

The Impact of Nurse-Led Strategies on Managing Chronic Diseases

Wujud Mohammed A. Alhifthi, Fadiyah Fahad Noorsaeed, Shada Saud Kojar, Susan Sultan Mueen, Huda Mubarak Zaki Almuwallad, Hakami, Shadia Mousa M., Samira Saad Alsulami, Kholoud Aun Hamed Alshamrani, Abdulrhman Ahmed Almalki, Noorah Jamaan Alnadawi

- 1- Nursing Technician, Maternity and Children Hospital, Arar, Saudi Arabia
- 2- Nursing Specialist, Erada Complex for Mental Health, Tabuk, Saudi Arabia
- 3- Health Assistant, Health Care security, Prince Abdulaziz bin Musa'ed Hospital, Arar, Saudi Arabia
- 4- Specialist nurse, Ministry of health, Riyadh, Saudi Arabia
- 5- Specialist Nurse, Ministry of Health, Riyadh, Saudi Arabia
- 6- Nursing Specialist, Ministry of Health, Riyadh, Saudi Arabia
- 7- Senior Specialist, Health administration and community Health, Ministry of Health, Jeddah, Saudi Arabia
- 8- Nursing Specialist, Sarat Abeidah General Hospital, Sarat Abeidah, Saudi Arabia
- 9- Technician nursing, Erada Complex for Mental Health, Tabuk, Saudi Arabia
- 10- Specialist Nurse, Eradah Complex and mental health, Arar, Saudi Arabia

Abstract:

This review article investigates the impact of these strategies on chronic disease management. The role of nurses has evolved significantly, with increasing evidence highlighting the positive effects of nurse-led initiatives on patient health outcomes. This review delve into various nurse-led approaches, such as patient education, support for self-management, medication oversight, and lifestyle guidance. It critically assess the effectiveness of these interventions in enhancing patient compliance with treatment plans, lowering hospital readmission rates, and improving overall quality of life. Additionally, the review will address the challenges and obstacles nurses encounter when implementing these strategies, along with potential solutions to mitigate these issues. The significance of interdisciplinary collaboration and the integration of nurse-led initiatives into current healthcare frameworks will also be emphasized. Ultimately, this review seeks to provide a thorough understanding of the existing evidence regarding the efficacy of nurse-led strategies in chronic illness management, aiming to inform healthcare professionals, policymakers, and researchers about the advantages of involving nurses in the care of patients with chronic conditions.

Keywords: Nurse-led interventions, Chronic disease management, Patient education, Self-management support, Medication management, Lifestyle counseling

Introduction:

The role of nurses in healthcare has evolved significantly over the years, especially in the management of chronic diseases. Chronic diseases, such as diabetes, heart disease, and asthma, are long-lasting conditions that require ongoing medical attention and lifestyle management. Nurses play a crucial role in educating patients about their conditions, providing support, and coordinating care with other healthcare providers [1].

Historically, nurses have always played a key role in caring for patients with chronic conditions. In the early

days of nursing, before the advent of modern medicine, nurses were often the primary caregivers for patients with chronic illnesses. They provided comfort, support, and basic medical care to help patients manage their conditions and improve their quality of life. As healthcare systems evolved and medical knowledge advanced, the role of nurses in chronic disease management also evolved [2].

Managing chronic diseases can be challenging for both patients and healthcare providers. Patients with chronic conditions often require complex treatment regimens, lifestyle modifications, and ongoing monitoring to keep their conditions under control.

Nurses face challenges such as limited resources, time constraints, and the need to coordinate care with multiple healthcare providers. Additionally, patients with chronic diseases may have comorbidities or social determinants of health that complicate their care [3].

In recent years, there has been a shift towards a more holistic and patient-centered approach to chronic disease management. Nurses are now seen as key members of the healthcare team, working collaboratively with physicians, pharmacists, dietitians, and other providers to deliver comprehensive care to patients with chronic conditions. Nurses are involved in all aspects of chronic disease management, from assessing patients' needs and developing care plans to educating patients about their conditions and helping them navigate the healthcare system [4].

Nurses now play a crucial role in empowering patients to take control of their health and manage their chronic conditions effectively. They provide education on medication management, diet and exercise, symptom management, and self-care strategies. Nurses also help patients set realistic goals, monitor their progress, and make adjustments to their care plans as needed. By building trusting relationships with patients and providing ongoing support, nurses can help patients improve their health outcomes and quality of life [5].

