

GOVERNANCE OF COMMUNITY NURSES PARTICIPATION IN THE RENAL CARE CENTER: A DOCUMENT REVIEW

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Abstract

The emergence of new regulations regarding the mandatory ownership of new Peritoneal Dialysis Units (PD Units) in regional hospitals in Indonesia creates new problems for PD patients after undergoing therapy. They need treatment by CAPD professionals who are still on the move. This study aims to discuss how far the community nurses are involved in the management of patient care in the PD unit so that an overview of their duties and functions is obtained in handling PD patients in the CAPD unit under management nursing. This document review used PRISMA analysis. Data were taken from Google Engine, with keywords: Peritoneal Dialysis, community nursing, and public health. Select documents from reputable journals for the last five years. The documents that were filtered (n=14) all met the search criteria for documents according to keywords. There were only two documents (n = 2) that raise the issue of community nurses and their role specifically in PD units in the community. The most discussed role was training (n=5). The challenges were bureaucracy or government regulations. This study recommended that community nurses could be empowered to care for PD patients after getting short CAPD training.

Keywords— CAPD unit, community nurses, peritoneal dialysis.

INTRODUCTION

The government's latest regulations regarding the need to have a Continuous Ambulatory Peritoneal Dialysis (CAPD) unit for every hospital raise questions about the continuation of nursing care for CAPD patients in the community (Kemenkes RI, 2022). This is because chronic kidney disease (CKD) patients with peritoneal dialysis (PD) therapy who live in remote areas far from healthcare facilities require health services (Afzal et al., 2021). Therefore, the involvement of various related parties, especially the role of community nurses needs to be considered (Li et al., 2021). In general, nurses have roles and functions as clinicians, advisers, coordinators, consultants, educators, researchers, and managers (Belita et al., 2022; Fawaz et al., 2020). Community nurses in Indonesia have an active role in handling public health problems (Shalahuddin et al., 2019).

They are at the forefront of individuals, families, groups, and communities both from the aspects of promotion, prevention, and rehabilitation (Huang et al., 2020). They are actively involved in activities related to managing cases of chronic kidney failure (CKD) in the community, from early identification of cases to follow-up (Hardy et al., 2021). The prevalence rate of CKD in Indonesia will increase by 0.38% in 2022 (Databox, 2022). Meanwhile according to Riskesdas data estimates that 3.8% of the population suffers from chronic kidney failure (IRR, 2018). The Indonesian Renal Registry (IRR) recorded only about 10% report and there are still around 2000 patients receiving CAPD therapy (IRR, 2018). However, the number of CAPD nurses is very limited. Currently, there are around 2000 CAPD nurses spread throughout Indonesia, the majority in Jakarta, West Java, Central Java, East Java, Yogyakarta, and Bali (IPDI, 2017).

Several studies have discussed the roles and functions of CAPD nurses in hospitals, clinics, and health centers, including in CAPD units (Acob, PhD & Martiningsih, 2018; ICN, 2021; Ofei et al., 2020). The roles and functions of CAPD nurses are divided into two parts, namely the roles of clinical specialists and general clinicians (Yetti, 2007). Clinical specialist includes roles and functions that only those who are qualified and certified are legally allowed to perform CAPD nursing procedures (Yang & Dong, 2020).

While the role of the general clinician of nursing can be performed by general nurses who have received CAPD training Afzal & Hardy, (2021). Otherwise, it requires a review of where community nurses can contribute to renal care for CAPD patients in the community. In one of his studies, Afzal discussed the role of Homecare Nurses in treating PD patients in South Sulawesi (Afzal & Hardy, 2021). The same researcher conducted a study in Aceh where the involvement of public health center nurses was suggested to be empowered to anticipate a shortage of PD nursing human resources in remote areas (Afzal et al., 2021). The results of those two studies prove that the potential for empowering community nurses to sharpen their competence through PD training is worthy of consideration.

This document review research with a descriptive design seeks to explore the governance of community nurse participation in kidney service centers as an implementation of public health services. The goal was generally to know the roles, duties, and functions of community nurses in the renal care center as part of public health services, especially in cases of chronic kidney disease (CKD). The implications of this research will help formulate specific tasks and responsibilities of community nurses for CKD patients who need CAPD therapy. Another positive impact was to provide added value to research related to therapy and CAPD nursing from a community health nursing perspective

RESEARCH METHODS

This research using a document review method with descriptive design was supported by PRISMA Analysis. Primary data was filtered from Google Engine. The keywords were CAPD unit, community nurses, peritoneal dialysis, public health services. Documents obtained from reputable journals on websites belonged to Google Scholar, Research Gate, PubMed, and Semantic Scholar were extracted for the last five years (2018-2023). Other supporting documents came from the Ministry of Health of the Republic of Indonesia, government the health offices, the central statistics agency, and the world health agency (WHO).

