

AGNIESZKA PLUTA¹, HALINA BASIŃSKA-DROZD¹, KAMILA FALEŃCZYK¹,
MARIA BUDNIK-SZYMONIUK¹, MARZENA HUMAŃSKA²

Competence and educational role of family nurses in the care of patients with chronic kidney disease requiring renal replacement therapy

Abstract

Family nurse is a nurse working in primary care, fulfilling the functions of the family, its members, the community, the environment they live in a situation of health, illness and disability. Nurse's care includes patients in different stages of chronic kidney disease, including those requiring dialysis. At present, systematic increase in the number of patients included in the final stage of the disease, requiring renal replacement therapy is observed. Patient education in chronic kidney disease, especially renal replacement therapy requires an important part of his treatment.

The purpose of this paper is to define the powers and the related role of family nurse education in the care of patients with chronic kidney disease requiring dialysis.

Keywords: family nurse, chronic kidney disease.

DOI: 10.12923/j.0044-2011/123-4/a.10

INTRODUCTION

Chronic kidney disease (CKD) is a disease affecting about 10% of the population. Systematically the number of patients in the fifth stage of the disease who require dialysis is increasing. According to the data contained in the Polish Nephrological Register of 2007 in Poland 18 214 patients with CKD were dialyzed. This figure was higher than in previous years, which was associated with an increase in the proportion of elderly patients and patients with diabetes. Patients over 65 years of age in Poland in 2007 constituted 56% of dialysed population [1]. These patients because of their age, health, and present problems in many cases require support and assistance from the immediate surroundings, including the family nurse.

According to currently accepted standards of care program for patients with chronic kidney disease hemodialysis is performed by an interdisciplinary team of dialysis center, where the patient has dialysis treatments performed as a part of specialist medical care. Hemodialysis patient is under the care of both specialized interdisciplinary team and primary health care.

Primary health care (PHC) as part of the health care system provides care in an outpatient setting, at home or in a learning environment for all patients regardless of age, gender or health status. Services are provided in primary care to women who have chosen a PHC doctor, nurse, midwife and men who chose primary care physician and nurse. Infants of both sexes are under the care of a midwife. From 2 months of age, boys are under the care of primary

care nurses and girls continue to be under the care of a midwife.

Family nurse is a nurse working in primary care, fulfilling the functions of the family, its members, the community, the environment they live in a situation of health, illness and disability. Nurse's care includes up to 2750 patients who have made a declaration of choice of family nurse. Care performed by the family nurse should take place in a comprehensive, continuous way based on the nursing process. The nurse carries out a holistic care to the patients, their families, and the local population to the extent consistent with the professional level, including health assessment and nursing interventions.

Family nurses, because of the nature of their work, have a great insight into the daily lives of both patients and their relatives. They perfectly know housing conditions, wellbeing, environment or occupation. This allows them to determine the pathology of the family, addictions, as well as to assess the efficiency of nursing care and the family. Both systematic and continuous contact with the patient allows to care and conduct effective prevention and targeted health promotion. Holistic care for dialysis patients is focused not only on the clinical aspects (occurrence of adverse events), but also on social and psychological aspects. It should be emphasized that the entire care over a patient significantly determines the quality of life. The powers of the family nurse in the care of dialyzed patients include self-diagnosing, planning and performance of nursing care in accordance with the chosen model of care, self-determining ways, forms and methods of implementation of the comprehensive nursing

¹ The Department and Institute of Public Nursing Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University of Toruń, Poland

² Institute of Theory of Nursing Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University of Toruń, Poland

care in accordance with the standards applicable to medicine, codes of professional ethics as well as legislation governing actions taken by nurses or midwives alone without medical orders [2-4]. Performing certain services without doctor's order is subject to completion of the course or obtaining by a nurse a specialist title. In case of exceeding her powers, a nurse should immediately refer a patient to a specialist doctor. Guaranteed services for primary health care are regulated by the Regulation of the Minister of Health, 2010 [5].

Family nurse should have a basic understanding of chronic kidney disease (stages of the disease), techniques of hemodialysis and peritoneal dialysis technique.

The following is a model of organization of health care for patients with chronic kidney disease.

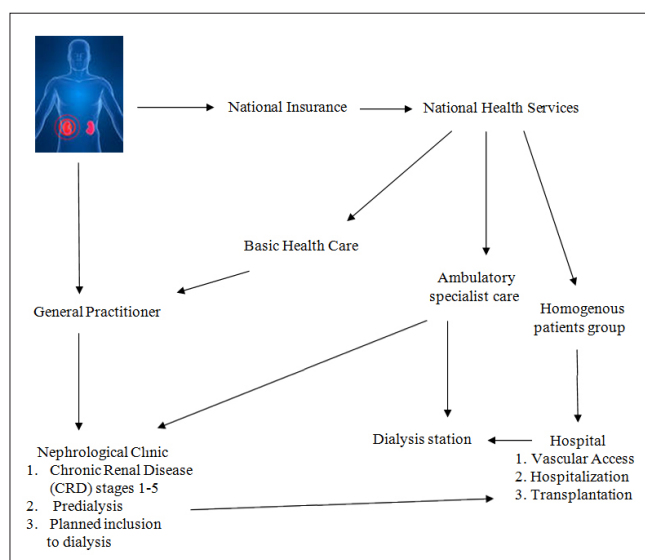


FIGURE 1. Organization of health care of patients with chronic kidney disease in Poland [6].

