A Culturally Sensitive Training Model for Health Volunteers in the Management and Support of Family Caring for People undergoing Continuous Ambulatory Peritoneal Dialysis\(^1\)

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Abstract

Caring for patients with chronic kidney disease who received Continuous Ambulatory Peritoneal Dialysis (CAPD) at home affects the quality of life of patients and caregivers. Public health volunteers play an important role in supporting patients with CAPD and their caregivers. This article presents a contextually and culturally sensitive training model for health volunteers to support family caring of patients receiving CAPD. The authors reviewed the local situations regarding home-based CAPD care, roles of family and volunteers, as well as relevant literature. We drafted a model of competency development, and consulted the model with experts, health personnel, and public health volunteers. It was found that a culturally sensitive training model consists of three components: 1) required CAPD care competencies, 2) competency development strategies, and 3) evaluation of the training. The required competencies for CAPD care for health volunteers included: CAPD knowledge and skills, stress management of patients, stress management of caregivers, and coordination of service and care. Competency development strategies include educational interventions to develop knowledge and skills for home-based CAPD care, and continuous support for the learning process. Evaluation will be informed by Kirkpatrick’s Model of evaluation including reaction, learning, behavior and result. Experts, health personnel, and public health volunteers agreed that this culturally sensitive training model is appropriate.

Keywords: Public health volunteers, CAPD, training

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Introduction

Currently, patients suffering with Continuous Ambulatory Peritoneal Dialysis (CAPD) increased. In 2007, the number of patients with CAPD increased from 11,198, 12,150 in 2012 and 21,402 in 2014 (Thai Nephrology Society of Thailand, 2014). In the year 2007, the National Health Security Office (NHSO) offered the “PD First” policy which is free for patients with end-stage renal disease with universal health care coverage treated through CAPD (Thanakitjaru, 2015).

Caring for patients receiving CAPD at home does not only affect the patient but the caregivers as well due to complicated treatment procedure and strict in maintaining the dialysis equipment (Thammakoon, Suwanjareon, & Sapmak, 2013; Beanlands et al., 2005). The maintenance of the equipment includes washing hands, replacement of dialysis fluid, waste disposal, and storage of dialysis fluid and equipment for dialysis. The complexity of the process causes stress and can also affect the quality of life of patients and caregivers (Pairojkittrakul, Harnirattisai, & Thitiarchakul, 2014).

Health Volunteer is the person selected from the village or the community. Their duty is to publish data and to provide public health services to improve the quality of life in the community (Sararak, 2010). It also includes designing the health services together with the local people to provide universal and equal health care (Jungsathiansub, 2007). It is evident that health volunteers play an important role in supporting the care for people and patients in the community directly within the jurisdiction. Therefore, the Health Volunteer Training program has been applied to manage and support families in caring for patients receiving CAPD. It is important to reduce the complications of dialysis, to improve the quality of life of patients and caregivers, and reduce the cost of treatment.

This article will focus on the theme of the volunteer development model for health care in the management and support of families in caring for patients undergoing CAPD, and to promote effective care for health volunteers which is suitable for the Thai society context.

Figure 1: Concept of Competency of Health Volunteers
Figure 1 shows that the patient is an important person who needs care. When patients cannot take care of themselves may be due to poor health condition or restrictions in self-care, caregivers are the ones who must be involved in the care of patient supported by health volunteers who are involved in helping both patients and caregivers. In cases where the need for help exceeds the capacity of the health volunteers, the health service system and organizations in the community can help them. There are many potential methods which can help in the care and in the capacity increase in managing and supporting patients and caregivers in the future effectively.

Therefore, it is necessary to develop a model of volunteer development to be apply in the health care of families in caring for patients receiving CAPD, to promote the ability of caregivers, to provide care and management for patients and caregivers, and enhance knowledge, skills and confidence in patient care.

Method

The authors conducted a literature review related to the Development of Health Volunteers Model in terms of managing and supporting care for patients and families receiving CAPD. After that, the authors developed the model in managing caregivers and patients receiving CAPD. The researchers consulted with 2 expert, 2 health personnel and 3 health volunteers regarding the model’s appropriateness to the culture and social context of Thailand, and with the consideration of the suitability and feasibility of the model by the Panel consensus model.