The stages of data processing according to PRISMA Analysis include Identification, Screening, Eligibility, and Included. Only documents that focus on keywords were retrieved to see their suitability for the topic. Other data that was lacking or out of focus were deleted. The last stage was a review where screening was carried out not only on keywords but also languages (English and Indonesian), research methods, and results (showing clear recommendations). The inclusion criteria were CAPD or peritoneal dialysis, community nursing, and public health services, in English and Indonesian which were filtered using the words 'AND' and 'OR'. The exclusion criteria were all documents that were irrelevant to the title or more than 5 years of publication. Data were analyzed descriptively

RESULTS AND DISCUSSION

PRISMA analysis

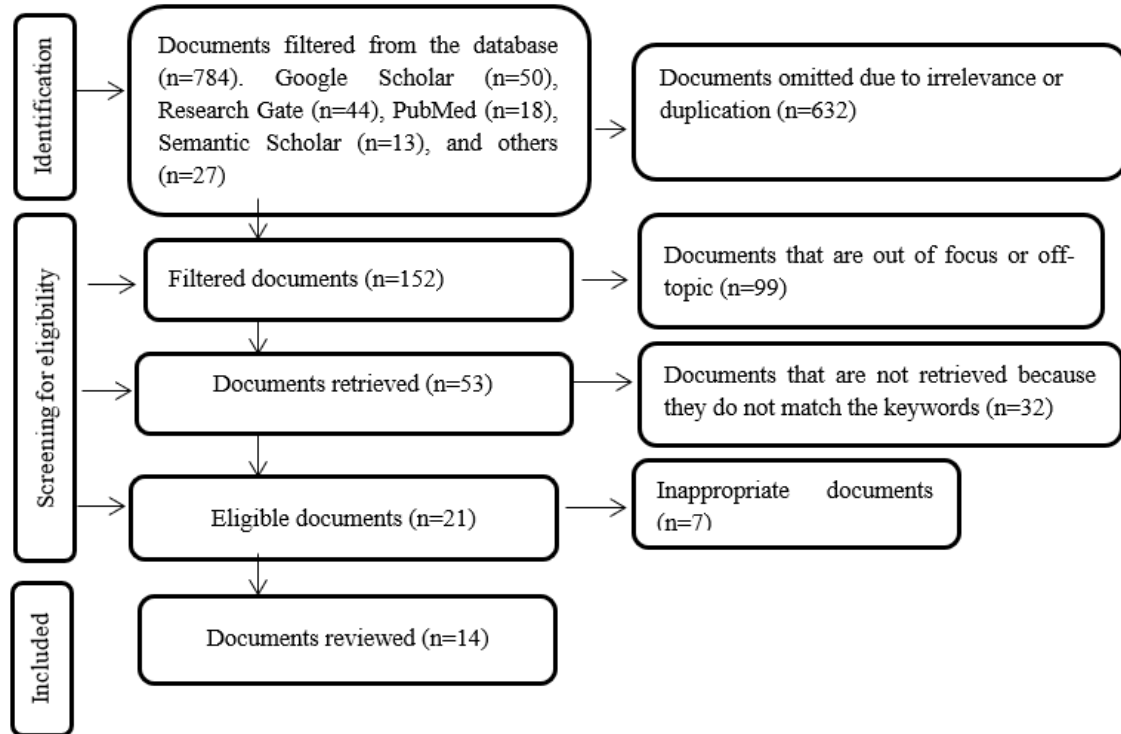


Diagram1: PRISMA Analysis Results

Reviewed Documents

Table1: List of the Reviewed Documents (n=14)

No.	Title, Author, Year of Publication, and Country	Methods, Design, Instruments, Population,	Results
1	Improving Public Awareness On Peritoneal Dialysis Through Public Health Nurses, Afzal et al., 2021, Indonesia	Document review. Descriptive design, using PRISMA Analysis. The study reviewed 28 documents, 15 were in English, and 13 in Indonesian.	Acehnese has the potential to develop the CAPD program through the Public Health Center nurses. The challenges include training, government bureaucracy, and a small number of nurse specialists (Afzal et al., 2021).
2	Optimizing The Roles Of Homecare Nurses In Continuous Ambulatory Peritoneal Dialysis Nursing, Afzal & Hardy, 2021, Indonesia	Document review. Descriptive design, using PRISMA Analysis. The study reviewed 25 documents, 20 (80%) were related to the study, 14 journals (56%)	Homecare nurses to be involved in CAPD nursing. It is supported by the survey where 79 respondents (98.5%) agreed with CAPD basic training to improve HC

