Heart Failure Nurse Practitioner Role Development and Proposal

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Abstract

Heart failure (HF) is a debilitating chronic condition affecting millions of individuals and resulting in an overwhelming clinical and financial burden for Americans. The complexity of this chronic condition combined with a high incidence of comorbidities makes management more difficult and results in frequent emergency department (ED) visits and hospital admissions. The Institute of Medicine recommends that nursing lead the redesigning efforts to improve healthcare outcomes and costs (1). Acute Care Nurse Practitioner (ACNP) utilization is a perfect solution for fulfilling the needs of this patient population and transforming the care delivery model to fit the changing dynamics of health care delivery.

Introduction

Medical advances and new technology have contributed to extending life expectancy of critically acute and chronically ill patients. The aging population, along with the ability to extend life expectancy, has expanded the need for comprehensive care for patients with complex medical needs. Changes in the health care system have warranted a change in the way health care is delivered. Health care reform has begun to focus on quality and cost effective measures to improve overall outcomes and reduce the clinical and financial burden associated with chronic conditions such as HF. The Pay for Performance initiative is transforming the current volume based reimbursement program from a fee-for-service to a performance based incentive program with goals of quality improvement and cost effective care (2). The Centers for Medicare and Medicaid Services (CMS) has introduced initiatives to promote accountability for providing high quality patient centered care, making HF a focal point for improvement measures. Nursing is at the forefront of transforming the health care system. A heart failure nurse practitioner (HFNP)

role was proposed to meet the challenges of health care reform and fulfill the needs of this complex multidimensional patient population.

This article describes the process of developing and proposing a HFNP role for the management of HF patients throughout the care continuum at a non-profit acute care facility in a tri-state area in the Midwest United States. This project is a nurse led initiative to redesign the health care delivery process in response to meeting the challenges of improving quality of care while decreasing the burden of this chronic condition. The PEPPA framework is an acronym for participatory, evidence-based, patient-focused process for guiding the development, implementation, and evaluation of an advanced practice nursing role (3). The PEPPA framework was utilized to guide the role development and proposal process.

Significance

The United States (U.S.) prevalence rate of HF is reported at 5.7 million, the incidence rate 670,000, and the mortality rate is approximately 292,214 with 1 in 8 death certificates mentioning HF (4). These numbers have increased over the years despite improvement in medical technology. In fact, medical technology contributes to increased numbers of people living with HF. This chronic condition is progressive and causes physical, emotional, and socioeconomic duress to those personally affected. The diagnosis of HF results in chronic disability, reduced quality of life, and early mortality. HF also contributes to overwhelming healthcare expenditures. The financial impact of this chronic condition is estimated at 39.2 billion dollars in direct and indirect cost annually (5).

Over one million patients a year are hospitalized with HF, resulting in $11.2 billion in hospital costs alone (4). Heart failure is associated with the highest cost for diagnosis and treatment by Medicare and has the highest 30-day readmission rate post hospital discharge at 26.9% (4). Despite the financial resources allocated to HF diagnosis and management, outcomes have not improved and prognosis remains poor (6).

History of the Nurse Practitioner Role

The Nurse Practitioner (NP) role was developed in the 1960s resulting from a shortage of primary care providers (7). The original intent was to work in collaboration with physicians to improve access to healthcare recipients. Today the utilization of NPs results in not only improved access, but increased quality of care, and reduced cost. The increased quality of care may be related to the NPs focus on holistic and preventative care. There is no significant difference in healthcare outcomes and patient satisfaction when comparing care provided by NPs and physicians (8). NPs have been responsive to the needs of society by filling the gaps of health care provision, providing quality, cost effective, comprehensive, patient centered care across all care continuums. The continued dedication to advanced education, evidence based practice, development of the nursing profession, and ability to provide expert clinical care demonstrates the commitment of the nursing profession to health care reform.

An adult ACNP is a nurse practitioner that provides and manages care in a variety of settings for the acute, critical, and complex, chronically ill adult patient population (9). The ACNP role was developed in the 1990s. In 1995, the first national certification exam was initiated (10). ACNPs not only closely assess, monitor, and provide complex therapies and interventions when

appropriate, but also help promote supportive care measures that enhance quality of life when chosen as an outcome goal.

PEPPA Framework

The PEPPA framework was developed in Canada in 2004 to help successfully guide the implementation and utilization of advanced practice nurses (11). This framework is a nine step evidence based process that consists of the design, implementation, and evaluation process to plan and structure an optimal APN role development process. A toolkit using the PEPPA framework was developed and evaluated in Canada. It uses a variety of resources, tools, and guiding activities to ease the utilization of the PEPPA framework to help organizations design and deliver high quality, cost effective, patient centered care utilizing APRNs (12). Six of the nine steps of the PEPPA framework and the toolkit were used to propose the implementation of a HFNP role.

