Nurse practitioner led collaborative care teams for heart failure management

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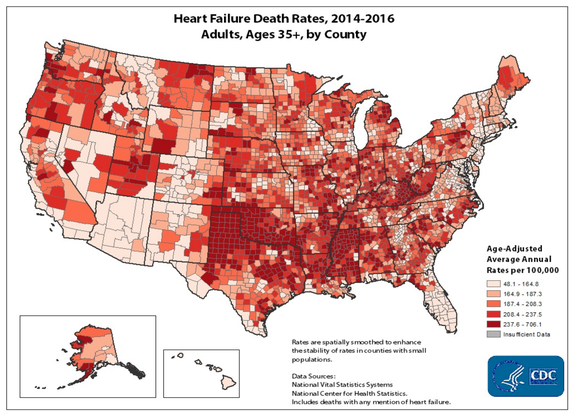
INTRODUCTION

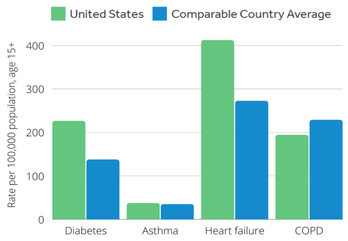
- Heart failure is a prevalent chronic disease in the United States.
- It is defined as a complex clinical syndrome of signs & symptoms that suggest the efficiency of the heart as a pump is impaired. This condition occurs when the heart cannot adequately supply oxygen and blood to the rest of the body.

- The number of people diagnosed with heart failure is increasing and projected to rise by 46% by 2030, resulting in more than 8 million people with heart failure.
- It is thought to affect 14% of the elderly population.



- It is the leading cause of hospitalizations in patients over the age of 65, with the highest 30-day readmission rate.
- Heart failure costs the nation an estimated $30.7 billion each year. This total includes the cost of health care services, medications to treat heart failure, and missed days of work

Hospital admission rate for chronic health conditions, 2018 or nearest year

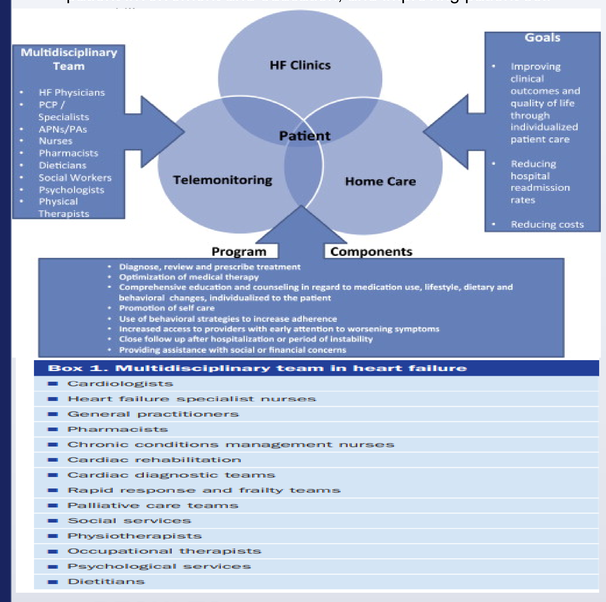


OBJECTIVES

- To provide understanding of nurse practitioner led collaborative care teams.
- To determine whether NP collaborative care teams are more effective for heart failure management than traditional patient care.
- To determine what benefits these collaborative teams have on patient care outcomes.
- To make recommendations for best heart failure management.

MATERIALS & METHODS

- A literature review was conducted, and 8 keeper studies were selected after completing a rapid critical appraisal on the studies.
- Keeper studies were found to valid, reliable, and applicable to the clinical question of implementation of NP led collaborative/multidisciplinary care teams for heart failure management.
- Studies focused on implementing multidisciplinary teams, increasing patient monitoring and access to care, increasing patient involvement and education, and improving patient self-



