

Optimizing The Roles Of Homecare Nurses In Continuous Ambulatory Peritoneal Dialysis Nursing: A Document Review

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Abstract

Keywords:

CAPD; Homecare Nursing; Dialysis; Training.

Background: The number of patients with Continuous Ambulatory Peritoneal Dialysis (CAPD) and the number of active CAPD patients in South Sulawesi is very far from the proportions. This problem is compounded by the lack of registered CAPD nurses.

Purposes: To assess efforts to enrich the competency of Homecare Nurses related to CAPD patients at home using the Community Nursing approach.

Method: This study used Document review, quantitative design by conducting a search, identifying key words, reviewing articles and documenting the results. The review was carried out within the frame of Content Analysis, by emphasizing the role of basic CAPD training on methods, benefits and strategies. The documents were collected from various sources, including from the Ministry of Health, BPPSDMK, IRR, IPDI and journals from 2016 to February 2021. It was supported by an analytical survey of 81 respondents of nurses, taken online in social media.

Result: Out of 25 documents reviewed, 20 (80%) were related to the study, 14 journals (56%) were in English. The results demonstrate the recommendation of Homecare nurses to be involved in CAPD nursing. This is also supported by the survey finding where 79 respondents (98.5%) agreed with CAPD basic training to improve HC nurse's competency. While Homecare services have weaknesses, policy makers are significantly needed in the implementation of the program.

1. INTRODUCTION

The number of new patients in the Hemodialysis (HD) unit of South Sulawesi (Sulsel) was 1317, but there were only 22 (1.7%) active CAPD patients who were served by one unit serving CAPD in Makassar (IRR, 2018). CAPD patients are cases of chronic kidney failure (CKD) which continue to increase, but are not followed by the

number of CAPD users (BPPSDM, 2018).

The increase in CKD cases is a challenge for Dialysis nurses in general and CAPD nurses in particular. The number of dialysis nurses in Indonesia until 2018 is still 2,324 (32%) who have not been certified from a total of 7,660 dialysis nurses (IRR, 2018). This Condition is not enough to provide nursing services to the Indonesian people, including efforts to

socialize the importance of using CAPD for kidney failure patients as one of the best options for a replacement therapy (Hermalia et al., 2019). The minimum number of certified dialysis nurses is due to the long waiting list of training in almost all existing training providers (BPPSDM, 2018).

In field practice, nurses have the closest role in health care services (Siti et al., 2016). Homecare nursing is an informal yet professional care arena that greatly benefits patients in various ways (Yoyok et al., 2016). CAPD patients are cases requiring treatment that are categorized as specialist nursing services (Hermalia et al., 2019). Nurses have roles as clinicians, educators, coordinators, advisers and researchers (BPPSDM, 2018). They play significant roles in providing nursing services to CKD cases, so that patients are able to be independent (Alves et al., 2016). The challenges faced by CAPD nurses are generally the same as nurses with other specialties in Indonesia, including the limited number of specialized nursing educational institutions (Efendi, 2018) in addition to the number of CAPD certified nurses is still very limited. This is an obstacle in developing nurses to have CAPD competency (BPPSDM, 2018). This is also the reason why CAPD users are few in number even though it is very beneficial for patients (IRR, 2018). Yet, the Indonesian Association of Nephrologists (PERNEFRI) and the

Ministry of Health have conducted studies and have launched the National CAPD Coverage Pilot Project to bridge these interests (IRR, 2018). Other challenges faced by CAPD nurses are Indonesia's geographical conditions, culture, regulations, tariffs, public knowledge, facilities and basic CAPD training for nurses (Hermalia et al., 2019).

In South Sulawesi lack of CAPD nurses. Lacking of CAPD nursing services at home (Homecare) will result in decreasing the quality of CAPD nursing services as a whole. Therefore, a concrete step in optimizing the roles of Homecare nurses in CAPD nursing through the Community Nursing approach could be an answer.

2. METHODS

This study is Document review with quantitative design. The data retrieval steps were conducted by searching engine (Google Scholar, Research Gate, PubMed), identifying key words, reviewing articles and documenting the results. Data collection was carried out by the authors with the following inclusion criteria: a period of the last 5 years, in English or Indonesian, the subjects were Homecare and Dialysis nurses, the document types of journal, policy and procedures, government regulations and reports. The data were summarized the name of the researcher, year published journals, study design, research objectives, samples, instruments and a summary of the results or findings. Content analysis was used to systematically

identify the communication which is visible (manifest), and carried out objectively, validly, reliably and can be replicated. To support the analysis of the study, the authors also conducted an online survey with Indonesian nurses as the population, from March 4 until March 13, 2021.