Step 1: Define the patient population and describe the current model of care

The first goal in this step is to determine the patient population that will be affected by the role development. The HFNP role proposal was developed for the HF patient population entering the emergency department (ED) or admitted to in-patient units. In 2012 there were 214 patients discharged with the primary diagnosis of HF. The age range for patients was 37 years to 95 years with the average age of 74 years old or 76 years median age. Of the total HF patients, 82% either had traditional Medicare or a Medicare Advantage Plan. There were 113 females and 101 males and 93% were Caucasian.

The second goal is to describe the current model of care. An evaluation of the current model of care included determining who provides care for this patient population, how care is provided, and what the interaction was between the members of the care team. The current model of care consists of patients entering through the ED or being directly admitted to the hospital. The majority of HF patients are admitted to the post-critical care unit which is a cardiac step down unit primarily used for patients with cardiac related diagnoses. On occasion patients admitted with respiratory distress, pneumonia, or COPD with underlying HF are admitted to other units, but the goal of the hospital is to keep all HF patients in the specialty setting of the post-critical unit. HF patients requiring closer monitoring or intubation are placed in the intensive care unit (ICU).

Almost 60% of the HF patients have a hospitalist as the admitting and attending physician during hospitalization, the other 40% have a family practice provider follow their case. There are two cardiology groups that provide consulting services and follow-up care post discharge. A HF program manager is responsible for identifying HF patients, providing education to patients and caregivers, assessing the needs for outpatient services and assisting in discharge planning. The HF program manager participates in daily discharge planning with the charge nurse, social worker, case manager, dietician, and home health consultant. Multidisciplinary rounds are also completed with the hospitalists, patients, staff nurses, pharmacists, dieticians, case managers, social workers, home health consultant and HF program manager on Mondays, Wednesdays, and Fridays. The HF program manager also manages a tele-monitoring service for qualifying HF patients who agree to participate in the program. The average number of HF patients participating in the tele-monitoring program is 75-80 patients a month.

Step 2: Identify the stakeholders and recruit the participants

The stakeholders are identified based on those that will be influenced and those that have the ability to directly or indirectly influence the new model of care. Patients, families, and care givers are considered central to the development of the new model of care. The internal stakeholders include the attending providers, cardiologists, heart failure program manager, nurses, unit managers, case managers, and social workers. The key stakeholders for this proposal are considered those who would be making the decision to approve this position. They include the Senior Leadership Team consisting of the President/Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Medical Officer (CMO), Chief Nursing Officer (CNO), Organization Development Director, Network Development Director, and the Director of Mission Services and Ethics. The Director of Quality Services also plays a key role in providing the metrics and assisting in determining the improvement goals and outcome measures related to the HF patient population. The external stakeholders consist of the primary care providers, community agencies, home health services, long term care facilities, and hospice care services.

Step 3: Determine the need for a new model of care

Assessing the strengths and weaknesses of the current model of care and review of the literature provide the identification for the needs and gaps in the provision of service for HF patients and families, the organization, and stakeholders. A HF dashboard had been previously developed and is utilized to track outcomes. Information obtained from this dashboard provides an overview of the patient population, based on three DRGs (291, 292, 293) and metrics used to assess and compare outcomes between organizations. Information from this dashboard was

utilized to present the need for a new model of care. Tables 1 and 2 display the clinical, quality, and cost implications of the current model of care.

Step 4: Identify the priority problems and goals to improve the model of care

Priority Problems

Identification of the priority problems consists of further analysis of the gaps in the system that contribute to the need for a new model of care. Patient safety and quality of care are considered the highest priority problems to be addressed. Further analysis of the data and a literature review provide three concepts related to enhanced patient safety and quality of care: provision of patient centered care, coordination of care, and transitional care.

Patient Centered Care. The concept of patient centered care focuses on the patient as an individual with unique needs. This concept is consistent with the philosophy of the Relationship Based Care Model adopted by the organization in 2012 (13). Providers should be considerate of the patient's values and beliefs, focusing on collaborating with the patient to find the optimal treatment plan that adheres to the needs of the patient (14). Patient centered care is enhanced when a relationship between the provider and patient and/or family is present. This relationship allows for a better understanding of the patients' wants and needs and allows the provider to experience the patient as a person. Patient centered care results in an improvement of outcomes such as quality of life, functional status, independence, sense of control, health outcomes, compliance with medical recommendations, and satisfaction with care (14).

