OPEN ACCESS

Saudi Journal of Nursing and Health Care
Abbreviated Key Title: Saudi J Nurs Health Care
ISSN 2616-7921 (Print) | ISSN 2616-6186 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Review Article

The Role of the Nurse in the Optimal Care of Patients with Heart Failure

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DOI: 10.36348/sjnhc.2024.v07i01.003 | **Received:** 07.12.2023 | **Accepted:** 11.01.2024 | **Published:** 25.01.2024

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Abstract

Heart failure (HF) is a clinical condition that requires comprehensive medical care, consisting of supervision by a cardiologist, primary care physician (PCP), nurse practitioner and nutritionist. A physiotherapist, pharmacologist play a no less important role, and psychological support for both the patient himself and his family can be equally helpful, which can positively influence the treatment process. A significant problem in the care of patients with HF are repeated hospitalizations, which can result from the progression of the disease itself, but also from suboptimal therapy, comorbidities or noncompliance. As each hospitalization worsens the patient's prognosis, but just as importantly, generates high costs, outpatient care options involving different groups of medical personnel are being sought to improve the prognosis and quality of life of HF patients, but also reduce the cost of care. Currently, 90% of the budget for HF care is consumed by hospitalizations. This article aims to show how the competencies and tasks of a nurse can be used in the care and education of a patient with HF. The role of the nurse in the outpatient care of patients with HF is emphasized by the guidelines of the European Society of Cardiology, resulting in the creation of the Education and Certification Program for Heart Failure Nurses in Poland under the auspices of the Polish Cardiac Society, the Heart Failure Association, the Supreme Chamber of Nurses and Midwives.

Keywords: Heart failure (HF), psychological support, suboptimal therapy.

INTRODUCTION

Heart failure (HF) is a major global health problem, currently affecting 2% of the population, but the rate is as high as 10% in older age groups [ESC guidelines]. The HF epidemic is associated with serious consequences for patients' quality of life and a huge economic burden on the health care system [1]. The care of patients with heart failure requires a multispecialty approach, mainly through its complex pathophysiology and the variety of symptoms presented, as well as the multi-morbidity of patients. Since most of the budget allocated for the care of patients with HF is consumed by hospitalizations [2], models of care are constantly being sought that would influence the reduction of hospitalization rates and early re-hospitalizations. It seems that education of nursing staff, and the provision of outpatient surveillance by specialized heart failure nurses could have a beneficial effect on quality of life and risk of hospitalization in this group of patients, especially with limited access to cardiologists. Many studies have indicated that nurses could play a key role in monitoring the treatment and severity of symptoms of patients with HF [3]. With their specialized knowledge, communication skills, and ability to coordinate access to the entire treatment team (PCP, cardiologist, nutritionist., psychologist, pharmacist, physical therapist), they could improve the care of patients with HF [4, 5]. This is confirmed by the fact that the European Society of Cardiology's guidelines for the diagnosis and treatment of HF point precisely to the central role of the nurse in patient care. It is the nurses who become the key link in treatment teams, providing holistic care, education and support for HF patients and their families [4].

THE ROLE AND TASKS OF THE NURSE IN THE CARE OF THE PATIENT WITH HEART FAILURE

Early evaluation of patients after hospital discharge for decompensated HF is crucial in preventing complications and early re-hospitalizations. The guidelines emphasize that a visit to a PCP should take place within 7 days of discharge, while a visit to a cardiologist should take place within 14 days. On the other hand, heart failure is the leading cause of hospitalization among people > 65 years old, so it is unrealistic to meet the above recommendations. Therefore, some of the tasks could be taken over by nursing staff. Nurses are trained in both the subjective