3. RESULTS AND DISCUSSION

Result

3.1. Documents Reviewed

Document collection using inclusion criteria (time of writing, type of article, languages, subject and theme). The number of documents collected was 25, i.e. 22 journals (88%), 2 reports (8%) and one government policy (4%). The languages used in the documents were 14 (56%) in English (40.9%) and 11 (44%) in Indonesian. The analytical content was about the topics, authors and professional contents. The results show 20 documents (80%) were nursing-related documents written nursing professionals, 15 documents (60%) on Dialysis and CAPD nursing, 5 (20%) was about Homecare and 3 documents (16%) were about general health written by other healthcare professions and 2 (8%) documents were on online learning subjects.

The contents of the core documents indicate that 6.2% of Indonesia's population suffers from kidney failure and the prevalence of chronic kidney disease \geq 15 years increased from 2.0 per mile to 3.8 per

mile (Kemenkes, 2018). Patients have to undergo therapy and medication that require large costs (Suara.com, 2018). Of the 6.2% figure, on average they experience stage five of chronic kidney failure (Mardhatillah et al., 2020). Chronic Kidney Diseases (CKD) is included in the top ten of non-communicable diseases in Indonesia with the most common comorbidity are Diabetes Mellitus, Hypertension and Cardiovascular (IRR, 2018). For two years (2015-2017) in South Sulawesi, data on new cases of chronic renal failure patients undergoing hemodialysis had an increase of 675% (Mardhatillah et al., 2020). Hence, nurses have a major role in nursing services for chronic kidney patients (Melo et al, 2016). In Indonesia the number of uncertified dialysis nurses is 1,586 (32%) nurses (IRR, 2018). Regulation of the Minister of Health (Permenkes) RI No. 812 / MENKES / PER / VII / 2010 states that nurses who provide services must meet professional standards and standard operating procedures that are able to pay attention to patient safety and health (Hermalia et al., 2019). To assess the competency of hemodialysis nurses, the Indonesian Dialysis Nurses Association (IPDI) has made competency standards for hemodialysis nurses consisting of general competency standards and specific competency standards (IPDI, 2017).

3.2. Survey Results

Table 1: Demography

No	Data	F	%
1.	Ages (years)		
	21-30 years	23	28.4
	31-40 years	32	39.5
	More than 40 years	26	32.1
2.	Gender:		
	Males	27	33,3
	Females	54	66.7
Total		81	100%

Table 1 demonstrates that most respondents are females, ages between 31-40 years old (39.5%).

Table 2: Interest to Attend the Training and Heard about the CAPD Term.

Interest to attend the training				Heard about the Term of CAPD			
Yes		No		Yes		No	
79	97.5%	2	2.5%	61	75.3%	20	24.7%

Table 2 shows 75.3% (61 respondents) of 81 respondents have heard of CAPD, the remaining 20 respondents (24.7%) have

never heard of it and 97.5% or 79 respondents were interested in participating in the training and only 2 nurses were not.

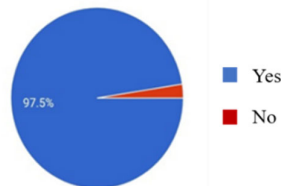
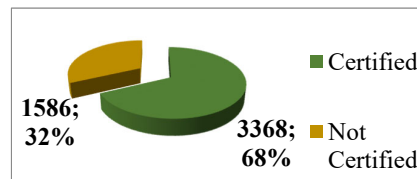


Figure 1: Is the training useful to enrich the material for Medical Surgical and Community Nursing?

The figure above shows that the majority of respondents (79 nurses or 97.5%) believed that the training will be useful for subjects on Medical Surgical and

Community Health Nursing. Only 2 respondents were not sure (2.5%).

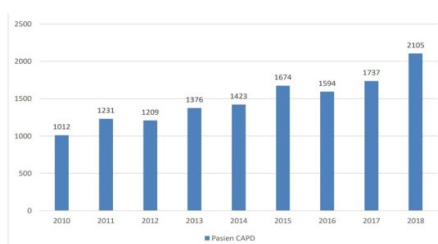


Source: IRR, (2018).