**Figure 2:** Framework for Health volunteers in the management and support of family caring for people undergoing CAPD
Results

The results of this article are based on the literature review of related articles and the consultation from professional individuals specializing in this field. It was found that a culturally sensitive training model for health volunteers in the management and support of family caring for people undergoing CAPD at home is appropriate for Thai context and culture consisting of 3 components: 1) Required CAPD Care Competency; and 2) Competency Development Strategies, and 3) Evaluation of the training program.

1. Required CAPD Care Competency

1.1 CAPD focus care. The required performance developed included the following:

1.1.1 Nutrient Care – Nutrition is essential for patients who receive CAPD because patients often shows symptoms of malnutrition, dyslipidemia, and loss of protein, vitamins and minerals due to the solution used in CAPD treatment. Therefore, caregivers are required to learn about the appropriate food for patient that will provide nutritional support. Patients should receive five food groups of nutrients and the optimal energy should be 30-35 kcal/kg/day. Provider of good energy nutrition includes: brown rice, white rice, taro, and so on. As for protein, due to CAPD, it loses albumin during the dialysis. Patients should take more meat to compensate for the loss of protein approximately 1.2-1.5 g/kg BW/day. Protein can be found in pork, chicken, crab, fish and egg whites (Pairojkittrakul et al., 2014).

1.1.2 Caring for CAPD – Pongsakul (2007) stated that long-term care is needed to maintain the Tenckhoff catheter and exit-site line. Patients are required to perform dialysis thoroughly and rigorously, such as preparing the equipment, the use of mask and washing hands properly for sanitation, preparation of the changing table and using 70% alcohol spray on the table, and connecting the lines of catheter and exit-site line.

1.1.3 Infection control – The common complication of CAPD is peritonitis caused by the contamination of the catheter and exit-site line or transfer set, replacing dialysis fluid in the wrong technique, replacement equipment, and other factors (Chan-o & Tantanon, 2008). Therefore, self-care of patients is very important. Patients should follow the instructions for self-care with dialysis to prevent infection.

1.1.4 Wound care of CAPD – Continuous CAPD care needs prevention of complications from infection. Post-surgery care for the catheter and exit-site line is important to prevent the growth of bacteria on the abdominal wound. Health volunteers can manage and provide care in two ways (Bussapwanich et al., 2007). They are as follows:

1) Early exit-site care (first 2 weeks after surgery). Early exit-site care starts after the peritoneal catheter insertion and the goal is to prevent infection during the healing period and avoiding activities that causes high intra-abdominal pressure.

2) Chronic exit-site care (dialysis period) Chronic CAPD patients need to continuously monitor the exit site and perform routine care to prevent catheter infections. Initial patient education should include how to assess the exit-site, visual inspection and palpation of the tunnel, recognizing signs, and symptoms of exit-site infection. It is important to practice
these factors in prevention of catheter infections. Regardless of early or chronic care, proper hand hygiene and aseptic techniques should be emphasized to prevent any contamination by touch.

1.1.5 The essential complications need to be reported to the doctor or health personnel. Most of the time the CAPD performed at home has higher risks in complication as compared to CAPD at the hospital (Chan-O & Topanthanon, 2008). Patients and caregivers must be informed and advised about complications from health personal and health volunteers (Eiamaong, et al., 2007). The common complications include infection of the peritoneum (peritonitis) caused by contamination of the dialysis tubing (transfer set) or inaccurate replacement of solution. Signs and symptoms of peritonitis may include severe abdominal pain, fever, and turbidity dialysis fluid. If such symptoms occur, patients should notify the health personnel or health volunteers immediately. Therefore, self-care of patients is important, and also monitoring from the health volunteers will help reduce the infection from dialysis.

1.1.6 Medication treatment for CAPD patients. Although CAPD is a remedy for impaired kidney function, patients still need to take medication to prevent further problems which cannot be resolved by dialysis such as anemia, hypertension, acidosis, and electrolyte imbalance. Therefore, patients should be involved in the care and follow up of their own treatment to maximize the benefit and to lower the side effects of drug (Bussapwanich et al., 2007; Hudson, 2008).