PATIENT SELF-CARE ASSESSMENT & EDUCATION

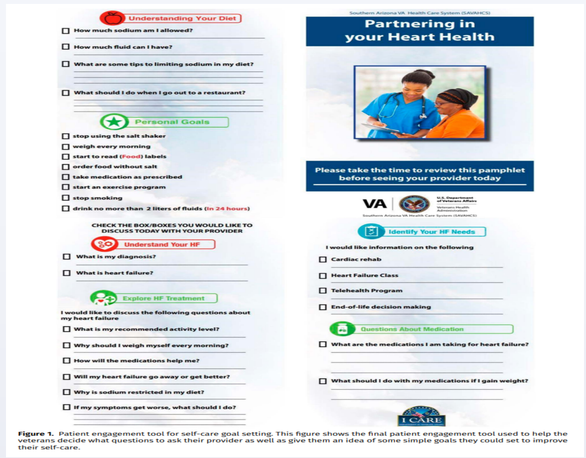
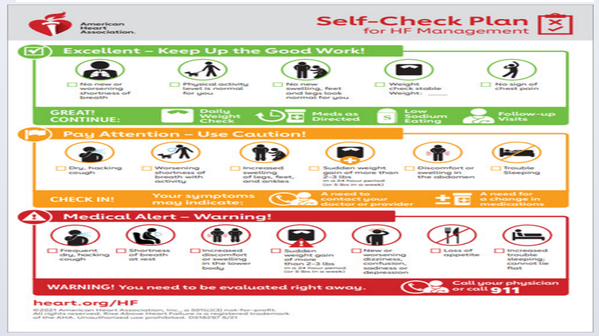


Figure 1. Patient engagement tool for self-care goal setting. This figure shows the final patient engagement tool used to help the veterans decide what questions to ask their provider as well as give them an idea of some simple goals they could set to improve their self-care.



RESULTS

Moore (2016)

- Nurse practitioner led home based congestive heart failure pathway program was effective in reducing 30-day readmission rates to 9% compared to the national average of 23%.

Bader et al. (2018)

- Patients became more educated on salt and fluid restrictions, daily weight, and reporting warning symptoms and signs to the heart failure team.
- At the follow-up survey, 73% of patients had not needed any interim admissions.
- Fewer patients were having sleep pattern disturbances, and their ability to do mild to moderate exercise had increased.

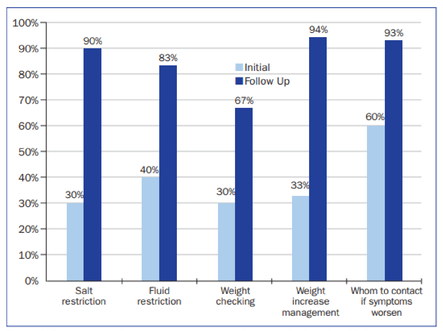


Figure 2. Percentages of correct responses by patients on the initial and follow-up surveys to questions on adherence and self-care (n=30)

Hua et al. (2018)

- Scores of self care maintenance, management and confidence in collaborate care model (CCM) group were all significantly higher than the control group.
- CCM significantly improved both the physical and mental quality of life, compared with the control group.
- CCM significantly increased patient's left ventricle ejection fraction, decreased NT-proBNP level and enhanced exercise capacity.

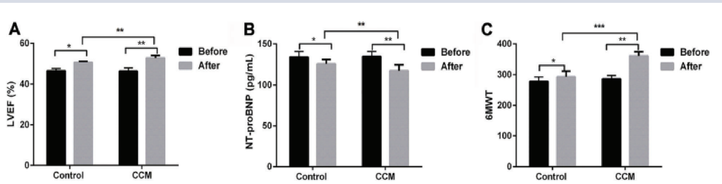


Figure 2. Comparison of *A*, physical quality of life, and *B*, mental quality of life between patients with chronic heart failure treated with usual care (Control) and with the collaborative care model (CCM). Data are reported as means ± SD. *P < 0.05; **P < 0.01 (*t*-test).

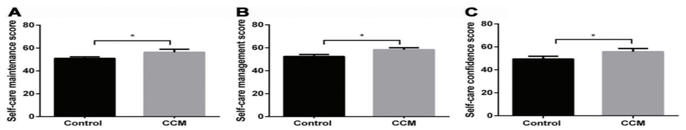
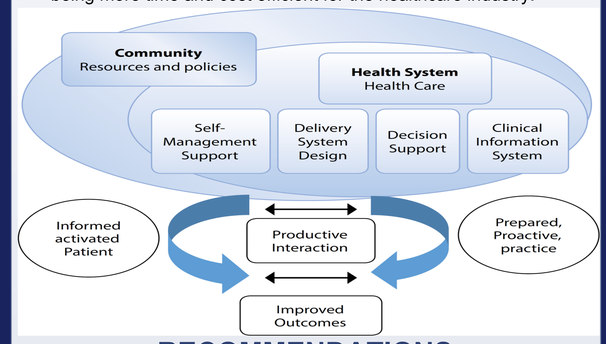


Figure 1. Comparison of *A*, self-care maintenance; *B*, self-care management, and *C*, self-care confidence between patients with chronic heart failure treated with usual care (Control) and with the collaborative care model (CCM). Data are reported as means ± SD. *P < 0.05 (*t*-test).