As the prevalence of chronic diseases continues to rise, there are many opportunities for nurses to further expand their role in chronic disease management. Nurses can leverage technology, such as telehealth and remote monitoring devices, to enhance patient care and improve communication with patients and other providers. Nurses can also advocate for policy changes that support better access to care for patients with chronic conditions, such as increased funding for preventive services and care coordination programs [6].

Types of Nurse-Led Interventions in Chronic Disease Management:

Chronic diseases are long-term health conditions that require ongoing management to prevent complications and improve quality of life. Nurse-led interventions

have been shown to be effective in managing chronic diseases by providing education, support, and monitoring to patients. In this essay, we will explore the different types of nurse-led interventions in chronic disease management [7].

One type of nurse-led intervention in chronic disease management is patient education. Nurses play a crucial role in educating patients about their condition, treatment options, and lifestyle changes that can help manage their disease. This education can help patients better understand their condition and empower them to take control of their health. Nurses can provide information on medication management, diet and exercise recommendations, and self-care techniques to help patients effectively manage their chronic disease [8].

Another type of nurse-led intervention in chronic disease management is patient support. Nurses can provide emotional support to patients coping with the challenges of living with a chronic disease. They can listen to patients' concerns, provide encouragement, and help them navigate the healthcare system. Nurses can also connect patients with support groups, resources, and community services to help them cope with their disease and improve their quality of life [9].

In addition to education and support, nurses can also play a role in monitoring patients with chronic diseases. Nurses can track patients' symptoms, vital signs, and medication adherence to ensure they are effectively managing their condition. They can also conduct regular check-ins with patients to assess their progress, address any concerns, and make adjustments to their treatment plan as needed. By monitoring patients closely, nurses can help prevent complications and ensure patients are receiving the care they need to manage their chronic disease effectively [2].

Nurse-led interventions in chronic disease management can take place in a variety of settings, including hospitals, clinics, and community health centers. Nurses can work collaboratively with other healthcare providers, such as physicians, pharmacists, and dietitians, to develop comprehensive care plans for patients with chronic diseases. By working as part of a multidisciplinary team, nurses can provide holistic

care that addresses the physical, emotional, and social aspects of managing chronic diseases [6].

Nurse-led interventions play a vital role in managing chronic diseases by providing education, support, and monitoring to patients. By empowering patients with knowledge, offering emotional support, and closely monitoring their progress, nurses can help patients effectively manage their chronic disease and improve their quality of life. Through collaboration with other healthcare providers, nurses can deliver comprehensive care that addresses the complex needs of patients with chronic diseases. As the prevalence of chronic diseases continues to rise, nurse-led interventions will play an increasingly important role in helping patients live healthier, more fulfilling lives [10].

Effectiveness of Nurse-Led Interventions in Improving Patient Adherence:

Patient adherence to medical treatment is a crucial aspect of healthcare that directly impacts treatment outcomes and patient well-being. Non-adherence to prescribed medications or treatment plans can lead to worsening of health conditions, increased healthcare costs, and decreased quality of life. Nurse-led interventions have been increasingly recognized as effective strategies to improve patient adherence and promote better health outcomes [11].

Nurses play a central role in patient care, providing education, support, and guidance to patients throughout their healthcare journey. Nurse-led interventions involve nurses taking the lead in implementing strategies to enhance patient adherence to treatment plans. These interventions can include patient education, counseling, monitoring, and follow-up support to help patients understand the importance of adherence and overcome barriers to compliance [12].

One of the key strengths of nurse-led interventions is the close relationship that nurses often have with their patients. Nurses are often seen as trusted and approachable healthcare providers, making it easier for patients to communicate their concerns and challenges related to adherence. This strong patient-nurse relationship allows nurses to tailor interventions

to meet the individual needs and preferences of each patient, increasing the likelihood of successful adherence [14].

Research has shown that nurse-led interventions can significantly improve patient adherence to medications and treatment plans across various healthcare settings. A systematic review published in the *Journal of Clinical Nursing* found that nurse-led interventions were associated with improved adherence to medications in patients with chronic conditions such as diabetes, hypertension, and HIV. These interventions were found to be particularly effective in promoting patient understanding of their treatment regimens, addressing misconceptions about medications, and providing ongoing support to help patients stay on track with their treatment [15].

