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Theoretical review

Patients with Complex or Long-term Health Needs in Cardiology

Zorina O.S. [1*], Vaartio-Rajalin H. [2]

[*1] Doctoral student of the Karaganda Medical University, Karaganda, Kazakhstan. E-mail: zorina_96@mail.ru
[2] Professor in gerontological care (tenure track), Faculty of Education and Welfare Studies/Caring Science, Abo Akademi University, Vasa, Finland. E-mail: hevaarti@abo.f

Abstract

During the whole illness trajectory, nurses play a vital role in managing the care of patients with cardiovascular long-term and complex illnesses. The application of Self-care of chronic illness -theory improves patients´ self-management and give the knowledge and skills with which patients can formulate their individual goals and feel self-confidence despite the condition.

The aim of this review is to describe the reflections concerning advanced nursing care of patients with cardiovascular complex or long-term conditions. A theoretical review, conducted in a dialectical process between evidence-based literature, a theoretical framework and professional reflection.

Nurses assess patient's level of risk for cardiovascular disease, contribute to primary and secondary illness prevention through patient education based on a nursing theory, observe symptom clusters and their effects to the patient´s functional capacity and quality of life with relevant PREMs and PROMs, conduct and interpret clinical measurements, monitor medication and treatment adherence, and develop as well as review the person-centered nursing care plan accordingly.

Keywords: complex conditions, long-term condition, advanced nursing, cardiovascular conditions.

Corresponding author: Olga Zorina, Doctoral student of the Karaganda Medical University, Karaganda, Kazakhstan.
Postal code: M01K7G6
Address: Kazakhstan, Karaganda city, st. Gogol 40
Phone: +77783499408
E-mail: zorina_96@mail.ru

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Introduction

Cardiovascular disease is the leading cause of death worldwide: no other cause that causes as many deaths each year. People who have high risk for cardiovascular diseases such as high blood pressure or hyperlipidemia, or a cardiovascular diagnosis need not only medication but continuous patient education and counseling [1,2] during the whole illness trajectory in order to be able to monitor own symptoms and symptom clusters and to manage the self-care. Otherwise, there is a risk for a complex condition. Long-term and complex cardiovascular diseases include chronic ischemic heart disease, consequences after myocardial infarction, ventricular arrhythmias, etc.

According to Self-care of chronic illness theory, self-help is defined as the process of maintaining health through health-promoting practices and disease control, focused on the individual performing self-care [3]. Nurses play an important role in managing the care of patients with long-term and complex illnesses. Nursing care coordination activities, according to Karam and others, are grouped into three categories: activities directed at the patient, family, and caregivers; those that target medical and social groups; and those that bring together patients and professionals [4]. Therefore, nurses need to constantly assess the condition of patients with a long-term or complex cardiovascular disease and to use narrative conversations as the main tool in a patient-centered approach [5]. The effectiveness of nursing care for patients with long-term and complex illnesses is manifested in the improvement of the treatment process: improved interaction between nurses and patients, increased safety of vulnerable patients, improved clinical outcomes and reduction of disease exacerbation.

This paper reflects the professional nursing care provided to patients with complex and long-term diseases in cardiology.

Literature search and selection strategy

This essay is based on a course material received at EU-financed project AccelEd https://project-acceled.com/ and the course “Nursing theories and research on patients with complex and long-term health needs” within it.

For the essay, articles and information were systematically searched from databases PubMed, EBSCO, and Web of Science with following inclusion criteria: articles published in English, human studies, original papers on symptom clusters in adults with heart disease and empirical research describing nurse-led care coordination in primary health care for patients with complex needs. As search terms a combination of the MESH terms were used: "symptoms, clusters of symptoms, coronary artery disease, heart failure, cluster analysis, nursing, complex and long-term health needs, cardiology, myocardial infarction, cardiac rehabilitation". The abstracts and full texts were then retrieved to confirm that they met our inclusion criteria. The reference lists of the retrieved full texts were also analyzed in order to identify any additional relevant articles.

Professional nursing care in cardiology

Patients with cardiovascular disease typically face many challenges related to the outcome of the disease, rehabilitation after a serious cardiovascular event, especially in their quest to return to their previous lives. The recovery process after an acute myocardial infarction in this case is a complex procedure, which challenges the patient´s psychological and physical well-being due to the constant and continuous care and supervision that patient needs after discharge from the hospital. Outpatient cardiac rehabilitation has evolved over the years from health monitoring to a safe return to physical activity, using a multidisciplinary approach focused on individual patient education, exercise, changing risk factors and improving overall health [6] through self-management [3].

