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## ANALYSIS OF CONTINUOUS AMBULATORY PERITONEAL DIALYSIS SERVICE READINESS AT RSUD KOTA BOGOR IN 2023

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**Abstract.** The availability of health service facilities certainly contributes to one of the success factors in the distribution of health services in Indonesia, including renal replacement therapy (RRT) services. Through Minister of Health Regulation (PMK) No. 8 of 2022, the government ensures that patients with end-stage renal disease (ESRD) receive equal access to RRT. One of the efforts to equalize dialysis services is implementing Continuous Ambulatory Peritoneal Dialysis (CAPD) services. Therefore, RSUD Kota Bogor must prepare for CAPD services in its dialysis installations. This research analyzes the readiness and efforts to provide CAPD services at RSUD Kota Bogor. This study employs a qualitative descriptive-analytical approach to examine the preparation and readiness of RSUD Kota Bogor to provide CAPD services. Most of the CAPD service readiness assessment instruments at RSUD Kota Bogor, based on PMK No. 8 of 2022, have been fulfilled, achieving an 80% compliance rate. However, there is still a need to prepare facilities, infrastructure, and Standard Operating Procedures (SPO) that have not yet been completed so that CAPD services can be effectively implemented.

**Keywords:** CAPD, RSUD Kota Bogor, End-Stage Renal Disease

**Abstrak.** Ketersediaan fasilitas pelayanan kesehatan tentunya menjadi salah satu faktor keberhasilan pemerataan pelayanan kesehatan di Indonesia, termasuk pelayanan terapi pengganti ginjal. Pemerintah melalui Peraturan Menteri Kesehatan (PMK) No. 8 Tahun 2022 memastikan pasien penyakit ginjal kronis stadium akhir mendapatkan terapi pengganti ginjal yang merata. Salah satu upaya pemerataan pelayanan dialisis adalah dengan melaksanakan pelayanan *Continuous Ambulatory Peritoneal Dialysis* (CAPD). Oleh karena itu, RSUD Kota Bogor harus menyiapkan pelayanan CAPD di instalasi dialisisnya. Penelitian ini menganalisis kesiapan dan upaya penyelenggaraan pelayanan CAPD di RSUD Kota Bogor. Penelitian ini menggunakan pendekatan kualitatif deskriptif analitis untuk mengkaji kesiapan dan kesiapan RSUD Kota Bogor dalam menyelenggarakan pelayanan CAPD. Sebagian besar instrumen penilaian kesiapan pelayanan CAPD di RSUD Kota Bogor berdasarkan PMK No. 8 Tahun 2022 telah terpenuhi dengan capaian tingkat kepatuhan sebesar 80%. Walaupun demikian, masih diperlukan penyiapan sarana, prasarana, dan Standar Prosedur Operasional (SPO) yang sesuai agar layanan CAPD dapat terlaksana secara efektif.

**Kata kunci:** CAPD, RSUD Kota Bogor, Penyakit Ginjal Kronis

### INTRODUCTION

Health is the right of every individual to want and be able to live healthily and to utilize health services. The constitutional mandate stipulates that the state must provide health service facilities for its citizens (Ayuningtyas, 2020). The availability of health service facilities certainly contributes to the success of equalizing health services in Indonesia. Renal replacement therapy (RRT) services in Indonesia also face challenges in terms of the distribution of services this is due to, among other

things, funding problems, the limited number of facilities that provide or offer CAPD services, and the lack of competent personnel for CAPD (NICE Guidelines, 2018). Peritoneal Dialysis (CAPD) is a type of dialysis that uses the peritoneal membrane as a semipermeable membrane (Kandarini, 2021; John T. Daugirdas MD Peter G. Blake MB, FRCPC, FRCPI Todd S. Ing MB, 2008).

Chronic Kidney Disease (CKD) is in fourth place in the catastrophic disease category, according to data from the Indonesian Health Profile (2020).