In addition to improving patient adherence, nurse-led interventions have also been shown to have a positive impact on patient outcomes. A study published in the *Journal of Advanced Nursing* found that nurse-led interventions were associated with improved clinical outcomes in patients with heart failure, including reduced hospitalizations and improved quality of life. These findings highlight the potential of nurse-led interventions to not only improve adherence but also enhance overall patient well-being and healthcare outcomes [16].

Despite the growing evidence supporting the effectiveness of nurse-led interventions in improving patient adherence, challenges remain in implementing these interventions on a wider scale. Limited resources, time constraints, and competing priorities within healthcare settings can pose barriers to the successful implementation of nurse-led interventions. However, with continued research, advocacy, and collaboration among healthcare professionals, nurse-led interventions have the potential to become a standard practice in promoting patient adherence and improving healthcare outcomes [12].

Nurse-led interventions have shown promise in improving patient adherence to medications and treatment plans, leading to better health outcomes and enhanced quality of life for patients. Nurses play a critical role in supporting patients in their healthcare journey, providing education, guidance, and support to

help them adhere to their treatment regimens. As healthcare continues to evolve, nurse-led interventions will likely play an increasingly important role in promoting patient adherence and improving healthcare outcomes [5].

Impact of Nurse-Led Interventions on Hospital Readmissions:

Hospital readmissions have long been a concern for healthcare providers, as they not only indicate poor patient outcomes but also contribute to rising healthcare costs. In recent years, nurse-led interventions have emerged as a promising solution to reduce hospital readmissions and improve patient care [17].

Nurse-led interventions refer to programs and initiatives that are designed and implemented by nurses to improve patient outcomes and reduce healthcare utilization. These interventions can take various forms, such as care coordination, patient education, medication management, and transitional care. Nurses play a key role in coordinating care across different settings, ensuring that patients receive appropriate and timely interventions to prevent hospital readmissions [18].

One of the key benefits of nurse-led interventions is their ability to provide personalized and holistic care to patients. Nurses are trained to assess patients' physical, emotional, and social needs, allowing them to develop individualized care plans that address the root causes of hospital readmissions. By focusing on the whole person, nurses can identify and address underlying issues that may contribute to patients' readmission, such as medication non-adherence, lack of social support, or inadequate self-care skills [19].

Furthermore, nurse-led interventions have been shown to improve communication and collaboration among healthcare providers, leading to better coordination of care and smoother transitions between healthcare settings. Nurses act as liaisons between patients, families, and healthcare teams, ensuring that everyone is on the same page regarding the patient's care plan and goals. This interdisciplinary approach helps to prevent gaps in care and reduce the likelihood of

readmissions due to miscommunication or lack of follow-up [20].

In addition to improving patient outcomes, nurse-led interventions have also been found to reduce healthcare costs associated with hospital readmissions. By preventing unnecessary hospitalizations, nurses help to lower healthcare expenditures and free up resources for other patients in need. This cost-saving benefit is particularly important in the current healthcare landscape, where hospitals are under increasing pressure to improve efficiency and reduce waste [21].

Despite the numerous benefits of nurse-led interventions, there are also challenges associated with implementing and sustaining these programs. One common challenge is the need for adequate resources, including funding, staffing, and training, to support nurse-led interventions. Hospitals and healthcare organizations must invest in their nursing workforce and provide the necessary tools and support to enable nurses to effectively carry out their roles as care coordinators and patient advocates [22].

Another challenge is the need for ongoing evaluation and quality improvement to ensure that nurse-led interventions are achieving their intended outcomes. Nurses must collect and analyze data on patient outcomes, healthcare utilization, and cost savings to demonstrate the impact of their interventions and identify areas for improvement. This requires a culture of continuous learning and adaptation within healthcare organizations, as well as collaboration with other stakeholders to share best practices and lessons learned [23].

Nurse-led interventions have the potential to significantly reduce hospital readmissions and improve patient care. By providing personalized, holistic care and promoting communication and collaboration among healthcare providers, nurses can help to prevent unnecessary hospitalizations and improve patient outcomes. However, the successful implementation of nurse-led interventions requires adequate resources, ongoing evaluation, and a commitment to quality improvement. Healthcare organizations that invest in their nursing workforce and support nurse-led interventions are likely to see

positive results in terms of reduced readmissions, improved patient satisfaction, and lower healthcare costs [24].