The role of health professionals in promoting the development of secondary prevention should never be underestimated, as physicians and nurses play a critical role in patient management and counseling. However, despite the established benefit of rehabilitation programs, enrollment in cardiac rehabilitation is still underused and convincingly low due to many factors. Patients are not sufficiently adherent to therapy: prescribed medications, nutritional interventions, etc. Health professionals and health care systems need to improve the effective treatment of cardiovascular diseases with a greater impact in the field of primary and secondary prevention through collaboration with patients and their families, which is a way to solve this problem. The collaboration should be based on systematic use of PREM (Patient Recorded Experience Measures) and PROM (Patient Recorded Outcome Measures) questionnaires as indicators of patients´ distress or health-related well-being [7]. As members of a multidisciplinary team, nurses make a significant contribution to the management of secondary prevention and for this a basic understanding of educational and behavioral theories are very important [8].

Despite strong evidence that secondary prevention strategies significantly reduce morbidity and mortality in acute coronary syndrome survivors, a significant proportion of patients indicated for these treatments do not receive secondary prevention or receive suboptimal doses. There is a low adherence of patients to drug therapy: before and after myocardial infarction. Given an aging population and a growing need to reduce cardiovascular risks internationally, innovative ways are needed to improve the use and implementation of secondary prevention strategies in which the nurse is a leader and a partner [8, 9].

Nurses routinely measure blood pressure in most healthcare settings using advanced blood pressure measurements as part of the initial and ongoing evaluation of each patient. Also nurses lead screening and blood pressure testing initiatives at the primary health care level. After measuring and recording blood pressure, the nurse analyzes the data to determine if the readings are in the normal or hypertensive range. A nurse record keeping system can help ensure that uncontrolled hypertension is recognized and treated. Nurses can assess a patient's level of risk for cardiovascular disease (for example, the Framingham Cardiovascular Risk Assessment).

Nurse follow-up and management between phone, mail or digital visits can be effective in reinforcing goals related to admission and continuation of care and participation in care, and can improve the relationship between healthcare professionals and patients. It is important to keep track of missed visits to maintain contact with the patient and emphasize the importance of meeting blood pressure targets. Nurses are often the first to identify hypertension and poor patient adherence to medication and therefore play a key role in communicating with patients and other healthcare professionals to ensure adherence to treatment recommendations by developing and reviewing the nursing process plan and patient management accordingly [10].

Team care is aimed at achieving effective management of secondary prevention after a myocardial infarction, especially in the first month after infarction and after discharge from hospital (see Table 1), the patient must undergo an outpatient stage of rehabilitation in a day hospital. After discharge from the day hospital, the patient is registered with the dispensary and cardiac rehabilitation begins [11].

Table 1 - Outpatient cardiac rehabilitation in Kazakhstan

Discharge from the hospital after ACS		
Outpatient stage of rehabilitation in a day hospital		
Dispensary registration of a patient for 12 months		
№ visit to polyclinic	Visit period	Monitoring
1 visit	after discharge from the day hospital	Assessment of the patient's condition, measurement of blood pressure, ECG. Assessment of the risk of developing recurrent coronary events. Evaluation of the need for planned coronary angiography, interventional and cardiac surgical methods for the treatment of coronary artery disease.
2 visit	2 months after ACS	Assessment of the patient's condition, measurement of blood pressure, correction of therapy if necessary. Assessment of the risk of recurrent coronary events
3 visit	3 months after ACS	Assessment of the patient's condition, measurement of blood pressure, ECG, biochemical blood test (lipid profile, glucose, liver function tests (ALT, AST), total bilirubin, creatinine, potassium (K +). Assessment of the risk of recurrent coronary events. Correction of therapy if necessary
4 visit	6 months after ACS	Assessment of the patient's condition, measurement of blood pressure, ECG, echocardiography (ECHOKG), Holter ECG monitoring (CMECG), 24-hour blood pressure monitoring (ABPM), stress test, biochemical blood test (lipid profile, glucose, ALT, AST, total bilirubin, creatinine , K +). Correction of therapy if necessary. Assessment of the risk of developing recurrent coronary events. Assessment of the need for planned coronary angiography

Separation of the roles of individual team members based on knowledge, skill set and availability, as well as patient needs, allows the main coordinating cardiologist to delegate routine matters to the team, in particular the nurse, thereby leaving more time to solve complex and critical problems faced by patients with ischemic heart disease [12].