Catastrophic diseases are diseases with the highest cost requirements in JKN health services. Kidney failure is in fourth place after heart disease, cancer, and stroke, which contributes to more than 80% of national health financing, as seen in the table below (Kemenkes RI, 2022)

**Table 1.** Major Catastrophic Diseases

Catastrophic	Case	Cost
Cardio	13,041,463	10,275,991,842,618
Cancer	2,452,749	3,543,100,599,385
Stroke	2,127,609	2,549,057,628,672
Renal Failure	1,763,518	2,321,341,773,983
Thalassaemia	224,886	509,199,118,050
Haemophilia	70,999	405,670,839,460
Leukaemia	134,271	361,056,430,870
Cirrhosis Hepatic	183,531	310,924,725,446
<b>Total</b>	<b>19,999,026</b>	<b>20,276,342,958,484</b>

Source: Indonesian Ministry of Health, BPJS Health, 2020

Demand for dialysis services increases along with the increasing incidence of Chronic Kidney Disease. During the period 2007 to 2018, there was a significant increase in hemodialysis procedures. According to data collected by the Indonesian Renal Registry (IRR), the number of active HD patients in West Java in 2018 was 33,828 patients. The growth in the number of active HD patients in West Java from 2014 to 2018 was 26,447, with an average of 5,289 patients per year. With this calculation, when compared with the availability of nurses and machines, the need for nurses is 882 people and the machine shortage is 3,137 machines, as attached in the table below (PERNEFRI, 2018):

**Table 2.** Estimated Machine and Maintenance Needs

	Numbers for 2018	Optimal amount	Lack
Number of active patients	33,828		
Nurse	997	1,879 (2 shifts : 1 nurse serves 3 patients)	882
Machine	2,501	5,638 (2 shifts : 1 machine can be used for 6 people)	3,137

Source: Indonesian Renal Registry (IRR), 2018

Hemodialysis treatment is not the only option for stage 5 Chronic Kidney Disease; other kidney replacement therapy options can be offered as a

treatment solution. Kidney replacement therapy itself consists of dialysis and kidney transplantation. Dialysis is divided into two types: hemodialysis and peritoneal dialysis. The peritoneal dialysis that has been carried out in Indonesia is Continuous Ambulatory Peritoneal Dialysis (CAPD).

The increase in the number of HD procedures will also impact the need to provide machines and human resources, namely dialysis nurses. Due to the increasing need and analysis of the availability of HD facilities, the government has also made policies related to kidney replacement therapy. Regulation of the Minister of Health of the Republic of Indonesia No. 8 of 2022, which regulates health support activities in the form of dialysis services in hospitals, states that dialysis units must provide hemodialysis and Peritoneal Dialysis services (Lydia, 2020).

According to Novelia et al., (2017), Peritoneal dialysis (PD) is much more efficient and effective in managing stage 5 CKD patients who require TPG when compared to hemodialysis, in terms of financing and in terms of the patient's quality of life. According to studies, the quality of life of CAPD patients is higher compared to HD (Novelia, Nugraha and Thabrany, 2017; Jain and Simoyi, 2008). Peritoneal dialysis services in Indonesia, namely CAPD, according to data from the 2018 IRR, show a figure that is still very small. The proportion of new patients who chose CAPD therapy in 2018 was deficient compared to hemodialysis, namely only around 2%. An increase in the number of patients with end-stage chronic kidney disease who require Renal Replacement Therapy (RRT) will have a significant impact on the economy. Currently, RRT options are available: hemodialysis (HD), peritoneal dialysis (PD), and kidney transplantation. Using CAPD can be a solution for equalizing kidney services in Indonesia because it has advantages, namely it can be done independently by the patient, it is more economical in terms of costs, and it has a better quality of life.

RSUD Kota Bogor, the only government-owned hospital in Bogor, has been providing dialysis services since 2015, but the services provided are limited to hemodialysis. Data on the number of hemodialysis service visits at the RSUD Kota Bogor has increased from 2017 to 2021, where all service visits to the dialysis installation are providing routine hemodialysis, cito hemodialysis, hemodialysis for patients with positive HBsAg, positive anti-HIV, and positive anti-HCV.