Family nurse's services in care of dialyzed patient

The services provided by the nurse include nursing, diagnostic, therapeutic, and rehabilitative services, health promotion and disease prevention. It is regulated by the Ministry of Health ordinance from 2005 [7].

The medicinal services implemented by the family nurse within the care of dialyzed patient include determining the diet, and adapting feeding techniques for the current state of a patient. Diet in a population of patients requiring renal replacement therapy is an extremely important part of treatment. It should provide the optimum amount of nutrients, prevent malnutrition, reduce the number of end products of metabolism, prevent the development of atherosclerosis as well as provide a sense of freedom and good quality of life [8,9]. Patients undergoing renal replacement therapy are educated in their dialysis centers by a dietician and nursing staff in the field of diet, including familiarization with products that are high in potassium, phosphorus and salt. Patients and their families are introduced with optimal techniques of food preparation. These courses are, however, purely theoretical. The patients, and sometimes their immediate family after such training, acquire knowledge, but it is uncertain whether the information provided in the dialysis center will be implemented in daily life. Everything will be reflected both in laboratory tests, vital signs parameters – the measurement

of blood pressure or body weight measurements as part of the diagnostic services. Family nurse working in the home environment can observe patient's eating habits, if they are relevant to the current state of health, well targeted and emphasize the importance of dietary compliance in the renal-replacement treatment. Family nurse administers medication in different ways commissioned by the physician, provides wound dressings for wounds, ulcers, burns, removes stitches by the order of a physician, performs nursing and therapeutic treatment of fistulas, stoma and difficult-to-heal wounds. Among the treatments performed by the family nurse there are also inhalation, infusion / rectal ingots, treatments with heat and cold, as well as providing first aid in life-threatening conditions, sudden diseases that require a cardiopulmonary resuscitation.

The diagnostic services performed by a family nurse within the medical care for patients with chronic kidney disease receiving dialysis, include a family-environmental interview focused on family history of disease, a physical examination using observation, palpation, percussion, auscultation methods, performing measurements with the use of instruments and equipment, performing measurements of vital signs, evaluating and interpreting them, controlling swelling. An extremely important task for a family nurse is to assess the patient's capacity to perform basic activities of daily living, and evaluate the nursing ability of patient's family. As mentioned before, the dialyzed patients after 65 years of age constitute 56% of all dialyzed population, and this age group due to the coexistence of multiple diseases, as well as the limitations resulting from the aging of the organism in many cases requires the support of the loved ones. The loved ones because of the commitment associated with the care of patient, sometimes need support, both the material, informative, psychological and physical. Rating and providing an efficient nursing from the family determine the quality of life for patients requiring renal replacement therapy. Family nurse takes samples for diagnostic tests, performs diagnostic tests for determination of ketone bodies and glucose in the blood and urine. For patients complaining of pain, a nurse assesses and monitors pain. Family nurse takes care of the patient, works in compliance with the nursing process. Family Nurse within the care for patients with chronic kidney disease receiving dialysis also provides rehabilitation services. As part of these services, a nurse participates in and coordinates the bedside rehabilitation to prevent complications arising from both the disease process and prolonged immobilization. A nurse runs motor rehabilitation for the patient (sitting, assuming an erect position, learning to walk, and learning self-care), breathing exercises, chest percussion and postural drainage are being used. An important service undertaken by family nurse is activating patients with the use of occupational therapy. Patients receiving dialysis are a less physically active group, avoiding regular exercise, but also reluctant to carry out activities of daily living. Very often, inactivity and poor quality of life resulting from complications of CKD, dialysis and comorbidities is the cause of lack of motivation to perform regular daily activities, especially physical activities [10,11].

Family nurse implements the nursing care for patients with chronic kidney disease receiving dialysis. Among these

services, a nurse performs nursing and hygiene treatments resulting from nursing process and the demand for health services; prepares and activates the patient for self-care, as well as implements nursing care for patients in various stages of the disease and according to current medical knowledge and modern standards of care.

The last group of services made by the nurse to the patient with chronic kidney disease includes health promotion and disease prevention. Within these services, the nurse recognizes, assesses, and prevents health threats of patients. Hemodialyzed population is burdened with the risk of bleeding and thrombotic vascular accesses especially dialysis fistulae. Blood clots of arteriovenous fistulas may be due to anatomic stenosis, sudden hypotension, or pressure from the outside such as a purse, watch, bracelet or incorrectly made dressing. Caring for the fistula is not only required from the dialysis staff, but above all from the patient. Family nurse entering the patient's home environment draws attention to the monitoring of the noise of the fistula, as well as observation for vascular access complications such as stopping blood flow. A nurse also informs about not carrying heavy items with the hands with the fistula, or not sleeping on that side. For the sake of arteriovenous fistula, the blood pressure measurements are not taken on the limb with vascular access. Family nurse recognizes the patient's nursing needs and health problems, implements health education, and organizes support groups for the patients and their families.