3	<p>Effects of Modified-Continuous Ambulatory Peritoneal Dialysis (CAPD) Patient's Handling Process on Nurse's Knowledge, Perceived Benefits and Performance in CAPD Care, Promjak et al., 2021, Thailand.</p>	<p>were in English, and 6 in Indonesian.</p> <p>The quasi-experimental study, 47 nurses in sub-district health promoting hospitals (HPHs) of Nan general hospital renal node which completed the standard protocol were assigned to an experimental group, which received the modified-CAPD patient's handling process intervention. The intervention covered both case management and a CAPD web-based program. A mixed method of activity-based costing and step-down was used. The capital costs include land, building, medical equipment, and furnishing. The recurrent costs include staff emoluments, facility utilities, patients' medical costs, and dialysis consumables. One-way sensitivity analysis was performed to investigate the variability in the data. One hundred and forty-one patients (82%) completed the study consisting of 77 patients with HD and 64 patients with CAPD.</p>	<p>nurse's competency (Afzal & Hardy, 2021)</p> <p>Intervention should be implemented in other primary care facilities to improve the quality of care for CAPD patients (Promjak, 2021).</p>
4	<p>The Cost of Dialysis In Malaysia: Hemodialysis And Continuous Ambulatory Peritoneal Dialysis, Surendra et al., 2018, Malaysia.</p>	<p>Members of the group filled in a pro forma with the headings of personal experience, country experience, who are the assistants, funding of asPD, barriers to growth, what is needed to grow, and the top three priorities.</p>	<p>In CAPD, there are minimal sensitivities except for the 5% discount rate. Knowledge of the costs of modalities is useful in the context of planning for dialysis services and optimizing the number of kidney failure patients treated by dialysis (Surendra et al., 2018).</p>
5	<p>Availability of assisted peritoneal dialysis in Europe: call for increased and equal access, Brown et al., 2022, European countries.</p>	<p>Systematic review with a descriptive design. PRISMA Analysis as a systematic review through 103 document searches, identifying keywords and reviewing articles from</p>	<p>Only 5 of the 13 countries surveyed publicly provided funded reimbursement for asPD. The use of asPD depends on overall attitudes towards PD, with all respondents mentioning the need for nephrology team education and/or patient education and involvement in dialysis modality decision-making (Brown et al., 2022). The study suggests Subjective Global Assessment (SGA) screening method for CAPD patients is used by CAPD nurses (Ridha Afzal, Syaifoel Hardy, Edison Kabak, 2021).</p>
6	<p>The Impact of Nutritional Screening on Peritoneal Dialysis Users by Nurses, Afzal et al., 2021, Indonesia.</p>	<p>Systematic review with a descriptive design. PRISMA Analysis as a systematic review through 103 document searches, identifying keywords and reviewing articles from</p>	<p>The study suggests Subjective Global Assessment (SGA) screening method for CAPD patients is used by CAPD nurses (Ridha Afzal, Syaifoel Hardy, Edison Kabak, 2021).</p>

		<p>Google Scholar, Research Gate, and PubMed. Characteristics of the studies under the search were: nursing on CAPD users, CKD cases, nutrition assessment, roles of CAPD nurses, and nutritional screening methods.</p>	
7	<p>Assisted peritoneal dialysis: strategies and outcomes, Giuliani et al., 2022, Italy.</p>	<p>Document review. Healthcare and non-healthcare assistants have been used with good clinical results. A mixed model of help, using different professional figures for short time or for longer according to patients' needs,</p>	<p>Outcomes of PD are reported in different ways, and the comparative effect of PD is unclear. Quality of life has rarely been evaluated; however, patients seem to be satisfied with the assistance provided, since it allows them to both retain independence and be relieved from the burden of self-care. Assisted PD should not be intended as a PD-favoring strategy, but as a model that allows home dialysis also in patients who would not be eligible for PD because of social, cognitive, or physical barriers (Giuliani et al., 2022)</p>
8	<p>Remote Nursing Assessment for Peritoneal Dialysis Users During Covid-19 Pandemic, Afzal et al., 2021, Indonesia</p>	<p>A systematic review, and PRISMA analysis. 842 documents were drawn from the search engine and 169 records were extracted from Google Scholar, ResearchGate, SagePub, and Semantic Scholar. The search keywords were nursing assessment, PD users, and Covid-19. The indicators include respondents (PD users), research methods (quantitative, document review), years of publication (2020-2021), results (focus on nursing assessment during the Covid-19 pandemic), and languages (English and Indonesian). The document search used the PICOT (Population, Intervention, Comparison, Outcome, and Time).</p>	<p>Tele-PD nursing, home delivery service, PD nursing triage, and a PD nursing dashboard are a combination of remote PD nursing management as an alternative solution in PD user assessment during the Covid-19 pandemic era (Hardy et al., 2021).</p>