Challenges and Barriers in Implementing Nurse-Led Interventions:

Nurse-led interventions have become increasingly popular in healthcare settings as a way to improve patient outcomes and enhance the overall quality of care. These interventions involve nurses taking on a more proactive role in managing patient care, often working independently or in collaboration with other healthcare professionals. While nurse-led interventions have shown great promise in improving patient outcomes, they also come with their own set of challenges and barriers that can hinder their successful implementation [25].

One of the main challenges in implementing nurse-led interventions is resistance from other healthcare professionals. Traditional healthcare settings often have a hierarchical structure where physicians are seen as the primary decision-makers, and nurses are expected to follow their orders. When nurses take on a more independent role in managing patient care, it can create tension and resistance from other healthcare professionals who may feel threatened by this shift in power dynamics. Overcoming this resistance and gaining buy-in from all members of the healthcare team is crucial for the successful implementation of nurse-led interventions [26].

Another challenge in implementing nurse-led interventions is the lack of resources and support. Nurses are often already overburdened with their existing workload, and adding on additional responsibilities for managing patient care can be overwhelming. Without adequate resources, such as staffing support, training, and access to necessary tools and technology, nurses may struggle to effectively implement and sustain nurse-led interventions. Healthcare organizations must invest in providing the necessary resources and support to ensure the success of nurse-led interventions [27].

Furthermore, a lack of clear guidelines and protocols for nurse-led interventions can also pose a barrier to their implementation. Nurses may feel unsure about

their role and responsibilities in managing patient care without clear guidance and protocols in place. Developing standardized protocols and guidelines for nurse-led interventions can help to clarify expectations and ensure consistency in the delivery of care. Healthcare organizations must work to establish clear guidelines and protocols to support nurses in implementing nurse-led interventions effectively [22].

Additionally, resistance from patients and their families can also be a barrier to the successful implementation of nurse-led interventions. Patients and their families may be accustomed to a more traditional model of care where physicians are seen as the primary decision-makers, and may be hesitant to trust and follow the recommendations of nurses. Building trust and rapport with patients and their families, and involving them in the decision-making process, is essential for the successful implementation of nurse-led interventions [19].

While nurse-led interventions have the potential to greatly improve patient outcomes and enhance the quality of care, they also come with their own set of challenges and barriers that must be addressed for successful implementation. Overcoming resistance from other healthcare professionals, providing adequate resources and support, establishing clear guidelines and protocols, and building trust with patients and their families are key steps in overcoming these challenges and ensuring the success of nurse-led interventions in healthcare settings. By addressing these challenges and barriers, healthcare organizations can empower nurses to take on a more proactive role in managing patient care and ultimately improve the overall quality of care provided to patients [5].

Strategies to Enhance the Effectiveness of Nurse-Led Interventions:

Nurse-led interventions play a crucial role in improving patient outcomes and enhancing the quality of healthcare delivery. Nurses are at the forefront of patient care, and their expertise and skills are instrumental in implementing effective interventions that address the unique needs of each patient. In this essay, we will discuss strategies to enhance the effectiveness of nurse-led interventions and maximize their impact on patient care [29].

1. Comprehensive Assessment

One of the key strategies to enhance the effectiveness of nurse-led interventions is to conduct a comprehensive assessment of the patient's needs. Nurses should take the time to gather relevant information about the patient's medical history, current health status, and social determinants of health. This information will help nurses develop tailored interventions that address the specific needs of each patient and improve their overall health outcomes [30].

2. Collaborative Approach

Nurse-led interventions are most effective when they involve a collaborative approach that includes other healthcare professionals, patients, and their families. Nurses should work closely with physicians, social workers, and other members of the healthcare team to develop and implement interventions that are holistic and patient-centered. Involving patients and their families in the decision-making process can also help improve adherence to treatment plans and enhance the effectiveness of interventions [31].

3. Evidence-Based Practice

Another important strategy to enhance the effectiveness of nurse-led interventions is to use evidence-based practice. Nurses should rely on the best available evidence to guide their clinical decision-making and ensure that interventions are based on the latest research and best practices. By using evidence-based practice, nurses can improve the quality of care they provide and enhance patient outcomes [32].