Coordination of Care. Care coordination is recognized as one of twenty key health care areas that need improvement, based on recommendations by the Department of Health and Human Services (DHHS) along with the Institute of Medicine (IOM) in the report "*Priority Areas For National Action: Transforming Health Care Quality*", (15). In health care, a lack of coordination can contribute to a patient's increased risk of complications, medical errors, and an increased cost to all consumers. Patients with complex medical needs and multiple co-morbidities are at an increased risk for complications and ineffective care related to the insufficient coordination of health care services.

Transitional Care. The transfer of care between health care providers and settings during the acute phase of a patient's disease process is considered a transitional care period (16). The focus of transitions between health care settings has become more prominent with the increased recognition of hospital readmission rates. Transitional care has become a national focus in the search for improving patient outcomes across the care continuum. The evidence reveals that the lack of appropriate care transitions results in increased health care cost because of compromised quality and safety (16).

Inadequate communication between the hospital providers and primary care providers has been noted by Kripalani, LeFevre, Phillips, Williams, Basaviah, & Baker (17) as a contributing factor to patient safety and quality care concerns in the transitional care period. Direct communication between providers occurs less than 20% of the time, availability of discharge summaries at follow-up visits is between 12% – 34%, and lack of important information on discharge summaries was a common occurrence (17). Another gap noted in the system that may impact

transitional care is follow-up visits post hospital discharge. Jencks, Williams, & Coleman (18) reported that less than 50% of patients readmitted within 30days of discharge had a follow-up visit by a provider. All of these factors result in poor quality care, adverse outcomes, and high readmission rates.

Improvement Goals

The same outcome measures used to determine the need for a new model of care were utilized to construct the improvement goals for the HFNP proposal. These goals are based on the priority problems and areas that can be impacted by the HFNP role implementation. Year one and year two goals were proposed to meet the organizational targets for LOS, re-admission rate, mortality ratio and patient satisfaction based on both overall rating and recommendation of the hospital. For adherence to core measures, the goal for year one is to meet the organizational target of 85% and for year two to meet 100% compliance. Case manager evaluation and follow-up appointment scheduled prior to discharge are considered important aspects of providing patient centered care, care coordination, as well as transitional care, so the goals were set above the organizational target goals. The target goal for case management evaluation for year one is 85% and year two 100%. The goal for scheduling a follow-up appointment prior to hospital discharge was set at 85% for year one and 95% for year two. The improvement goals are also displayed on Tables 1 and 2.

Step 5: Define the new model of care and the APN's role

This step includes the actual development of the HF role based on the identified needs and outcome goals previously determined. Some of the multifaceted responsibilities that an HFNP

encompasses include direct patient care, clinical expertise, quality improvement participation, and the provision of education to nurses, staff, patients and families. The PEPPA Framework toolkit recommends developing a logic model to illustrate how the activities of the new model of care will result in the desired outcomes (12). A logic model (Figure 1) was developed for the role proposal to display the identified priority problems, goals of the HFNP role, expected outcomes and an evaluation plan post HFNP role implementation. A job description for the HFNP role was also created.

Step 6: Plan the implementation strategies

At this step the role was proposed to the nursing administration council that consists of unit managers, directors, and the chief nursing officer (CNO). Positive feedback was received and recommendations for strengthening the proposal were applied. Next a power point presentation was devised and used to present the role proposal to the Senior Leadership Team. The logic model was a useful tool to present the need for a new model of care in the management of HF patients, the suggested strategies for improvement, and the expected outcomes and evaluation plan with implementation of the HFNP. The job description supplemented the logic model by clearly defining the role of the HFNP.

Implications for Nurse Executives

The accountability of health care reform and quality improvement rests on everyone's shoulders. Nursing is responsive to the needs of society by providing the high quality, cost effective, comprehensive, patient centered care that is expected. The nursing profession is not only essential for filling the gaps of the health care system but also for recognizing, devising,

planning, and proposing implementation strategies that create improvement opportunities that benefit the patients and the health care system. This role development and proposal project using the PEPPA framework created the opportunity to address the needs of the HF patient population, the organization, and the health care system.

Conclusion

Health care reform, the competitive health care market, and consumer demand for quality improvement warrants a change in health care delivery. The current model of care and organizational structure are not conducive to providing the highest quality, most cost-effective, patient centered care that is outcome focused. A HFNP is able to influence outcomes by providing quality patient centered care, coordination of care, and transitional care to this vulnerable acutely, critically, and chronically ill patient population. Using the PEPPA framework to continue guiding the process; successful implementation of a HFNP role can be achieved. Implementation of a HFNP role will help transcend the safety, quality, and cost of care provided for patients living with heart failure.