Through Minister of Health Regulation (PMK) no. 8 of 2022, the government regulates that patients with end-stage chronic kidney disease receive

equitable renal replacement therapy. One of the efforts to equalize dialysis services is to start utilizing CAPD services so that kidney disease sufferers can easily access the health services they need. To improve access and quality of health services per PMK No. 8 of 2022 regarding the treatment and care of kidney disease sufferers, RSUD Kota Bogor needs to fulfill additional requirements for Peritoneal Dialysis services in hospitals.

**METHOD**

This type of research is qualitative research with a descriptive-analytical approach in order to explore and examine the preparation and readiness of the RSUD Kota Bogor in providing CAPD services. This qualitative approach was chosen to get answers to problems or issues raised by researchers by exploring the experiences of people related to the problem or issue (Wibowo, 2014). In this research, interviews were conducted face-to-face and also in writing via communication applications. This research will also review and use documents as secondary data. Document review refers to the checklist PMK No. 8 of 2022 concerning Standards for Business Activities and Products in implementing Risk-Based Business Licensing in the Health Sector.

**RESULTS**

*Characteristics of Informants*

Informants who participated in this research were the deputy director, head of the section, head of the division, sub-corridor, quality assurance, head of the installation, head of the room, and nurse implementing HD. Most informants were men, with the most recent education being a master's degree and the most years of work being between one and five years.

*Document Completeness*

Requirements for complete documents include a valid hospital operational permit, valid dialysis service operational permit, valid service change permit, as well as registration reporting to the Health Service and IRR. The completeness of the licensing documents for the RSUD Kota Bogor by Check List PMK No.8 of 2022 in Table 3 shows that all documents have been fulfilled.

The completeness of the licensing documents for the RSUD Kota Bogor by PMK Check List No.8 of 2022 in Table 1 above shows that all documents have been fulfilled, but there is 1 point in the registration reporting section of RSUD Kota Bogor that does not report registration to the Bogor City Health Service. Per the data collected, the completeness of the licensing documents for RSUD Kota Bogor has only been fulfilled at 80%.

**Table 3.** Completeness of Licensing Documents

No.	Completeness	Information	Evaluation		Notes
			Available	Not Available	
1.	Valid hospital operational permit		√		
2.	Service operational permit ongoing dialysis		√		
3.	Permit to change services that is still valid		√		
4.	Registration Reporting to the Health Office and Indonesian Renal Registry (IRR)	2 times/ year Per month	√		Registration Reporting only to IRR
5.	Dialysis services consist of hemodialysis and peritoneal dialysis with a CAPD patient target of 10% of all patients				target of 10% achieved within 3 years after CAPD service started

*Human Resources Readiness*

A critical factor in health service readiness is human resources. Human Resources (HR) are people or individuals who work productively as the driving force of an organization and function as assets, so they must be given training and develop their abilities. The human resources required in an HD installation include an HD quality guarantor

(supervisor), an HD implementing doctor, and an HD nurse. According to PMK checklist No. 8 of 2022, most of the human resources in dialysis installations are fulfilled; only a few human resources need to be included, such as pediatricians, consultant nephrologists, and administrative staff. Based on this checklist (Table 4), the RSUD Kota Bogor has only met 77% of its human resource

readiness. It's just that the position of the Bogor City Regional Hospital, which is currently still in the stratification of intermediate-class referral hospitals, means that the unavailability of nephrology consultant pediatricians is still categorized as complete.

**Readiness of Facilities and Infrastructure**

The facilities and infrastructure that must be met are four significant parts: room provisions, medicine, medical equipment and consumable medical goods (BMHP), waste treatment, and

infrastructure. From the PMK checklist no. 8 of 2022, there are still several medicines and medical equipment that are not yet available in the provision of CAPD services. Based on the facilities and infrastructure parts (Table 5), the readiness for CAPD services in this segment at the RSUD Kota Bogor is 85%. Most of the facilities and infrastructure have been met due to joining hemodialysis. For the provision of facilities and infrastructure that have not been met, the head of the room has made a proposal for the procurement of facilities and infrastructure based on the minimum needs for CAPD services.