- 9 The Effectiveness of an Evidence-based Continuous Ambulatory Peritoneal Dialysis (CAPD) Retraining Program to Reduce Peritonitis among Incident CAPD Patients, Liu, 2019, Hong Kong
- 10 A Prototype for a Mobile Peritoneal Dialysis Unit, Case Study of Lamsonthi Model, Lopburi Province, Soranart et al., 2019, Thailand
- 11 A Covid-19 pandemic-specific, structured care process for peritoneal dialysis patients facilitated by telemedicine: Therapy continuity, prevention, and complications management, Polanco et al., 2020, Dominican Republic.
- The participants were recruited from the Renal Units in two public hospitals during their initial CAPD training. After they started home CAPD therapy, they were randomized into retraining. Participants in the intervention group attended an evidence-based CAPD retraining session after they started home CAPD therapy, while those in the control group received usual care. The retraining program was guided by the Adult Learning Theory.
- The prototype was developed through a participatory design process between designers, patients, and multidisciplinary staff from Lamsonthi Hospital to create an integrative design outcome responsive to sensitive conditions. With an emphasis on affordability and movability, the final design proposed a budget foldable prototype that could be transported in a truck and installed at any location, and later movable to another place to service another patient in need. The unit accommodates wheelchair access and is equipped with sanitary and lighting systems.
- An observational prospective longitudinal study with 946 patients in seven centers was distributed, between April 1 and June 30. The protocol was focusing on patient follow-up; risk mitigation data were registered and collected from electronic records. 95 catheters were implanted, 64 patients initiated PD, and the remaining were in training. A total of 9532 consultations were given by the different
- There was a trend of higher exit-site infection incidence in the intervention group compared to the control group over the different follow-up periods (Liu, 2019).
- The invention represents a convergence through multidisciplinary approaches to transform healthcare and services and the necessary collaborations between medical disciplines and built environment. It demonstrates an alternative community-based approach towards specific problems in healthcare that cannot be solved by the traditional system (Sinuraibhan et al., 2020).
- The implementation of the protocol and telemedicine utilization have ensured follow-up and monitoring, preserved therapy, controlled complications, and PD lives protected (Polanco et al., 2021).

12	Patients' and caregivers' expectations and experiences of remote monitoring for peritoneal dialysis: A qualitative interview study, Walker et al., 2020, New Zealand	<p>teams of specialists, with 8720 (91%) virtual and 812 (9%) face-to-face consultations.</p> <p>Qualitative study design, using semi-structured face-to-face interviews of patients who either received PD or were considered eligible for PD, and their caregivers. Transcripts were analyzed using thematic analysis.</p>	<p>Remote monitoring may increase patient knowledge about their kidney disease and its treatment, encourage accountability to the clinical team, enhance partnerships with clinicians, and improve access to treatment and timely care (Walker et al., 2020).</p>
13	Social Return On Investment For Patient Treated By Continuous Ambulatory Peritoneal Dialysis, Lophongpanit et al., 2020, Thailand.	<p>This study follows six steps of SROI principle and framework. It is a mixed method of exploratory sequential design divided into 2 parts; qualitative research using content analytics and social value outcomes. The second part takes the information gathered from the first part to create a research tool to quantitatively collect the data from 191 informants. The data has been analyzed to calculate the SROI ratio and interpret the amount of social value.</p>	<p>CAPD patients have a good quality of life, not being a burden on society, and are willing to undergo kidney transplantation in the future. The costs in the societal view are direct medical costs reimbursement from the national health security office (Lophongpanit et al., 2019).</p>
14	Use of Sharesource in Remote Patient Management in Peritoneal Dialysis: A Canadian Nurse's Perspective, Eyolfson, 2019, Canda	<p>Remote Patients Management (RPM) models. With the introduction of RPM at Seven Oaks Hospital in Winnipeg, MB, nurses have tracked and documented examples of success on home dialysis. Despite the obstacles, patients embraced self-care in the home setting with increased confidence.</p>	<p>Patients overcame the challenges of self-care in a remote setting with physical impairments, as well as enhanced acceptance of home dialysis. The utilization of RPM by the care team promoted patient independence and confidence in performing therapy at home (Eyolfson, 2019).</p>