References

1. The Institute of Medicine (IOM). The Future of Nursing: Leading Change, Advancing Health. Washington, DC: National Academies Press; 2010
2. Egol A., Shander A., Kirkland L., Wall, et. al. Pay for performance in critical care: An executive summary of the position paper by the Society of Critical Care Medicine*. Critical Care Medicine. 2009;37(9): 2625-2631.
3. Bryant-Lukosius D, DiCenso A. A framework for the introduction and evaluation of advanced practice nursing roles. Journal of Advanced Nursing. 2004;48(5):530-540.
4. American College of Cardiology Foundation, American Heart Association, Physician Consortium for Performance Improvement. Heart Failure Performance Measurement Set. Publication. American Medical Association 2009. http://www.ama-assn.org/ama1/pub/upload/mm/pcpi/hfset-12-5.pdf. Accessed January 10, 2013.
5. Jessup M, Albert NM, Lanfear DE, et al. ACCF/AHA/HFSA 2011 Survey Results: Current Staffing Profile of Heart Failure Programs, Including Programs That Perform Heart Transplant and Mechanical Circulatory Support Device Implantation: A Report of the ACCF Heart Failure and Transplant Committee, AHA Heart Failure and Transplantation Committee, and Heart Failure Society of America. Circulation: Heart Failure. 2011; 4(3):378-387.
6. Hall MJ, Levant S, DeFrances CJ. Hospitalization for Congestive Heart Failure: United States, 2000-2010. NCHS Data Brief; No 108. United States, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 2012. http://www.cdc.gov/nchs/data/databriefs/db108.htm. Accessed January 6, 2013.

7. Sherwood GD, Brown M, Fay V, Wardell D. Defining Nurse Practitioner Scope of Practice: Expanding Primary Care Services. Internet Scientific Publications (ISPUB). 2009. http://www.ispub.com/ostia/index.php?xmlFilePath=journals/ijanp/vol1n2/scope.xml. Accessed September 10. 2010.

8. Ruel J, Motyka C. Advanced practice nursing: A principle-based concept analysis. Journal of the American Academy of Nurse Practitioners. 2009; 21:384-392.

9. National Panel for Acute Care Nurse Practitioner Competencies. Acute care nurse practitioner competencies Washington, DC: National Organization of Nurse Practitioner Faculties; 2004:1-34.

10. Kleinpell RM. Acute care nurse practitioner practice: Results of a 5-year longitudinal study. Am J Crit Care. 2005;14(3): 211-221.

11. McNamara S, Giguère V, St-Louis L, Boileau J. Development and implementation of the specialized nurse practitioner role: Use of the PEPPA framework to achieve success. Nursing & Health Sciences. 2009;11(3):318-325.

12. Bryant-Lukosius D, Cancer Care Ontario. Designing Innovative Cancer Services and Advanced Practice Nursing Roles: Toolkit; https://www.cancercare.on.ca/about/programs/otherinitiatives/peppaproject/; 2009; Accessed September 20, 2012.

13. Koloroutis M. *Relationship-Based Care: A Model for Transforming Practice.* Minneapolis, MN: Creative Health Care Management; 2004.

14. Sidani S. Effects of patient-centered care on patient outcomes: An evaluation. Research and Theory for Nursing Practice. 2008;22(1):24-37.

15. Adams K, Corrigan J. Priority Areas for National Action: Transforming Health Care Quality. Washington, DC: National Academies Press; 2003.

16. Enderlin, CA, McLeskey N, Rooker JL, et al. Review of Current Conceptual Models and Frameworks to Guide Transitions of Care in Older Adults. Geriatric Nursing. 2013;34: 47-52.

17. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: Implications for patient safety and continuity of care. JAMA: The Journal of the American Medical Association. 2007;297(8):831-841.

18. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. The New England Journal of Medicine. 2009;360(14):1418-1428.