**Table 4.** Completeness of Licensing Documents

Completeness	Information	Evaluation		Notes
		Available	Not Available	
If DPJP is a SpPD-KGH	Diploma, STR-KT Kidney Hypertension, SIP	√		DPJP is a SpPD, K-GH
If DPJP SpPD:	Diploma, dialysis training certificate, STR KT standard dialysis, SIP			
General Practice	Diploma, STR, dialysis training certificate, SIP	√		
Nephrology Consultant Pediatrician	Diploma, STR KT Child specialist. nephrology, SIP		√	
Certified Nurse	Diploma, STR, SIP and training certificate	√		
Nurse	Diploma, STR and SIP as an ordinary nurse	√		
Electro-medical Technician	Electro-medical technician	√		
Dietitian	Diploma, STR and SIP Dietitian	√		
Pharma-ceutical staff	Diploma, STR and SIP for pharmaceutical staff	√		
Adminis-tration staff	Diploma and Placement Decree/Letter of Assignment for administrative staff		√	Diploma (+) SK (-) Admin staff is managed by a vendor

**Management Commitment**

As a service that is not yet running, CAPD services require support from the management of the RSUD Kota Bogor as policymakers. This support is in the form of commitment from management to this CAPD service. From the results of interviews, all informants, especially structural and functional officials, have the same commitment to providing this CAPD service. However, regarding facilities

and infrastructure, it has yet to be met because the disposition letter for procurement has yet to be received. The form of hospital management commitment is not only in the form of a statement that all levels of management are committed to this CAPD service but also in the form of reporting that is carried out routinely in the form of registration reporting to the IRR every month.

**Table 5.** CAPD Facilities and Infrastructure

Facilities and Infrastructure	Exist (√) / Not (-)
a. Room conditions are:	
1) One adequate space area	√
2) Ease of access from dialysis installations to CAPD services	√
3) Minimum room: admin room, management, service room	√
b. Medicines, medical devices, BMHP CAPD, at least consist of:	
1) Dialysate fluid (glucose-based; 1.5%;2.5%) for education/training needs	-
2) Minicap	√
3) Disposable syringes	√
4) Mask	√
5) Gloves	√
6) Heparin	√
7) Antiseptic	√
8) Liquid scales	-
9) Body scales	√
10) Peritoneal dialysis mannequin for training demo	-
11) Infusion pole	√
c. Medical Waste Processing	√
d. Infrastructure, consisting of:	
1) Cleanliness	√
2) Ventilation	√
3) Lighting	√
4) Have a work and fire safety system	√

**Management Process**

**Planning Readiness**

In this research, planning was created as a basis for determining efforts in preparing CAPD services at the RSUD Kota Bogor, depicted in table 6. From the interview results, planning for preparing CAPD services was carried out; however, during the observation, some of the facilities and infrastructure were not yet in the room. Further discussion and in-depth interviews are needed regarding the availability of facilities and infrastructure that have been proposed but have not been realized.

**Organizing Readiness**

From the results of in-depth interviews with related units from the director level to the head of the room, the competence and authority of officers at HD installations have met the requirements in terms of human resources, which will then be applied to CAPD services. However, when this research was conducted, the management had not

yet implemented the CAPD team's formation. The formation of the CAPD team must be carried out based on recommendations, and the Main Director of the RSUD Kota Bogor must make a decree on its formation.

This hospital has a Consensus Decision Making Group (CDMG), which forms the CAPD team with the hospital management. The CAPD team itself consists of an Internal Medicine Specialist, Kidney Hypertension Sub Specialist; Digestive Surgeon (If the Renal Hypertension Sub-Specialist does not have clinical authority in installing Tenckhoff); Surgeon; Clinical Pathology Specialist; General Practitioner certified in dialysis; Dialysis Nurse with CAPD authority; Dietitian (nutritionist) or Clinical Nutrition Specialist; Pharmacist; Administrative Officer; and Homecare worker.