When discussing home care for patients with chronic kidney disease, the possibility of using long-term nursing care at home should be emphasized. The condition for a patient to be included in a long-term nursing care is a referral for home nursing from the health insurance doctor and a patient's qualification card for including into long-term nursing (modified Barthel scale). The patient to be eligible for this form of care has to obtain up to 40 points according to the modified Barthel's scale. The time a patient is being taken into long-term nursing care is contingent upon the patient's health status. A family nurse should do evaluation with the modified Barthel's scale every month. After exceeding 40 points, the National Health Service does not fund further long-term nursing care [12].

CONCLUSIONS

The share of family nurses in the care of patients with chronic kidney disease needing renal replacement treatment is significant, although the entire nursing process is the responsibility of the dialysis center, where the patients have their dialysis treatments performed. Now, there are no scientific studies investigating this issue. From personal experience, it was observed that patients requiring renal replacement therapy indicate their health problems to the dialysis staff because of their knowledge and experience, as well as frequency of visits. A hemodialyzed patient has procedures performed 2, 3 times per week in three shifts system and the

time of each treatment ranges from 4 to 5 hours. It seems that a family nurse's care of a patient requiring dialysis is insufficient. Patients often do not know about the possibility of using this form of care.

REFERENCES:

1. Rutkowski B, Lichodziejewska-Niemierko M, Grenda R. Raport o stanie leczenia nerko zastępczego w Polsce. Gdańsk: Polski Rejestr Nefrologiczny; 2007.
2. Strzeciwo A. Wybrane problemy służby zdrowia w Polsce. In: PD Sloane, LM Slatt, P Curtis (ed). *Medycyna rodzinna*. Wrocław: Wydawnictwo Urban&Partner; 1998. p. 59-64.
3. Strzeciwo A. Zakres działań I najważniejszych kompetencji lekarza rodzinnego. In: A. Strzeciwo. *Praktyka lekarza rodzinnego. Aspekty organizacyjne, prawne i finansowe*. Wrocław: Wyd. Akademia Medyczna; 1998. p. 15-28.
4. Rozporządzenie Ministra Zdrowia z dnia 7 listopada 2007 roku w sprawie rodzaju i zakresu świadczeń zapobiegawczych, diagnostycznych, leczniczych i rehabilitacyjnych udzielanych przez pielęgniarkę albo położną samodzielnie bez zlecenia lekarskiego (Dz. U. Nr 210, poz. 1540).
5. Rozporządzenie Ministra Zdrowia z dnia 22 października 2010 roku w sprawie świadczeń gwarantowanych z zakresu podstawowej opieki zdrowotnej (Dz. U. 2010 Nr 208, poz. 1376).
6. [http://www.wil.org.pl/folder/medyczna%20wokanda/numery/049-066]
7. Rozporządzenie Ministra Zdrowia w sprawie zakresu zadań lekarza, pielęgniarki i położnej podstawowej opieki zdrowotnej z dnia 20 października 2005 r. Na podstawie art. 55 ust. 6 ustawy z dnia 27 sierpnia 2004 r. o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych (Dz. U. Nr 210, poz. 2135, z późn. zm.).
8. Pietrzyk JA. *Żywnienie chorych z niewydolnością nerek*. Koszalin: Wyd. Prosperius; 2008.
9. Kobus G, Perzanowska E, Jurkowska G. Udział pielęgniarki w zapobieganiu i leczeniu niedożywienia u chorych hemodializowanych. *Probl Hig Epidemiol*. 2010;91(1): 8-12.
10. Duława J, Ramos P. Rola wysiłku fizycznego w zapobieganiu chorobom układu sercowo-naczyniowego u chorych dializowanych. *Probl Lek*. 2006;3:245-6.
11. Pluta A, Faleńczyk K. Wybrane czynniki determinujące jakość życia pacjentów ze schyłkową niewydolnością nerek. *Pielęg XXI*. 2007;2: 33-7.
12. Rozporządzenie Ministra Zdrowia z dnia 23 grudnia 2010 roku w sprawie świadczeń gwarantowanych z zakresu świadczeń pielęgnacyjnych i opiekuńczych w ramach opieki długoterminowej.

Informacje o Autorach

Dr n. o zdr. AGNIESZKA PLUTA – adiunkt; mgr HALINA BASIŃSKA-DROZD – asystent; dr n. med. KAMILA FALEŃCZYK – adiunkt, p. o. kierownika; mgr MARIA BUDNIK-SZYMONIUK – asystent, Katedra i Zakład Pielęgniarstwa Społecznego, Wydział Nauk o Zdrowiu, Collegium Medicum w Bydgoszczy; dr n. med. MARZENA HUMAŃSKA – adiunkt, Zakład Teorii Pielęgniarstwa, Wydział Nauk o Zdrowiu, Collegium Medicum w Bydgoszczy.

Corresponding Author

Agnieszka Pluta
ul. Techników 3,
85-801 Bydgoszcz
tel: 693-716-980
E-mail: agnieszkapluta@poczta.onet.pl