examination and basic physical examination, and have the ability to gather a detailed history, identify symptoms and assess the risk of adverse events. A key marker of functioning for patients with heart failure, is the severity of dyspnea as assessed by the New York Heart Association (NYHA) classification. Identifying changes in daily functioning and changes in the above classification may suggest a change in clinical condition that may warrant modification of treatment or more rapid evaluation by a cardiologist [6]. Another important task of the nurse is to monitor the patient's physiological parameters, especially those assessing cardiovascular health. These include blood pressure, heart rate, saturation, and the number and quality of breaths. Abnormalities in these parameters may indicate a worsening of the patient's condition, an impending exacerbation of the disease, thereby necessitating medical intervention [6, 7]. Edema is one of the key symptoms of HF, depending on the position most often assumed by the patient, it appears in the lowest localized areas, in the case of running patients it will be the lower limbs, in patients lying down it will be the sacro-lumbar area and thighs. Interestingly, patients very often ignore the onset of edema, despite its significant impact on quality of life and limitation in daily functioning. Education in this area, as well as supervision by nurses, can sensitize patients to seek help more quickly if edema worsens. The occurrence of edema, as well as enlargement of abdominal girth, increased dyspnea or the onset of paroxysmal nocturnal dyspnea, are markers indicating conductivity and fluid retention, the main cause leading to cardiovascular decompensation and hospitalization. Regular assessment of these parameters, as well as education in self-care involving, among other things, daily measurement of body weight and observation of its dynamics, monitoring of the severity of edema and its changes after intensification of diuretic treatment can save the patient from the need for a hospital stay [8, 9]. In the case of worsening symptoms such as edema or shortness of breath, indicating an impending exacerbation of the disease, the nurse can point out the need for accelerated medical follow-up, or the need for psychological or dietitian care, depending on the dominant factor contributing to the onset of decompensation. A holistic assessment of the patient's condition and communication with the entire treatment team/other members of the team caring for the patient can have a major impact on the patient's treatment process [10].

Both increased shortness of breath and edema lead to a limitation in the ability to perform daily activities such as walking or doing household chores, which can also lead to social isolation and depression, and this can adversely affect adherence, attendance at follow-up appointments or the ability to purchase medications [3], and a nurse identifying the problem can involve the family, social support or the PCP.

The nurse plays an important role in providing emotional support. She listens to patients' concerns, offers her support, and offers help from mental health professionals [10].

Another extremely important task of a nurse in caring for a patient with HF is to educate about self-care. In the first step, they teach what the disease is, its course and how to cope with it, then point out the benefits of monitoring the symptoms of the disease and when to seek specialized help. They show the importance of non-pharmacological treatments for heart failure, such as diet, physical activity and avoiding factors that increase the risk of exacerbation. Nurses play an important role in educating patients about an appropriate diet by identifying unhealthy eating habits and encouraging healthier choices. The key to preventing fluid retention in addition to a low-salt diet (<5 g/salt/day) is to limit fluid intake. Excessive salt intake can lead to water retention in the body, negatively affecting HF symptoms and ultimately leading to decompensation requiring hospitalization. Encouraging patients to read the labels of the products they buy, with particular attention to sodium content, may have a beneficial effect on reducing hospitalizations. Patient education on monitoring daily fluid intake, monitoring fluid balance, has a proven role in preventing exacerbations [5]. It should also be noted that a common comorbid condition in patients with HF is malnutrition, cachexia, and anemia. The reason for these abnormalities is the chronic inflammatory process resulting from HF, but also reduced appetite and malabsorption due to intestinal swelling. Importantly, malabsorption can affect the ineffectiveness of medications including diuretics. It is important to point out to patients, to ensure that their diet is rich in protein and sufficient calories to regenerate and maintain normal muscle mass. Particular attention should be paid by nurses, especially to those taking diuretics. Water-electrolyte disorders, especially those involving potassium, can exacerbate or cause the onset of arrhythmias, including life-threatening ones. Hence, it is important to educate patients on the importance of monitoring levels of these electrolytes and adjusting diet. Often patients with HF are advised to limit alcohol and caffeine intake. These substances can adversely affect heart rate and lead to exacerbation of heart failure symptoms. Nurses can educate patients about the potential risks of excessive consumption of these substances and encourage moderate consumption [5, 11]. Regular contact between the patient and the HF nurse serves to build trust, which can later be used to encourage vaccination or cardiac rehabilitation. Rehabilitation in patients with HF has a proven beneficial effect in improving prognosis as well as reducing the risk of hospitalization. Educating patients about physical activity is also another task of nurses. They demonstrate the benefits of moderate, ability-appropriate activity and also tailor a workout plan to the individual patient's needs. Nurses should teach patients with heart failure a variety of forms of physical activity - both aerobic

exercises and isometric exercises that help maintain normal muscle mass and strength. Emphasize potential warning signs, at the onset of which activity should be stopped immediately. Similar to cardiac rehabilitation, regular physical activity allows for improvements in quality of life, physical functioning and a better sense of well-being. At the same time, it can also help reduce symptoms of depression and anxiety [5]. Nurses can play a key role in motivating patients to exercise by setting realistic goals, tracking their progress and offering emotional support. Each HF patient has individual needs and limitations. Nurses can help tailor an exercise plan to the patient's specific needs, taking into account factors such as age, fitness level and overall health [12, 13].