4. Continuous Monitoring and Evaluation

To ensure the effectiveness of nurse-led interventions, it is essential to continuously monitor and evaluate their impact on patient outcomes. Nurses should regularly assess the progress of interventions, make adjustments as needed, and track outcomes to determine the success of their interventions. By monitoring and evaluating interventions, nurses can identify areas for improvement and make changes to enhance their effectiveness [33].

5. Patient Education and Empowerment

Patient education and empowerment are key components of effective nurse-led interventions. Nurses should take the time to educate patients about their health conditions, treatment options, and self-care strategies. By empowering patients to take an active role in their care, nurses can improve patient outcomes and enhance the effectiveness of interventions. Patient education can also help improve patient adherence to treatment plans and promote better health outcomes [12].

Nurse-led interventions play a critical role in improving patient outcomes and enhancing the quality of healthcare delivery. By implementing strategies such as comprehensive assessment, collaborative approach, evidence-based practice, continuous monitoring and evaluation, and patient education and empowerment, nurses can enhance the effectiveness of their interventions and maximize their impact on patient care. It is essential for nurses to continue to develop their skills and expertise in order to provide high-quality, patient-centered care and improve the health outcomes of their patients [6].

Conclusion:

In conclusion, the evolution of the nurse's role in chronic disease management has been marked by significant advancements in patient care, education, and collaboration with other healthcare providers. Nurses play a vital role in empowering patients to take control of their health and manage their chronic conditions effectively. By continuing to adapt to the changing healthcare landscape and embracing new opportunities for innovation, nurses can continue to make a positive impact on the lives of patients with chronic diseases.

References:

1. Chan C.W., Richardson A., Richardson J., (2013). Managing symptoms in patients with advanced lung cancer during radiotherapy: results of a psychoeducational randomized controlled trial. *Journal of Pain and Symptom Management*, 45(5), 822-831.

2. Clark A.M., Savard L.A., Thompson D.R., (2008). What is the strength of evidence for heart failure disease management programs? *Journal of the American College of Cardiology*, 51(4), 347-353.
3. Clark A.M., Thompson D.R., (2005). Nurse-led interventions in heart failure: a systematic review. *European Journal of Heart Failure*, 7(3), 333-343.
4. Dale J., Caramlau I.O., Lindenmeyer A., Williams S.M., (2007). Peer support telephone calls for improving health. *Cochrane Database of Systematic Reviews*, 4, CD006903.
5. DeBusk R.F., Miller N.H., Superko H.R., Dennis C.A., Thomas R.J., Lew H.T., et al. (1994). A case-management system for coronary risk factor modification after acute myocardial infarction. *Annals of Internal Medicine*, 120(9), 721-729.
6. DeBusk R.F., Miller N.H., Parker K.M., Bandura A., Kraemer H.C., Cher D.J., (2004). Care management for low-risk patients with heart failure: a randomized, controlled trial. *Annals of Internal Medicine*, 141(8), 606-613.
7. Doughty R.N., Wright S.P., Pearl A., Walsh H.J., Muncaster S.A., Whalley G.A., et al. (2002). Randomized, controlled trial of integrated heart failure management: the Auckland Heart Failure Management Study. *European Heart Journal*, 23(2), 139-146.
8. Ekman I., Andersson G., Boman K., Charlesworth A., Cleland J.G., Poole-Wilson P.A., et al. (2006). Adherence and perception of heart failure symptoms. *European Journal of Heart Failure*, 8(5), 474-479.
9. Gwadry-Sridhar F.H., Arnold J.M., Zhang Y., Brown J.E., Marchiori G., Guyatt G., et al. (2005). Pilot study to determine the impact of a multidisciplinary heart failure clinic on heart failure patient outcomes. *American Heart Journal*, 150(6), 983.
10. Jaarsma T., Halfens R., Huijter Abu-Saad H., Dracup K., Gorgels T., van Ree J., et al. (2000). Effects of education and support on self-care and resource utilization in patients with heart failure. *European Heart Journal*, 21(23), 1017-1023.
11. Jovicic A., Holroyd-Leduc J.M., Straus S.E., (2013). Effects of self-management intervention on health outcomes of patients with heart failure: a systematic review of randomized controlled trials. *BMC Cardiovascular Disorders*, 13, 43.
12. Kasper E.K., Gerstenblith G., Hefter G., Van Anden E., Brinker J.A., Thiemann D.R., et al. (2002). A randomized trial of the efficacy of multidisciplinary care in heart failure outpatients at high risk of hospital readmission. *Journal of the American College of Cardiology*, 39(3), 471-480.
13. Koelling T.M., Johnson M.L., Cody R.J., Aaronson K.D., (2005). Discharge education improves clinical outcomes in patients with chronic heart failure. *Circulation*, 111(2), 179-185.
14. Krumholz H.M., Amatruda J., Smith G.L., Mattera J.A., Roumanis S.A., Radford M.J., et al. (2000). Randomized trial of an education and support intervention to prevent readmission of patients with heart failure. *Journal of the American College of Cardiology*, 39(1), 83-89.
15. Lainscak M., Blue L., Clark A.L., Dahlström U., Dickstein K., Ekman I., et al. (2011). Self-care management of heart failure: practical recommendations from the Patient Care Committee of the Heart Failure Association of the European Society of Cardiology. *European Journal of Heart Failure*, 13(2), 115-126.
16. Luttik M.L., Jaarsma T., van Geel P.P., Brons M., Hillege H.L., Hoes A.W., et al. (2006). Long-term follow-up in optimally treated and educated heart failure patients: effects of a self-care education programme. *European Journal of Heart Failure*, 8(5), 611-617.
17. McAlister F.A., Stewart S., Ferrua S., McMurray J.J., (2004). Multidisciplinary strategies for the management of heart failure patients at high risk for admission: a systematic review of