**Table 6.** CAPD Service Preparation Efforts

No.	Planning	Responsible	Time Target
1.	Vendor Determination	Medical Services	August 2023
2.	Procurement of CAPD training props	Vendors	August 2023
3.	Procurement of CAPD related drugs	Support	August 2023
4.	Procurement of medical equipment related to CAPD	General Affair	August 2023

Source: Dialysis Installation Data

**Implementation Readiness**

Implementation readiness in this research is to look at the process of preparing CAPD services at the RSUD Kota Bogor based on the provisions in PMK no. 8 of 2022, which appears in table 7. These requirements include general requirements, special requirements, and infrastructure. The hospital has already met the general provision of CAPD services, mainly in the context of health workers, but it still has to complete the facilities and infrastructure.

Apart from the general, specific requirements and infrastructure, to see implementation readiness, service aspects are needed for this CAPD service. At the implementation stage, the general and specific requirements have been met, but the complete facilities and infrastructure have not been met. Apart from general and special requirements and infrastructure, to see readiness for implementation, service aspects are needed for this CAPD service. Most of the completeness in the service aspect has not been met, such as the service schedule, patient list, SOP, type of activity, medical records, and CAPD adequacy records. Meanwhile, the schedule

for doctors and nurses already exists because they have joined the hemodialysis service. In percentage terms, completeness in the service aspect has only been met at 30%.

**Monitoring Readiness**

The supervision aspect in this research refers to the checklist based on PMK no. 8 of 2022, covering several activities described in table 8. Based on the checklist for supervision aspects above, it appears that the Supervisor has undergone a supervision process by carrying out mentoring/supervision activities for health workers and patients, so compliance with this supervision aspect is 100%. From the results of interviews so far, the Supervisor or dialysis quality guarantor at RSUD Kota Bogor has carried out activities, including lay seminar

aimed at HD patients with material about HD, CAPD, nutrition, surgery, etc and the "Clinical Dialysis" activity is a scientific activity sharing knowledge between specialist doctors, general practitioners, HD nurses, and internship doctors.

This activity is carried out to develop knowledge and increase understanding. Not only do they routinely transfer knowledge to health workers in the HD area, but supervisors also hold educational activities for patients by holding lay seminars. This fulfills the supervision requirements in preparing CAPD services at the RSUD Kota Bogor based on PMK No. 8 of 2022. According to previous research on CAPD, a thorough understanding of CAPD can increase the number of CKD patients who choose CAPD services (Lydia, 2020).

**Table 7.** Standard CAPD Service Requirements based on PMK No. 8 of 2022

No.	Completeness	Information	Evaluation		Notes
			Available	Not Available	
<b>CAPD</b>					
1.	Schedule	CAPD schedule		√	
2.	Patient List	Patient schedule		√	
3.	Standard Operating Procedures	SOP Document		√	
4.	Types of activities served	Consultation		√	
		Taking a prescription for dialysate fluid			
		CAPD patient training			
		PET examination			
		Adequacy check			
5.	Doctor's schedule	Schedule of general practitioners and DPJP at CAPD poly	√		if there is more than one general practitioner and DPJP
		Number and schedule of CAPD Poly services	√		
7.	Nurse to patient ratio	1:30 for dialysis nurses	√		whether to fulfill it or not, if it is not fulfilled, state the reasons and plans
8.	Medical record	Completeness of filling in medical records		√	
9.	Supervision of service quality	There are quality indicators		√	
10.	CAPD adequacy	Kt/V, Creatinine clearance		√	

**Table 8.** Monitoring Aspects based on PMK No.8 of 2022

No.	Type of Activity	Information	Evaluation	
			Available	Not Available
1	Supervisor	Assignment letter from Pernefri for SpPD-KGH and/or IDAI for Nefrologis Pediatric	√	
2	Supervision by supervisor	Offline and online supervision activities	√	
3	Knowledge transfer, consultation	all activities with health workers	√	
4	Supervision of patient services/education	all activities with patients by online and offline	√	