Nurses provide patient education, counseling and skills development to enable patients to make lifestyle changes that can benefit secondary prevention goals for acute myocardial infarction (such as smoking cessation, weight loss, no rehospitalization for acute myocardial infarction, improved adherence to treatment, increased physical activity). They also use effective, evidence-based strategies to help control blood pressure: identifying patients' knowledge, attitudes, beliefs, and experience with medications; talk about conditions and treatment; individualize the mode; promote social support; and collaborate with other professionals. It is important to consider that patient education is a means to an end. Knowledge is necessary but not sufficient to achieve the desired behavior without the development of skills and a host of other reinforcing factors. The ultimate goal for the patient is to have the necessary skills and resources, including knowledge to follow treatment recommendations and achieve and maintain blood pressure control. Thus it is necessary to assess the information needs of patients before conducting cardiac rehabilitation, in order to effectively conduct patient consultations in a simple and accessible form in order to increase their level of knowledge and increase adherence to treatment. A nurse can evaluate adherence to drug therapy in dynamics: before and after consultation [13].

Although the role of the nurse practitioner has not been specifically assessed in secondary prevention, many studies have shown improved outcomes (patient health, quality of life, coordination and continuity of care, utilization of health services, patient and family satisfaction with health care costs) when advanced nursing roles involving nurse practitioners, complement the existing roles of other medical professionals assisting in rehabilitation [14].

A nurse in cardiac rehabilitation should complete an individual patient care plan and identify appropriate interventions. It is necessary to improve patient self-management through a telephone call, a visit of patients to a nurse after discharge from the hospital (early start of rehabilitation activities), drawing up programs for cardiac rehabilitation (patient self-management, instruction and monitoring of exercises), motivation letters for lifestyle changes, use of remote monitoring (by phone and mobile application) between groups of patients, organizing and conducting classes at a health school [15].

In order to increase people's motivation to choose and maintain healthy behaviors, health policies are needed to create an enabling environment for healthy choices and their affordability. In order for people to choose and maintain healthy behaviors, policies are needed to create an environment conducive to ensuring healthy choices are accessible and affordable. There are also a number of factors that influence the development of chronic diseases, or underlying causes. They reflect the main driving forces leading to social, economic and cultural change - globalization, urbanization and population aging. Other determinants for cardiovascular diseases are poverty, stress and hereditary factors.

For the management of patients with long-term and complex conditions in cardiology, certain interventions are needed: for the general population and individual interventions that can be used in combination with each other to reduce the high burden of cardiovascular diseases [16].

The nurse can implement a policy to control smoking, reduce overweight, recommend patients to eat a balanced diet (reduce consumption of foods high in fat, sugar and salt), increase physical activity levels, including monitoring and assisting patients in taking medications in a timely manner thereby increasing adherence to treatment [17]. Typically healthcare professionals assessed patients' symptoms individually for evaluation, triage or diagnosis. However patients often experience several symptoms of the disease at the same time. There is a system of symptom clustering, which is defined as the presence of two or more symptoms of a disease that occur simultaneously and are related. For effective therapeutic management of patients it is necessary to know the existing clusters of symptoms, which will give a broader perspective for an adequate understanding of how patients experience symptoms can help in clinical management. Clusters of symptoms may differ for cardiovascular diseases. Patients with heart failure report multiple symptoms, including dyspnea on exertion, fatigue, and peripheral edema. When heart failure symptom clusters are known, this will help patients to quickly recognize their worsening condition, thereby preventing complications and reducing delay in seeking care [18].

Functional limitations are associated with a cluster of motor symptoms in heart failure patients experiencing both disease behavior and discomfort from disease symptom clusters. Heart failure has clusters of symptoms - physical and emotional/cognitive components that reflect functional decline, cognitive impairment. Psychological factors such as depression can influence the perception of breathlessness. Shortness of breath has been associated with depression, fatigue, and a general perception of health [19].

Older age makes it difficult to assess symptoms because older people may experience or interpret physical symptoms differently. Among patients with heart failure, older patients reported less discomfort with physical symptoms upon admission to the hospital with decompensated heart failure. Younger patients are more likely to fall into clusters with the most symptoms, and older people are more likely to fall into clusters with the fewest symptoms, may prevent seeking treatment and self-care. These symptoms are associated with poorer recovery, poorer health-related quality of life, and psychological distress. Doctors and nurses are advised to be alert for non-specific symptoms, such as fatigue and sleep disturbances, that may indicate the progression of heart failure to acute coronary syndrome, especially in the elderly [20-23]. Higher levels of distress correlate with cardiac arrest, increased readmissions [11].

