decreasing market availability (Raharni et al., 2018). Auction of e-catalogue medicine providers by LKPP based on the lowest price could impact low service and product quality (Dwiaji et al., 2016). The free delivery cost of the e-catalogue medicines policy also affected the distributor's commitment to serving orders from PHC, some of which are not located in the center of the City/ Regency.

In Klaten Regency, utilization of the DAK budget is managed by District Pharmacy Unit, whereas JKN budget is managed by PHC. Two sources of budget synergized by formulating a deal among PHC and District Pharmacy Unit about medicine items that be purchased by each of them to avoid overlapping budget and medicine overstock. In the implementation of the agreement, there was a lack of communication. No communication about the procurement failure of some medicines in the District Pharmacy Unit caused PHC to deal with worrying medicine availability. Coordination between District Pharmacy Unit and PHC had not run well yet. District Health Office as the parent organization should encourage coordination between District Pharmacy Unit and PHC to be more synergized in medicine procurement.

Another factor outside PHC was the COVID-19 pandemic. The pandemic affected medicine procurement from the budget side and also from the quantities and types of medicine needs in PHC. In terms of the budget, the pandemic has affected the spending posture in PHC. Several PHC were forced to cut the medicine budget for COVID-19 countermeasures. Besides, procurement adjustment should be done due to the changes of disease and prescription pattern. Some medicines related to COVID-19 should be urgently purchased, while some medicines should be deleted from the purchasing list for budget balancing. The changes were the problem in medicine planning (Faradiba et al., 2022). In this condition, the Pharmacist of PHC is encouraged to master medicine management in disaster situation skills. On the other side, the pandemic also caused a change in the availability and price of medicine raw materials, as well as

a change in production planning to prioritize COVID-19 medicines production. This situation affected the ability of the Pharmaceutical Industry to provide e-catalogue medicines.

3.3. Strategy to Improve Medicine Procurement Performance

Improvement strategy is needed to solve the medicine procurement problems. Defining and mapping the root problems helps to formulate the exact and practical strategy. By the root problems in Figure 1, strategies for improving medicine procurement performance in PHC are explained in **Table 4**.

Table 4. Recommendations of Medicine Procurement Performance Improvement Strategy in PHC

Aspect	Root Problem	Strategy Proposed
Human Resources	Team roles are not optimal	Strengthen the communication with Regional Procurement Service Agency Empower team with adequate number and competence
Mechanism	Provider's less preparedness to serve orders	Report the providers that are not respond the orders or not committed to the contract Intensive communication with the provider Impose monetary fines on providers who breach the contract Follow up e-catalogue failure with manual Direct Procurement
	Inaccuracy of PHC's drug needs plan uploaded in e-money	Involve internal team to compile drug needs plan Adjust the PHC's drug needs plan with District Pharmacy Unit's drug needs plan Review drug needs plan when there is a chance to correct data uploaded in e-money or to change the budget
Policy	Regency Price Standard is not updated	Form a team to update Regency Price Standard in accordance with latest price
	Detailed input of medicine name and quantity in Budget Implementation Document	Drug needs plan should be accurate and reviewed several times a year before budget shifting/changing is opened Drug needs plan training for Pharmacist in PHC and District Pharmacy Unit
System	Website error, maintenance, or difficulty to be accessed	Make a report to Regional Procurement Service Agency or National Procurement Policy Agency Offline E-catalogue procurement of medicine with the e-catalogue providers appointed by National Procurement Policy Agency
	Medicines displayed in e-catalogue is not complete	Propose to the National Procurement Policy Agency or Ministry of Health to complement the medicine list in the e-catalogue Follow up with manual Direct Procurement
Budget	Yearly income realization is lower than the estimation	Set minimum budget to maintain medicine availability Prepare buffer stock of medicine accurately
Environment	Lack communication of PHC, District Pharmacy Unit and District Health Office	Intensify the coordination by performing drug needs plan, procurement planning, and realization evaluation meeting Data synchronization before budget implementation document input Strengthen the role of District Health Office to encourage communication and coordination of PHC and District Pharmacy Unit
	Changes in the number of patients and prescription pattern	Drug needs plan and procurement plan review several times a year before shifting/ changing the budget
	Lack of provider's commitment	Intensify the communication with the provider about procurement package and medicine stock Follow up the failure of e-catalogue procurement of medicine with manual Direct Procurement Make a report to the National Procurement Policy Agency about noncommittal provider Ask guarantee letter to exchange medicine with expiration less than two years or to do addendum/ change of contract in medicine amount if it can't be exchanged Prepare drug needs plan uploaded in e-money more accurate, including adjustment with District Pharmacy Unit's drug needs plan

Problems expressed in the study mostly occurred from the beginning of the implementation of e-purchasing until now. It proved that there was a lack of synergy between the Indonesian Ministry of Health, National Procurement Policy Agency, Local Government, Providers (Pharmaceutical Industry and distributor), and health facilities/ PHC, which had an impact on the weakness of the e-purchasing system built. Regardless of existing problems, e-catalogue procurement of medicine through e-purchasing is still the main choice of procurement considering the low cost of e-catalogue medicines, and the simple, transparent and accountable procurement mechanism. Therefore, Government should make proper rules and policies accompanied by rewards and punishment to be obeyed by stakeholders to strengthen the e-catalogue system (Satibi et al., 2022).

The Challenge of medicine supply availability in PHC in the Universal Health Coverage (UHC) era become bigger to guarantee the accessibility of health services for National Health Insurance participants. Thus, the medicine procurement performance of PHC becomes more important for strengthening medicine availability. In this study, the commitment to medicine procurement from stakeholders in PHC was made to ensure the strategy proposal of medicine procurement performance improvement could be applied and enhanced health service quality in PHC in Klaten Regency.

4. CONCLUSION

Obstacles to e-catalogue procurement of medicine in PHC were influenced by internal and external factors. These obstacles occurred in some aspects, were human resources, procurement mechanism, policy, system information, budget, and environment. The obstacles are rooted in the lack of team role of PHC, District Pharmacy Unit, and District Health Office to synergize in accordance with the duty authority, the lack of pharmaceutical industry and distributor commitments in the provision of e-catalogue medicine for PHC, and also the urgent needs of system and regulatory improvement by the Government.

An improvement strategy is formulated based on the root problems, to increase PHC's medicine procurement performance through the synergy of various related parties. Further study is needed to evaluate how significant the strategy could improve the performance of medicine procurement. Accuracy of drug needs plan e-monev is also important to be observed considering that e-monev report is one of keys of e-purchasing implementation.

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