1.1.7 Psychosocial care for CAPD patients. Patients with chronic kidney disease are affected by diseases physically, mentally, socially, and economically which cause psychosocial problems (Limumnueylab, 2001; Vickie & Clinton, 1985). Hence, psychosocial care must be considered in caring for CAPD patients. There should be kindness, trust, and warmth within the patient-caregiver relationship, whereas the patients are positively encouraged in coping with the treatment. It is also important to promote appropriate knowledge and skills regarding CAPD care to reduce anxiety among patients and caregivers. In addition, financial support should also be taken into consideration by coordinating with other agencies or institutions. Lastly, it is salient to provide options for the patients in terms of medical facilities (Jirananthawat et al., 2008).

1.2 Stress management of patient

The daily life and work of patients undergoing CAPD is also affected which may result to dependence on others, social isolation, stress, and depression (Ardkhitkarn, Pothiban, & Lasuka, 2013). Patients must have self-management in all aspects such as stress management. The authors found two ways in achieving effective stress management.

1.2.1 Mindfulness-Based Stress Reduction Program. This pertains to being able to maintain consciousness mentally, emotionally and physically within the specific environment (Wongphiromsan, 2015). This approach is useful in dealing with the stress of the patients. In the study of Terathongkum and Taweekoon (2010) it was found that using Meditation program by focusing on awareness and on the present significantly reduces ($p < .05$) the stress level of the patient.

1.2.2 Peer and community mental support
Social relationship can reduce the stress caused by chronic illness of the patient such as family, friends, and community. This helps patients to release stress by expressing their anxiety and frustrations. Overall, mental support from significant individuals helps the patient in coping with the treatment.

1.3 Stress management for family caregivers

CAPD conducted at home affects not only the patient but also the caregivers. Probably because most patients are elderly who are limited in dialysis and mobility, and have memory problems. Thereby, family caregivers play an important role in the care of patients (Kaensan, 2015). Family caregivers need to adjust their daily lives in terms of work and social life depending on the patient’s care. As a result, caregivers are stressed with their care giving role which affects the quality of their lives (Kasemkitwattana & Prison, 2014). Therefore, support in terms of stress management for caregivers is also important. The authors found that effective stress management in caregivers include;

1.3.1 Mindfulness-Based Stress Reduction Program. This is consistent with the program in reducing stress in patients. It focuses on mindfulness and meditation of caregivers by providing care on awareness, being in the present, and thinking carefully. As a result, it helps the caregivers to relax emotionally and the perceived stress of caregivers decreases.

1.3.2 Peer and community mental support. This support comes from individuals surrounding the caregivers most especially their close relatives. To support caregivers, information and care instructions must be provided which will help caregivers in managing problems (Malathum, 2001). There is also a reduction of stress and anxiety, and perception of a better quality of life (Yurtsever et al., 2013).

1.3.3 Respite care service.

1.3.3.1 Volunteer. Volunteers may be other family members, friends, relatives or people in the community who may provide care temporarily.

1.3.3.2 Relative. This pertains to other relatives living near the family of the patients who can change shifts in caring for the patients.

1.3.3.3 Household chore support. This involves coordination with people in the community or community volunteers in terms of assisting the caregivers in cleaning the house and its surroundings to alleviate their burden from care giving.

1.4 Coordination of service

1.4.1 Local government. The continuation of care at home for patients needs to be supported by the local government which is relevant to the patients and the caregivers within the jurisdiction of the local government (Sawarphol et al., 2017). A health care system that patients and caregivers should follow is constructed through coordination with the local authorities. The benefits of this system include shuttle service for patient mobility, clinic or hospital appointment, seeing a doctor in case of emergency, and support for essential medical equipment such as a
place to store dialysis fluid, and transport from/to home/hospital (Artsanthia & Kampraw, 2014).

1.4.2 Health service. Health service providers in the community focus on the promotion, prevention, treatment, and rehabilitation of the health status of people in the community including both healthy and ill people in their area of responsibility. Thus, coordination with health care system in the community is important in helping patients and their caregivers to have access in health services and other options for treatment, and transportation for patients to more equipped institutions for continuous and faster treatment (Wirojratana, Amnatsatsue, Sasat, Malathum, & Narongsak, 2014). This reduces the complications of CAPD at home and as well as encourage patients and caregivers to have better quality of life.

1.4.3 Community organizations. This is the coordination between community organizations and community leaders such as village headman, chief executive of the Sub district Administrative Organization (SAO), community groups, and institutions (Sawatphol et al., 2017). This aims for the community to participate in caring for the patients and increasing the quality of life of patients and caregivers.