**DISCUSSION**

**Readiness of CAPD Services Based on PMK Checklist No. 8 of 2022**

CAPD services at RSUD Kota Bogor must be carried out starting September 2022 as a condition for extending dialysis service permits and are targeted to meet 10% of the total number of HD patients. CAPD service readiness is assessed based on PMK no. 8 of 2022, which includes administrative requirements, human resources, infrastructure, and service commitment. This research cannot be compared with previous research because there was no previous research regarding CAPD service readiness analysis until the researchers conducted this research. However, suppose you look at other similar research regarding the analysis of health service readiness. In that case, there is something in common: the document review refers to the Law or Ministerial Regulation (Pasca *et al.*, 2017).

**Document Completeness**

Document completeness requirements include: valid hospital operational permit, valid dialysis service operational permit, valid service change permit, and registration reporting to the Health Office and IRR. For registration reporting to the health office, Bogor City Hospital has not yet reported and registration reporting to the IRR is ongoing. The fulfillment of the patient target determined by PMK No. 8 of 2022, namely 10% of all HD patients running until this study was conducted, has not been achieved, this is because the CAPD service has not been running due to the lack of several infrastructure such as: dialysate fluid, fluid scales, and peritoneal dialysis mannequins for training demonstrations. According to the relevant party, the fulfillment of this infrastructure is related to the appointment of a vendor that has not been implemented. During this study, several preparations have begun, but several things such as

drugs, medical devices and the formation of a team to support CAPD services have not been met. This is related to the failure to determine the vendor or third party in the implementation of CAPD.

**Human Resources Readiness**

One of the important factors in the readiness of health services is human resources. Human Resources (HR) are people or individuals who work productively as the driving force of the organization, who function as assets so that they must be given training and development of their abilities (V, 2021) Assessment of the readiness of human resources (HR) that must be met according to PMK No. 8 of 2022, includes: HD Patient Responsible Doctor (DPJP), on-call doctor, pediatrician nephrology consultant, skilled nurses, regular nurses, electromedical technicians, dieticians, pharmaceutical personnel and administrative staff.

In HR readiness, the need for pediatrician nephrology consultants is currently still unfulfilled, for the position of the Bogor City Hospital which is currently still in the stratification of a Madya referral hospital, the unavailability of pediatrician nephrology consultants is still categorized as complete. For administrative staff, they currently do not have a decree because they are still managed by a third party so they are not employees of the Bogor City Hospital. The patient's responsible physician (DPJP) in the dialysis unit can be an internal medicine specialist with additional dialysis training competency or an internal medicine specialist subspecializing in hypertension kidney. In one dialysis unit, only 1 DPJP is needed, but if the DPJP is a hypertension kidney subspecialist, then the DPJP can function as a supervisor or quality assurance in the unit.

In this study, the fulfillment of the need for Dialysis DPJP has been met and the DPJP at the Bogor City Hospital functions as a quality assurance



of dialysis. In addition to DPJP, HR in the dialysis unit also requires cooperation between sections, namely on-call doctors, HD nurses, electromedical technicians, dieticians, pharmacy personnel and administrative staff. In this study, all HR needs have been met, only the administrative staff in the Hemodialysis Installation are employees employed by a third party. This means that the administrative staff are not employees of the Bogor City Hospital. In the in-depth interviews conducted, the function of the administrative staff in this HD installation runs according to the needs of the installation and carries out obligations according to the main tasks given by the installation. The policy of PMK no. 8 of 2022 states that administrative staff must have a diploma and Director's Decree. Currently, administrative staff have a diploma but do not have a Director's Decree for appointment as administrative staff, so it is deemed necessary to make a Director's Decree in determining them as administrative staff.

### **Readiness of Facilities and Infrastructure**

The three facilities that have not been met are the main facilities needed, because they are the initial facilities needed for training patients and families before undergoing CAPD. The unavailability of these three suggestions is due to the absence of a third party or vendor appointment to provide and participate in training patients and nurses in this CAPD service. For the provision of facilities and infrastructure that have not been met, the head of the room has made a submission for the procurement of facilities and infrastructure based on the minimum needs of CAPD services.