Figure 2: Comparison of certified and uncertified dialysis nurses in Indonesia 2018

Figure 2 shows the imbalance between the number of dialysis nurses, number of patients and their distribution. According to IRR (2018) the largest number of patients based on the CAPD patient distribution map above 100 patients are in East Java (561 or 26.6%), DKI Jakarta (369 or 17.5%), West Java (288 or 13.7%) and Central Java (149 or 7.1). % of the total 2105 patients. These patients are spread

across 23 provinces (67.6%) out of 34 provinces that provide services and have CAPD patient units. Meanwhile, there are 82 hospitals serving CAPD throughout Indonesia. However, in South Sulawesi, only 22 active patients were recorded in 2 CAPD service units (IRR, 2018). There are still more than 845 CAPD service units needed or 91% more throughout Indonesia.



Source: IRR, 2018.

Figure 3: CAPD graph of a patient from 2015-2018.

Figure 3 shows the steady increase of CAPD patients for the last 9 years. Nevertheless nursing training on CAPD is still rare, even though it is very much needed. The questionnaire tabulation shows that 98.7% of respondents stated that it was useful, 85% had heard of the term CAPD, 93% stated that they were interested in participating in training, and 80% demonstrated that it could be done online. Currently, the number of CAPD training providers has not increased, except for Hemodialysis training by BPPSDMK (2018). The study conducted by (Aydede et al., 2014) revealed that Homecare (HC) services could be useful in providing more efficient and higher quality care for CKD patients. So far the evidence for the synthesis of the effect of HC among CKD

patients has not been carried out (Aydede et al. 2014). In addition, data on Homecare Nurses who handle CAPD patients in South Sulawesi has not been obtained.

Discussion

Hemodialysis (HD) is a renal replacement therapy in the end-stage renal failure patients (Figueiredo et al., 2016).

Hemodialysis causes various complications which are the main cause of increased morbidity and mortality and have an impact on reducing the quality of life in patients (Nobahar & Tamadon, 2016; Shahdadi et al, 2017). Patients undergoing hemodialysis require special care that can only be provided by nurses who have hemodialysis expertise (Saleh, Ali, & Afifi, 2018). To provide quality nursing care to hemodialysis patients, competent HD

nurses are needed (Hermalia et al., 2019). HD nurses must have these competencies or abilities. These competencies include knowledge of kidney anatomy and physiology, the ability to provide information and education, ability to improve health and disease prevention, provide quality nursing care and prioritize patient safety, provide a comfortable care environment, be able to carry out scientific research and development, and be able to manage and collaborate with other teams of health professionals in the patient nursing process (Hermalia et al. 2019). Many previous studies have shown that HD provides convenience. The problem is that patients have to provide rooms and special experts including dialysis certified doctors as well as sophisticated machines and equipment that are still imported by Indonesia. Patients must come to the HD center (clinic and hospital). This is the reason why HD quite expensive.

The prevalence rate of kidney failure patients in South Sulawesi is 0.3% (Kemenkes, 2018). The population of South Sulawesi in 2020 was 8.888.762 people (BPS, 2020). That means there are about 26,666 people living with kidney failure. Meanwhile, the number of new patients in South Sulawesi who underwent the HD procedures was 200 (IRR, 2018). That means there are still 99.25% of people with CKD in South Sulawesi who have not been identified. The number of dialysis nurses in South Sulawesi is 92 people and still 58 who are certified (63%). It means that there

are 34 (37%) nurses who need to sharpen their competencies and structured steps to accomplish the competency requirements of certification. Competency is the ability to carry out tasks in accordance with knowledge that overlaps with the performance of the psychomotor components and affective skills (Nehrir et al., 2016). Competency is an individual's experience in dynamic processes and interactive social changes in professional life that foster metacognitive abilities, touch reality, motivation, decision making, job involvement, professional authority, self-confidence, knowledge and professional skills in the nursing process (Nehrir et al., 2016). In order to directly reach health care services for kidney failure patients in the community, Homecare nurses in providing health education needs to be considered, considering the number of dialysis/CAPD nurses is still very minimum. The existence of Homecare nurses, on the other hand, also needs to gain additional competency related to the nursing care of kidney failure patients in general and CAPD patients in particular, given the potentials to the contribution in the handling of CKD patients. By providing training, it is expected that it can enrich their knowledge and skills so that they can improve their professional performance, professional authority, self-confidence, knowledge and professional skills in the nursing process (Nehrir et al., 2016).