2. Competency development strategies

Competency can motivate a person to perform his/her job effectively or accordingly based on the criteria set in his or her job. The components of competency are divided into three parts: the knowledge, the skills, and the characteristics of the person, (McClelland, 1993 cited in Raven, 2001) reported that competency also includes attitudes or motives. It may also consist of capabilities and features such as ethical values, personality, physical attributes, and more (Sakornvivat, 2004). The development of health volunteer strategies for health promotion of patient and families requires two strategies.

2.1 Knowledge and caregiving skills

There should be a constant learning on the knowledge and appropriate skills necessary in continuous CAPD such as the proper procedure of dialysis, sanitation to reduce contamination, observation of signs and symptoms of infection, Tenckhoff catheter care, Wound care, and environment management. This will assist the health volunteers in reducing the potential complications of dialysis, (Sangtawan, 2008 cited in Ardkhitkarn et al, 2014). In addition, it will promote self-care among patients and to boost the confidence of caregivers in conducting dialysis treatment at home (Varitsakul & Sindhu, 2015).

2.2 Continuous support for the learning process

Continuous learning is important for health volunteers as leaders in the health sector. Knowledge is transferred to patients and families for effective self-care and quality of life. In addition, if they continue to learn, they can become health leaders by increasing their knowledge and skills to be helpful to others (Earley & Weindling, 2004).

According to the study of Kuanchom and Oumtanee (2014), the components of continuous learning include: 1) Access to and use of knowledge – health volunteers provide accessible resources which are beneficial in the caring process of the patients; 2) Self-assessment – health volunteers self-evaluation can provide grounds in further development; 3) Communication Skills
and Problem Solving – this focuses on the ability of the health volunteers in conveying knowledge, ideas, and practices that can be easily understood by the patients and caregivers. It also includes decision making with regards to the solution suitable for the problem; and 4) Learning Objectives – it is an element of self-motivated learning with a systematic planning for knowledge acquisition which can be used to manage care effectively.

Overall, public health volunteers who are the closest to the patients and families in the community need to have continuous self-learning and constant self-development to cope with the rapid evolving knowledge used in the management and support of patient and caregivers.

3. Evaluating of Training Program

The evaluation of this training program will be based on Kirkpatrick and Kirkpatrick (1994) which includes a four-level evaluation to assess and monitor training.

3.1 Reaction:

Assessments on the attitude or satisfaction of health volunteers after participating in capacity development training regarding the purpose, the benefits, and the instructor’s guide within the training.

3.2 Learning:

Measurement of knowledge and skills of health volunteers before and after training. For example, the health volunteer’s improvement which is measured by a true or false test and demonstration.

3.3 Behavior:

Behavioral assessments of the health volunteers in implementing knowledge gained from taking care of patients and caregiver conducting CAPD at home. A practical checklist questionnaire was used for this level.

3.4 Results:

There are three generated result from the training. First, patient outcome, this includes the assessment on the quality of life and clinical outcome such as infection from CAPD. Second, family caregiver outcome, this is the assessment of the quality of life of caregivers in continuing CAPD care at home. Lastly, cost, this evaluates the costs incurred in the patient’s care from both the families and the health care system. It also comprises of cost comparisons between before and after the training of health volunteers.

Conclusion

Caring for patients receiving CAPD at home does not only affect patients, but as well as the caregivers in terms of physical, psychological, social, and economical factors. Caregivers’ perceptions of stress were high which affected the quality of life of patients and caregivers. The treatment also had financial effect with the increase of costs for patient’s care. Thus, health
volunteers are important in supporting the care of patients and caregivers in the community. The literature reviews and consultation with individuals specializing in this field showed an agreement that the training model is culturally appropriate in the Thai context. The training model consists of two components: Required CAPD Care Competencies; and Competency Development Strategies. The required competencies for CAPD care included CAPD knowledge and skills, stress management of patients, stress management of caregivers, and coordination of service and care. Meanwhile the competency development strategies included developing knowledge and skills for CAPD care, and continuous support for the learning process. The evaluation and follow up of the training consisted of 4 levels: 1) Reaction; 2) Learning; 3) Behavior; and 4) Results – patient outcome: QOL and clinical outcome (e.g., peritonitis), family caregiver outcome: QOL, and Cost. This training program will benefit the health volunteers in effectively applying knowledge and skills and in supporting and managing patient and family care while complying with the context of Thai society to reduce stress, and increase the quality of life of patients and families.

Reference