### **Management Commitment**

The form of commitment is carried out by making periodic reports regarding CAPD actions to the Indonesian Renal Registry (IRR) and also to the Bogor City Health Office. When this study was conducted, management commitment was already running for HD services. This can be used as an example for its application to CAPD services at Bogor City Hospital.

### **Planning Readiness**

Planning is defined as an activity that details the goals that an organization wants to achieve and makes decisions at the beginning of the activity regarding decisions about what actions should be taken appropriately (Hasibuan, 2017). RSUD Kota Bogor carries out planning in this CAPD service in accordance with the needs of fulfilling minimum service standards based on PMK No. 8 of 2022.

### **Organizing Readiness**

The formation of this CAPD team must be carried out based on recommendations and a decree for the formation of the CAPD Team by the

President Director of the Bogor City Hospital. In the CDMG, the need for the formation of this CAPD team has been discussed and management agreed to move quickly in the formation of the CAPD team so that it can be formed immediately. The CAPD team itself consists of: 1) Internal Medicine Specialist Sub-specialist Kidney Hypertension; 2) Digestive Surgeon (If the Kidney Hypertension Sub-specialist does not have clinical authority in installing Tenckhoff); 3) General Surgeon; 4) Clinical Pathology Specialist; 5) General Practitioner certified in dialysis; 6) Dialysis Nurse with CAPD authority; 7) Dietitian (nutritionist) or Clinical Nutrition Specialist; 8) Pharmacist; 9) Administration Officer; 10) Homecare Officer.

### **Implementation Readiness**

The implementation of readiness carried out in this CAPD service includes: general requirements, special requirements, facilities and infrastructure, and readiness aspects. General and special requirements as well as facilities and infrastructure have been met and explained in the previous sub-chapter. In the CAPD service aspect based on the PMK No. 8 of 2022 checklist, most have not been met, such as: service schedule, patient list, Operational Service Standards (SOP), types of activities served, medical records, CAPD service quality control, and CAPD adequacy. The creation of SOPs is the main activity that needs to be carried out at the start of the service including in the preparation of this CAPD service.

### **Monitoring Readiness**

Supervision readiness for CAPD services has been carried out, by transferring knowledge to health workers in the hemodialysis installation environment. Not only does the supervisor routinely transfer knowledge to health workers in the HD scope, but the supervisor also holds educational activities for patients by holding public seminars. This has met the supervision requirements in preparing CAPD services at the Bogor City Hospital based on PMK No. 8 of 2022. In short, the researcher tried to make a table that describes the percentage of CAPD service readiness at the Bogor City Hospital. The assessment of readiness in general if averaged is 81%, where in organizing is the lowest at 0%, because in the organizing part what is most needed is the formation of the CAPD Team. Until this research was conducted, there was no CAPD Team.

### **CONCLUSION**

The process of preparing CAPD services has been carried out by the Bogor City Regional Hospital, including human resources, facilities and infrastructure, and hospital management

commitment. The licensing documents for preparing CAPD services at RSUD Kota Bogor were completed following the PMK checklist No. 8 of 2022. The readiness of human resources at RSUD Kota Bogor for CAPD services is currently considered ready, but a CAPD Team has not yet been formed so that this service can be provided. taking place. The readiness of facilities and infrastructure for CAPD services at RSUD Kota Bogor is still incomplete. The readiness of facilities and infrastructure for CAPD services at RSUD Kota Bogor is still incomplete. From the observations and in-depth interviews, researchers found that several medical devices and medicines in-service preparation were not yet fulfilled. This obstacle can be overcome by appointing a vendor or third party so that these needs can be fulfilled immediately.

All management has the same commitment in efforts to support the implementation of CAPD

services at the Bogor City Regional Hospital. This management commitment shows that the hospital supports and is willing to implement the policies made by the Ministry of Health. Follow-up action to address obstacles in CAPD services was carried out with the CDMG. Through the results of the CDMG, all decision makers coordinate with related parties, such as preparing an SPO for CAPD services which is then approved by the Hospital Director for implementation by the implementer.