Analysis

Table 1 shows that all the documents that were filtered met the search criteria for documents according to the keywords (CAPD unit, community nurses, peritoneal dialysis, public health services). However, there are three documents (n = 3) that really raise the issue of community nurses and their roles specifically in the PD unit, namely documents number 1, 2, and 8 which discuss primary care nurses in Public Health Centers (Puskesmas) and Homecare nurses in the community. The biggest challenge is bureaucracy or government regulation (document

number 1, 2, 7, and 8). Table 2 below is the analysis of documents in table 1 which shows the five roles of PD nurses that can be carried out through by community nurses. The most discussed role is training (document number 1, 2, 5, 8 and 10).

Table 2: PD Nurses' Roles that can be done by Community Nurses Based on the Reviewed Documents (n=14)

Document Number	PD Roles based on the Reviewed Articles					N	%
	Management	Training	Clinical specialists	Knowledge	General nursing Skills		
1	x	x	-	x	x	4	80
2	x	x	-	x	x	4	80
3	x	x	-	x	x	4	80
4	x	-	-	x	x	3	60
5	x	x	-	x	x	3	60
6	-	x	-	x	x	3	60
7	x	x	-	x	x	4	80
8	x	x	-	x	x	4	80
9	x	x	-	x	x	4	80
10	x	x	-	x	x	4	80
11	x	x	-	x	x	4	80
12	x	x	-	x	x	4	80
13	x	x	-	x	x	4	80
14	x	x	-	x	x	4	80
n	13	13	0	14	14		

Study Limitations

Limitations of this research of document review include the lack of completeness as desired by the researcher so that all research questions cannot be adequately answered according to the topic. Data may be incomplete and/or inaccurate. Those fact will affect the credibility and the ends of the study. Documents resulting from the review also have the potential to be inconsistent with the research agenda. Therefore, research using a document review approach requires more careful investigative abilities. The usage of this study cannot be universal, although, at a certain level, they can provide an overview of the ultimate goal of the study.

Discussion

The study proved two groups of classification of PD nurses' roles. The first role is as a general nurse in which his/her functions can be performed by community nurses in treating PD patients in the community (n = 14). The second classification is as the the role of nursing specialist in which only certified PD nurses are legally allowed to do the job of CAPD nursing. Three documents that intensely discuss the role of PD nurses who can be replaced by community nurses are suggested through training (short training) (articles numbers 1, 2, and 8). Those documents provide clear recommendations that in caring for PD patients in the community, general actions (basic human needs) and special measures (only those related to CAPD nursing procedures) are needed. CAPD nursing actions may only be carried out by PD nurses who have undergone training and are certified. However, Community nurses at a certain level can be given basic training so that in an emergency they will replace the role of PD nurses in CAPD units in the community. Nurses are healthcare professionals who have responsibilities in all health care settings (ICN, 2020; Sandehang et al., 2019). Regardless of the challenges in giving nursing care

to CAPD patients, with other healthcare profession nurses can work to accelerate the quality of healthcare services (Aiken et al., 2018; Yusnaini et al., 2021).

Many years to come Indonesia is facing several challenges in terms of public health conditions, healthcare education, manpower, health technology implementation, infrastructures and government regulations (BPS, 2020; Fauziyah et al., 2021; Kemenkes RI., 2022). Other challenges with regards to CAPD nursing are, as discussed in documents numbers 1, 2, 7, and 8, is professional and/or government regulations that have not yet provided clear rules regarding procedures. This study suggests to consider to empower the community nurses instead of PD nurses in providing CAPD care in the CAPDS unit in the community. The duty of community nurses are align with the nursing law, health law and the Indonesian Constitution (Suprpto & Malik, 2019; Wirentanus, 2019), Besides, the limited number of PD nurses on the one hand and on the other hand, the number of CAPD units is still on going to increase. It is feared that PD patients in remote areas who are far from health facilities (renal care centers) will have worsening health conditions. Therefore it is necessary to empower community nurses as an alternative solution.

CONCLUSION

This document review research has attempted to raise issues that are likely to occur in connection with the widespread establishment of CAPD units throughout Indonesia as recommended by the Government. This rule received a positive response according to the findings of CAPD experts who have discussed the advantages of using CAPD for the community. In line with this, the problem is that our health resources, especially community nurses, are not fully ready if given the task of caring for PD patients given their limited competence. This study recommended sharpening the competence of community nurses through PD training. However, regulatory support is still needed regarding their empowerment. Therefore, in the future direct research (original research) related to the authority of community nurses in nursing PD patients is highly expected.

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