According to IRR (2018) the map of the distribution of CAPD patients shows there are still 59 dialysis service centers

(72%) that do not have CAPD services in Indonesia. Other provinces, on averages, have 2 or one service centers. In South Sulawesi there is only one CAPD service unit in Makassar. This can be used as justification why providing CAPD nursing training to Homecare Nurses is one of the key aspects that need to be considered (Blomqwist, 2018). It is known that the health care workers closest to and interacting most frequently with patients are nurses. Nurses' shift work averages are 8.5 hours and approximately 3.1 hours per shift, spent by nurses with patients (Westbrook et al., 2011). Overall, nurses completed 72.3 tasks per hour with professional communication and treatment tasks being the most frequent (Westbrook et al., 2011). Nurses are also responsible to the community served to continuously update and improve nursing knowledge. By involving Homecare Nurses in CAPD services in the community through a Community Nursing approach, means optimizing their roles proactively in health care services (Figueiredo et al., 2016). Community nursing is community-focused, community-oriented aimed at promoting the health of the entire population, and prevention of disease, disability and premature death in a population (WHO, 2018). The paradigm is the individual as a client, the family as a client and the community as a client. The role of the Community Nurse includes being an educator, Advocate, Case Manager, Collaborator, Role Model, Researcher and

Reformer (WHO, 2018). Homecare nurses are part of Community Nursing professionals (Sumardin et al, 2020). Moreover, other chronic diseases that accompany CAPD patients are Diabetes Mellitus, Hypertension and Cardiovascular which also require nursing services. Thus Dialysis / CAPD care services need to be integrated with other nursing services related to comorbidities where Homecare nurses are generally trained in chronic disease care (Peterossi et al., 2017).

Treatment of CAPD and chronic diseases after being inpatient at hospital requires long-term home services (Singh & Shandily, 2016). This is in line with the Homecare care criteria where in practice Homecare nurses perform this role. For this reason, Homecare Nurses as part of Community Nursing who serve CAPD patients need to sharpen their competence as part of specialization services, including through basic CAPD nursing training. The training function for nurses is very necessary in improving the quality of service (Chaghari et al., 2017). In this Covid-19 era, where learning is mostly done online, the use of a combination of traditional learning methods with e-learning methods such as implementing educational websites and interactive online resources for the basics of teaching nursing courses can be an effective supplement to improve clinical nursing skills (Sheikhaboumasoudi et al., 2018). CAPD training can be conducted to help CAPD nurses train patients and caregivers to utilize adult

education theory and principles (Figueredo et al., 2016). The model of providing health care services at home (HC) is one of the advances in the form of care provided after the patient has been discharged from the hospital (Ligita, 2017), even though this health care service model is less than optimal due to the various limitations of nursing service facilities at home (Jester, 2007). The basic concept of HC Nurses' work is the continuation of nursing care from the hospital, part of family nursing care, home-based services, comprehensive component and nursing services provided according to individual needs.

Reviewing the duties of HC Nurses from the perspective of Community nursing it is understandable that the challenges of HC nurses in providing CAPD services are not easy. Therefore, training is part of the solution. In this Covid-19 era, online learning has proven to be very useful and helpful (Sadikin et al., 2020). In addition, the plan to provide training for Homecare Nurses is recognized to be more cost effective and efficient which can be recommended in South Sulawesi.

4. CONCLUSION

The number of certified dialysis nurses in Indonesia is very limited, including in South Sulawesi. In terms of Community Nursing, the Homecare Nurses Association has not yet been established, and there is no data that records the number of independent practicing nurses in South Sulawesi who have provided nursing services for CAPD patients. Waiting for the

process of achieving the ideal ratio between certified CAPD nurses and CAPD patients in South Sulawesi requires time, effort and money. This article seeks to explore the optimization of the role of Homecare Nurses in the perspective of Community Nursing for CAPD patients in the community by Document review. From the data analysis and recommendations of a number of previous related studies show, providing online training can be used as an alternative solution for improving the competency of nurses in CAPD patient nursing services. However, in the future, further research is still required in order to be able to concretely implement the CAPD nursing training to the Homecare Nurses in South Sulawesi.

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