In summary, the researcher tried to create a table that describes the percentage of CAPD service readiness in the Bogor City Regional Hospital, as seen in table 9. The overall readiness assessment on average is 80%, where organizing is the lowest, namely 0%, because the part of organizing that is most needed is the formation of a CAPD Team. Until the time this research was conducted, there was no CAPD Team.

**Table 9.** Assessment of CAPD Service Readiness at Bogor City Hospital Based on PMK no.8 of 2022

No.	Parameter	Instrument	Target	Achievements	Percentage
1.	Structure	Document	5	4	80%
		Human Resource	9	7	77%
		Facilities And Infrastructure	19	16	84%
		Commitment	18	18	100%
2.	Process	Planning	4	4	100%
		Organizing	1	0	0%
		Implementation	10	3	30%
		Supervision	4	4	100%
3.	Outcome	Readiness	70	56	80%

**Table 10.** Proposed Action Plan for Preparing CAPD Services at RSUD Kota Bogor

No.	Constraint	Proposed Action Plan
1.	Facilities and infrastructure that have not been met.	Make an appointment with vendors for CAPD services immediately so that we can follow up on the procurement of facilities and infrastructure that have not been met.
	Reason: Coordination between departments takes a long time. Vendor appointment for CAPD services has not yet been made.	
2.	There is no CAPD Team Decision Letter yet.	Proposed the formation of a CAPD team which then made regulations in the form of a Director's Decree regarding the appointment of the CAPD team.
3.	Standard Operational Procedures for CAPD services do not yet exist.	Prepare CAPD service Standard Operational Procedures (SOP) which are then approved by the Director.
4.	There are no medical records for CAPD patients.	Coordinating with SIMRS to create electronic medical records for the CAPD service format.
5.	There are no quality indicators yet.	Preparation of quality indicators. Make a CAPD adequacy assessment.

## RECOMMENDATIONS

Overall, RSUD Kota Bogor is quite ready to prepare CAPD services. However, there are several things that need to be monitored more aggressively, namely in the procurement of facilities and infrastructure. From the research results, it can be concluded that there are obstacles that need to be discussed further in the Consensus Decision Making Group (CDMG) with management in order to produce suggestions that can become a reference for implementing the strategy that the researcher is trying to make in the table 10.

This proposed strategy has been discussed in the Consensus Decision Making Group (CDMG) with all levels of management led by the Main Director of the Bogor City Regional Hospital. The proposal given is an effort to prepare that has not been carried out during this study. The proposal does not require large costs because it is a requirement for organizing CAPD services, including: making SOPs, making Director's Decrees, and coordination related to medical records.

Referring to the results of the research conducted, the researcher made recommendations for preparing CAPD services, there are: RSUD Kota Bogor Management formed a CAPD TEAM and then ratified it with a Director's Decree; RSUD Kota Bogor Management together with related parties create a marketing strategy for CAPD services so that the service target of 10% is achieved within a maximum of the next 2 years; RSUD Kota Bogor management makes decisions regarding the work status of administrative officers so that a Director's Decree is then issued; Management of RSUD Kota Bogor carries out monitoring regarding the procurement of facilities and infrastructure that are still not met so that they can be fulfilled immediately by collaborating with related fields; Dialysis installations need to create Standard Operating Procedures (SOP) regarding CAPD services, which are then ratified by the Director's Decree; Coordinate with SIMRS and Medical Records for completeness in filling out CAPD medical records which are separate from HD.

The others recommendations for preparing CAPD services are The Dialysis Installation coordinates with the Hospital Quality Committee to create CAPD quality indicators; The Dialysis Installation coordinates with DPJP and the Laboratory to assess CAPD adequacy by conducting regular Kt/V, Creatinine and Clearance checks on CAPD patients; and RSUD Kota Bogor coordinates with a network of health facilities in Bogor City to provide education and counseling regarding Chronic Kidney Disease, its prevention and therapy options.

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