Table 1. Metric Targets for Assessing Management of Heart Failure Patients

Heart Failure	Patient Cases DRG 291, 292, 293	Length of Stay (LOS)	Readmission Rate 0-30 day	Mortality Ratio	Core Measures ACE or ARB
Organizational Target	**N/A**	**3.75 to 3.89**	**16.5%**	**0.67 to 0.90%**	**95.0%**
03/2012 – 09/2012	89	4.00	18.2%	0.84%	88%
10/2012 – 03/2013	108	4.25	9.9%	1.66%	82.1%
Year 1 Goal	N/A	3.75	9.9%	0.90%	95.0%
Year 2 Goal	N/A	3.89	6.0%	0.67%	100%

Table 2. Metric Targets for Assessing Management of Heart Failure Patients

Heart Failure	Patient Cases DRG 291, 292, 293	% of Patients with CM Evaluation/ (24hrs)	Follow-up Appt. Scheduled Prior to Discharge	HF Patient Satisfaction Overall Rating	HF Patient Satisfaction Recommend Hospital
Organizational Target	**N/A**	**60%**	**60%**	**75.7% to 82.4%**	**79.7% to 84.3%**
03/2012 – 09/2012	89	67.96% (38.83%)	No Data	76.4%	83.1%
10/2012 – 03/2013	108	66.13% (42.74%)	42.86%	63.90%	77.4%
Year 1 Goal	N/A	80%	85%	75.7%	79.7%
Year 2 Goal	N/A	100%	95%	82.4%	84.3%

Figure 1. HFNP Role Proposal Logic Model

In-Patient Heart Failure Nurse Practitioner (HFNP) Role Proposal

SITUATION	INPUTS	OUTPUTS	OUTPUTS	OUTCOMES		
		ACTIVITIES	PARTICIPANTS	Short	Intermediate	Long
Mortality ratio above expected Currently the length of stay (LOS) exceeds the Geometric LOS Readmission rates negatively impact hospital revenue Non-compliance with Core measures results in financial implications Inappropriate health care utilization financially effects the organization and health care system Patient satisfaction reduced Patient safety issues with medication errors on discharge Reduced patient quality of life Increased caregiver burden	Inpatient Heart Failure Nurse Practitioner Access to ambulatory care services Future use of clinic setting for Heart Failure Patient Follow-up care provided by HFNP Continued Inpatient Heart Failure RN Educator-Coordinator	Provide HFNP consulting service for heart failure patients in the ED and inpatient units Utilize ambulatory care services to provide diuretic therapy for patients presenting with fluid overload not requiring hospitalization Begin discharge planning upon hospital admission based on assessment of patient goals Promote utilization of evidence-based practices Enhance effective communication between patient/family, providers, and staff ensuring patient needs are met and arrangement of discharge in a timely fashion Ensure transitional care services are provided including direct communication with PCP Complete medication reconciliation on admission and discharge Provide follow-up care on an outpatient basis RN will continue providing education to all HF patients/families, and staff; assist in care coordination; ensure discharge follow-up appointments are arranged; provide discharge follow-up on all heart failure patients; monitor Tel-Assurance patients ensuring symptom recognition and decomposition prevention See HFNP Job description for further details	Heart failure patients, families, and caregivers Hospitalist Cardiologist Primary Care Providers Nursing Staff Case Managers Social Workers Therapies Staff Tele-Monitoring Patients (86 participants) Unit Managers Director Inpatient Services Hospital Administration Organization Community	Improved recognition of heart failure patient population Improved patient-centered care focusing on goals obtained from assessment of patients health care needs and desired outcomes Improved care coordination to ensuring enhanced communication between patient/family & multidisciplinary team members Increased compliance of core measures to 100% Increased utilization of palliative care and hospice care services by 50% to meet the needs of patients who's goals are quality and comfort provided in their home settings Improved medication reconciliation to 100% accuracy Improved transitional care services & provision of care throughout the care continuum by 75% the 1st year Improved patient/family & caregiver education and condition management	80% consult rate by 2015 100% completion of Assessment and Plan of Care within 48hrs of admission Decreased LOS to meet Geometric measures & Organizational goals Improved patient satisfaction rate to meet Organizational target goal Improved staff and satisfaction to 25th percentile by the 1st year & 50th percentile the 2nd year Improve physician satisfaction to the 90th mean ranking over 5yrs Maintain 9.9% Readmission rate 1st year & 6% by 2nd year Improved patient quality of life, self management skills, functional ability, & care-giver burden by 25% based on pre and post questioner Provide NP led in home transitional care services to patients at high risk for readmission	Develop NP led outpatient clinic for heart failure patients Develop & Implement an inpatient NP role for Chronic Condition Management

Evaluation Plan: Development of an evaluation plan will be completed with the assistance of the Director of Quality Services based on the above measurable outcomes. A monthly score care will be utilized to assess progress. Implementation of process improvement measures will be based on six months worth of data. Data will be obtained from the Heart Failure Collaborative Dashboard, Minnesota Living with Heart Failure questionnaire (MLHF), National Database of Nursing Quality Indicators (NDNQI) for nursing satisfaction, and the Press Ganey survey for physician satisfaction.