TYPES OF MEDICAL SYSTEMS INVOLVING PERSONEL NURSING PATIENTS WITH HF

One of the main areas in which nurses are using telesystems is in telemonitoring patients health. These systems allow remote tracking of key physiological parameters such as blood pressure, heart rate, blood oxygen levels, as well as other cardiac indicators. This allows nurses to monitor patients' health in real time, quickly identifying any worrisome changes, which is crucial for early detection of signs of heart failure decompensation. Another important aspect of using telesystems is the ability to conduct remote consultations. Nurses, using telemedicine platforms, can effectively collaborate with cardiologists and other specialists, allowing them to make quick and accurate therapeutic decisions. Remote consultations also enable nurses to provide support and advice to patients, which is particularly important in the context of health education and psychological support. Telesystems also offer opportunities for health education and psychological support for patients. Nurses can use digital platforms to conduct educational sessions, provide advice on disease management, lifestyle changes, diet and medication management. Such support is extremely important, as it allows patients to better understand their disease and actively participate in the treatment process. Telemedicine systems also enable the collection and analysis of patient health data. Nurses can use this data to assess the effectiveness of treatment, identify trends and patterns, and adjust care plans and interventions based on patient needs and responses. In some telemedicine systems, nurses can receive alerts or alarms when alarming changes in a patient's health parameters are detected. This allows for quick response and intervention, which is particularly important in preventing sudden hospitalizations and deterioration of the patient's health [3, 7, 9].

SUMMARY

Heart failure is a chronic disease with an unfavorable prognosis, associated with the risk of recurrent exacerbations. The most appropriate management is optimal treatment of HF itself, as well as of comorbidities, a holistic approach by a multidisciplinary team including, in addition to treatment in accordance with the guidelines of the European Society of Cardiology, psychological care, dietary recommendations. Special care is required for patients with end-stage disease, in whom the most important thing is life-enhancing treatment. The article emphasizes the critical role of the nurse in providing this care and aims to encourage nursing staff to train and certify heart failure educators (https://edu.slabeserce.pl/uzytkownik/rejestracja). The nurse's main task is to observe the patient from both physical and emotional perspectives. Systematic monitoring of vital signs, clinical status enable faster identification of potential complications. No less important, however, is the emotional support offered to the patient, struggling with a chronic condition. Providing education about the condition and available therapies is a key element of support. It enables the patient to gain a deeper understanding of his or her health situation and actively engage in therapy. Throughout the treatment process, the nurse also plays an important coordinating role. The nurse's integrated efforts in caring for people with heart failure are the key to effective treatment and improving patients' quality of life.

CONCLUSIONS

1. The nurse occupies a central position in caring for the heart failure patient: Caring for the heart failure patient goes beyond the limits of pure medical knowledge. It requires deep understanding and empathy. A nurse with medical knowledge and relational skills is a pillar of comprehensive care;
2. The nurse oversees and evaluates the condition of the heart failure patient: Regular monitoring of the patient and evaluation of the patient's condition are essential for early detection of complications or deterioration of the patient's condition. Nurses have a leading role in this aspect of care;
3. Conducting patient education: The nurse conducts educational activities about their condition, enabling them to consciously participate in therapy and fully understand their disease.
4. The nurse provides emotional support: Chronic conditions like heart failure bring emotional challenges. The nurse's role in providing emotional support and recognizing the patient's psychological needs cannot be overstated.
5. The nurse coordinates the patient's care: Harmonious collaboration between different specialists is essential in the process of caring for a patient with heart failure. The nurse is often the key liaison in this multidisciplinary collaboration.
6. A nurse should continually improve her professional skills: In the face of rapidly changing medicine, continuing education is an imperative to keep nurses at the forefront of modern care.

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