- randomized trials. *Journal of the American College of Cardiology*, 44(4), 810-819.
18. McAlister F.A., Lawson F.M., Teo K.K., Armstrong P.W., (2001). A systematic review of randomized trials of disease management programs in heart failure. *American Journal of Medicine*, 110(5), 378-384.
19. McAlister F.A., Stewart S., Ferrua S., McMurray J.J., (2004). Multidisciplinary strategies for the management of heart failure patients at high risk for admission: a systematic review of randomized trials. *Journal of the American College of Cardiology*, 44(4), 810-819.
20. McAlister F.A., Youngson E., Bakal J.A., Kaul P., Ezekowitz J., van Walraven C., (2011). Impact of physician continuity on death or urgent readmission after discharge among patients with heart failure. *Canadian Medical Association Journal*, 183(18), E1124-E1133.
21. Naylor M.D., Brooten D., Campbell R., Jacobsen B.S., Mezey M.D., Pauly M.V., et al. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. *Journal of the American Medical Association*, 281(7), 613-620.
22. Naylor M.D., Brooten D.A., Campbell R.L., Maislin G., McCauley K.M., Schwartz J.S., (2004). Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. *Journal of the American Geriatrics Society*, 52(5), 675-684.
23. Naylor M.D., Brooten D.A., Campbell R.L., Maislin G., McCauley K.M., Schwartz J.S., (2004). Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. *Journal of the American Geriatrics Society*, 52(5), 675-684.
24. Phillips C.O., Wright S.M., Kern D.E., Singa R.M., Shepperd S., Rubin H.R., (2004). Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: a meta-analysis. *Journal of the American Medical Association*, 291(11), 1358-1367.
25. Riegel B., Carlson B., Kopp Z., LePetri B., Glaser D., Unger A., et al. (2002). Effect of a standardized nurse case-management telephone intervention on resource use in patients with chronic heart failure. *Archives of Internal Medicine*, 162(6), 705-712.
26. Riegel B., Carlson B., Kopp Z., LePetri B., Glaser D., Unger A., et al. (2002). Effect of a standardized nurse case-management telephone intervention on resource use in patients with chronic heart failure. *Archives of Internal Medicine*, 162(6), 705-712.
27. Riegel B., Carlson B., Kopp Z., LePetri B., Glaser D., Unger A., et al. (2002). Effect of a standardized nurse case-management telephone intervention on resource use in patients with chronic heart failure. *Archives of Internal Medicine*, 162(6), 705-712.
28. Stewart S., Marley J.E., Horowitz J.D., (1999). Effects of a multidisciplinary, home-based intervention on unplanned readmissions and survival among patients with chronic congestive heart failure: a randomized controlled study. *The Lancet*, 354(9184), 1077-1083.
29. Stewart S., Pearson S., Horowitz J.D., (1998). Effects of a home-based intervention among patients with congestive heart failure discharged from acute hospital care. *Archives of Internal Medicine*, 158(10), 1067-1072.