Conclusions

Cardiovascular diseases have a high socio-economic significance, and the importance of timely rehabilitation of patients after cardiovascular events is an urgent public health problem. The work carried out in this direction makes it possible to identify priorities in the organization of the activities of the preventive service, determine the needs of the population in preventive programs, taking into account medical, social and regional characteristics and can be used to make managerial decisions, health care in general. According to the Self-care of chronic illness theory, nurses focus on patients´ individual self-care that occurs in the context of a chronic illness.

Conflict of interest statement. The authors report no conflicts of interest in this work.

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Кардиологияда күрделі немесе ұзақ мерзімді медициналық қажеттіліктері бар науқастар

Зорина О.С. [1], Vaartio-Rajalin H. [2]

[1] *Қарағанды медицина университетінің PhD докторанты, Қарағанды, Қазақстан. E-mail: zorina_96@mail.ru*

[2] *Геронтологиялық көмек профессоры, Або Академия университетінің Білім және әл-ауқат факультеті, Васа, Финляндия. E-mail: heli.vaartio-rajalin@abo.f*

Түйіндеме

Аурудың бүкіл траекториясында мейіргерлер ұзақ мерзімді және күрделі жүрек-қантамыр аурулары бар науқастарға күтім жасауда маңызды рөл атқарады. Созылмалы аурудың өзін-өзі күту теориясын қолдану пациенттердің өзін-өзі басқаруын жақсартады және науқастарға өздерінің жеке мақсаттарын тұжырымдай алатын және жағдайға қарамастан өзіне сенімді сезіне алатын білім мен дағдыларды береді.

Бұл мақаланың мақсаты - жүрек-қантамыр жүйесі немесе ұзақ мерзімді жағдайы бар Бұл теориялық шолу дәлелді әдебиеттер, теориялық негіз және кәсіби рефлексия арасындағы диалектикалық үдерісте жүргізілген.

Мейіргерлер науқастың жүрек-қан тамырлары ауруларының қаупі деңгейін бағалайды, мейірбике теориясына негізделген пациенттерді оқыту арқылы бастапқы және қайталама аурудың алдын алуға үлес қосады, симптомдар кластерлерін және олардың сәйкес PREM және PROM көмегімен науқастың функционалдық мүмкіндіктері мен өмір сапасына әсерін бақылайды.

Түйін сөздер: күрделі жағдайлар, ұзақ мерзімді жағдай, озық мейіргерлік күтім, жүрек-тамыр аурулары.

Пациенты со сложными или долгосрочными медицинскими потребностями в кардиологии

Зорина О.С. [1] , Vaartio-Rajalin H. [2]

[1] PhD докторант Медицинского университета Караганды, Караганда, Казахстан. E-mail: zorina_96@mail.ru
[2] Профессор геронтологической помощи, Факультет образования и социального обеспечения, Университет Або Академия, Васа, Финляндия. E-mail: heli.vaartio-rajalin@abo.f

Резюме

На протяжении всего периода болезни медицинские сестры играют жизненно важную роль в организации ухода за пациентами с длительными и сложными заболеваниями сердечно-сосудистой системы. Применение теории самопомощи при хронических заболеваниях улучшает самоконтроль пациентов и дает знания и навыки, с помощью которых пациенты могут формулировать свои индивидуальные цели и чувствовать уверенность в себе, несмотря на свое состояние.

Цель данной статьи - описать размышления о передовом сестринском уходе за пациентами с сердечно-сосудистыми осложнениями или длительными состояниями. Это - теоретический обзор, проводимый в диалектическом процессе между научно-обоснованной литературой, теоретической базой и профессиональной рефлексией.

Медицинские сестры оценивают уровень риска сердечно-сосудистых заболеваний у пациентов, вносят вклад в первичную и вторичную профилактику заболеваний посредством обучения пациентов на основе теории сестринского дела, наблюдают за группами симптомов и их влиянием на функциональные возможности и качество жизни пациентов с помощью соответствующих предварительных и завершающих обследований, проводят и интерпретируют клинические измерения, контролируют медикаментозное лечение, а также пересматривают план сестринского ухода, ориентированный на личность.

Ключевые слова: сложные состояния, длительные состояния, продвинутый сестринский уход, кардиоваскулярные состояния.