CONCLUSIONS

- Nurse practitioner led heart failure management teams have been correlated to improved patient self-care ability when managing their heart failure.
- This improved self-care ability leads to improved quality of life, reduced disease exacerbations and reduced hospitalizations.
- NP led collaborative care team model of care is superior to traditional patient care when dealing with a chronic and complex disease such as heart failure and improves patient outcomes
- This care model improves patient's use of resources as well as being more time and cost efficient for the healthcare industry.



RECOMMENDATIONS

- Patients with both unstable and stable heart failure disease benefit by being followed by a nurse-led collaborative care team.
- Patients who have recently been discharged from the hospital related to CHF should have a follow-up assessment by a heart failure specialist provider within 2 weeks (READMISSION HIGH RISK TIME PERIOD).
- Patients should have regularly scheduled subsequent appointments with HF team, ideally in 1-2 weeks intervals especially after a disease exacerbation or medication titration.
- Home care services for heart failure management should be initiated for those unable to attend outpatient appointments.
- Frequent team meetings (weekly if possible) improve communication and patient care.
- Patient surveys should be conducted regularly to evaluate their disease knowledge and self-management skills throughout the use of nurse-led case management teams.
- Implementation of specific interventions is recommended for best use of CCMs, including patient engagement and goal setting.
- A focus on continuous patient involvement, education and disease self -management is crucial for this model of care to be effective.

REFERENCES

Bader, F., Atallah, B., Sadik, Z. G., Tbishat, L., Gabra, G., Soliman, M., Bakr, K., Ferrer, R., Stapleton, J., & Khalil, M. (2018). Nurse-led education for heart failure patients in developing countries. *British Journal of Nursing*, 27(12), 690–696.

Brennan, E. J. (2018). Chronic heart failure nursing: Integrated multidisciplinary care. *British Journal of Nursing*, 27(12), 681-688. doi:10.12968/bjon.2018.27.12.681

Centers for Disease Control and Prevention. (2020, September 8). Heart failure. Centers for Disease Control and Prevention. Retrieved January 31, 2022, from https://www.cdc.gov/heartdisease/heart_failure.htm

Charteris, E. J., & Pounds, B. (2020). A nurse practitioner–led effort to reduce 30-Day heart failure readmissions. *Journal of the American Association of Nurse Practitioners*, *32*(11), 738–744.

Glogowska, M., Simmonds, R., McLachlan, S., Cramer, H., Sanders, T., Johnson, R., Kadam, U. T., Lasserson, D. S., & Purdy, S. (2015). Managing patients with heart failure: A qualitative study of multidisciplinary teams with specialist heart failure nurses. *The Annals of Family Medicine*, 13(5), 466–471.

Hua, C. Y., Huang, Y., Su, Y. H., Bu, J. Y., & Tao, H. M. (2017). Collaborative care model improves self-care ability, quality of life and cardiac function of patients with chronic heart failure. *Brazilian Journal of Medical and Biological Research, 50(11)*, 1–6.

Huey-Chen, S., Boyd, J., Randall, S., & Maiorana, A. (2021). Association between community based nurse practitioner support, self-care behaviour and quality of life in patients with chronic heart failure. *Australian Journal of Advanced Nursing*, 38(3), 25-32.

Moore, J.-A. M. (2016). Evaluation of the efficacy of a nurse practitioner-led home-based congestive heart failure clinical pathway. *Home Health Care Services Quarterly, 35(1)*, 39–51.

Smith, C. E., Piamjariyakul, U., Dalton, K. M., Russell, C., Wick, J., & Ellerbeck, E. F. (2015). Nurse-led Multidisciplinary Heart Failure Group Clinic appointments. *Journal of Cardiovascular Nursing*, *30*(4S), 1–15.