Palliative Care Consultation by Advanced Practice Nurses Improves the Quality of Life in Congestive Heart Failure Patients

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Introduction

Patients with congestive heart failure (CHF) experience physical, psychological, and social distress and require significant symptom management. Patients who receive only curative interventions are deprived of palliative care by certified Palliative Advanced Practice Nurses (PAPNs), such as how to manage their disease throughout the continuum of their illness, supportive care, symptom management, and treatment plans. This project aimed to discover whether initiating early palliative care consultations, at the time of admission to the hospital, would (1) improve the quality of life (QoL) and (2) reduce the number of hospital readmissions for patients with CHF.

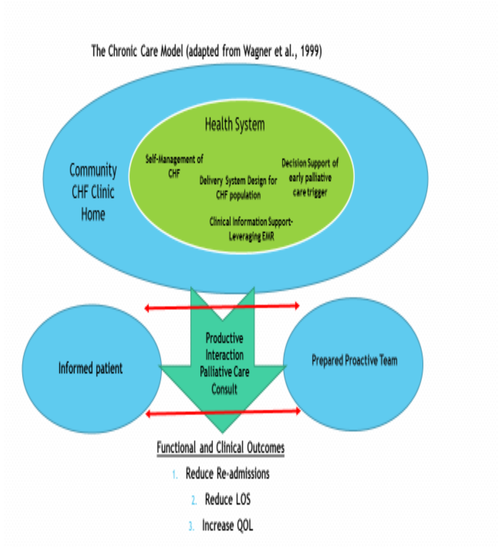
Background and Significance

Palliative care is a medical subspecialty that focuses on providing symptom relief and stress from serious illnesses. One goal of palliative care is to improve QoL for both patients and their family members, although palliative care also improves QoL by reducing hospital costs. Palliative care is appropriate across the life span, can be provided in conjunction with every other medical treatment, and is needed to complement medical management (Meier, 2012). Early palliative intervention should be considered for patients with CHF.

Problem Statement

Early initiation of a palliative care consultation by a PAPN through the use of a computerized trigger will improve the QoL for the medically complex patient.

Theoretical Framework
Chronic Care Model



Note. This figure was adapted from "The expanded chronic care model: an integration of concepts and strategies from population health promotion and the care model," by V.J. Barr, S. Robinson, B. Marin-Link, L. Underhill, A. Dotts, D. Ravensdale, and S. Salivaras, 2003, *Healthcare Quarterly*, *7*(1), p. 74.(doi:10.12927/hcq.2003.16763).

Aim and Objectives

To prompt appropriate care in the right place at the right time, this project proposed to use a trigger for a palliative care consultation upon patient admission at an academic acute care medical center in Middlesex County, New Jersey. A trigger-based referral system can enhance the medical center's current consult requests, improve timeliness and appropriateness of consults, and bridge clinical care providers' gaps in consults.

The aim of this project was to determine whether early initiation of palliative care consultations by a PAPN, triggered by admission to the hospital, would improve the QoL for the medically complex CHF patient.

The objectives of this proposal were to:

1. Develop a computerized trigger to notify PAPNs when a patient with CHF was admitted.

2. Evaluate patients' QoL via the Minnesota Living with Heart Failure Questionnaire (MLHFQ) at time of admission to the hospital and 30 days after palliative care consultation with PAPN.

3. Determine whether palliative care consultations reduced the number of acute care hospital readmissions within 30 days of hospital discharge

Review of Literature

Surviving a life-threatening event can be uplifting and devastating at the same time; such is the case for CHF patients (Evangelista et al., 2012). While living with their chronic disease, patients with CHF experience countless symptoms associated with marked distress and poor QoL (Bakitas et al., 2013). One approach for meeting the needs of patients with CHF is integrating palliative care with CHF care.

Purpose of Palliative Care

A review of literature revealed two qualitative studies by researchers who used different methods to study palliative care in the CHF population; both examined patients and their healthcare professional providers. Rodriquez, Barnato, & Arnold (2007) characterized patients with CHF who received palliative care consultations and identified barriers that limited the initiation of palliative care by their healthcare professionals. Rodriguez et al. performed a qualitative analysis of patient interviews ($n = 31$) and found that palliative care consults served as a transition from treatment to comfort care prior to patients' death. Study results revealed that among healthcare professionals, nurses had the greatest influence on facilitating palliative care consultations; surgeons were the most resistant to facilitating palliative care consults; and intensive care specialists viewed palliative care as falling within their purview.

Early Initiation of Palliative Care

In the aforementioned studies, palliative care consults were triggered within specific time frames. In Evangelista et al.'s (2012) study, where patients with CHF fared better on measures of depression, anxiety, symptom burden, and QoL, outpatient palliative care consults were initiated after discharge. In the studies by Rodriguez et al. (2007) and Bakitas et al. (2013), where patients with CHF showed improved measures of QoL, palliative care was initiated when patients were well into their hospital stay or at end-of-life. Researchers in both of these studies concluded that providing earlier palliative care services may have improved patients' QoL.

Triggering Early Referral

A need exists to initiate palliative care early in the treatment of patients with CHF. Implementing an automatic trigger in the EMR to refer patients for palliative care consultations can illuminate the role that PAPNs play in symptom management and in educating patients on how to adapt goals for their care.

Methodology
Quality Improvement Project

- Convenience Sampling of CHF patients
- Improving QoL
- Reducing readmissions

Setting

- 625-bed tertiary acute care academic medical center located in central New Jersey
- PAPN established in 2006 and consultative referral
- Current palliative program has not been evaluated

Population Project

- Adults with diagnosis of CHF and age ≥ 21 years old
- Sample size - minimum of 30 patients - male or female
- Identified through electronic trigger

Project Interventions

- Develop palliative care trigger
- Minnesota Living with Heart Failure Questionnaire (MLHFQ) QoL survey (Rector, 2017) – on admission and 30 days
- CHF symptom management education and advanced care planning/goals of care

Benefits and Risks

- No risks
- Trigger program activated on admission
- Advantages consult with PAPNs
- Model requires education and participation

Data Analysis

- Palliative care trigger created/activated - November 2019
- Trigger activated on admission
- November 1st, 2019 to December 1st, 2019 - No trigger activation
- IT widened trigger
- Widened trigger - 3,487 activations
- One response to perform consult

Findings
Number of Physicians in Specialty Groups

Specialty Group	n	%
Internal Medicine	37	46.25
Cardiology	19	23.75
Surgery	6	7.75
Critical Care	7	8.75
Family Medicine	7	8.75
Surgical Oncology	3	3.75
Medical Oncology	1	1.25

Note. $N = 80$ physicians in seven specialty groups.

Number of Bypassed Patient Referrals to Palliative Care by Specialty Group

Specialty Group	n	%
Internal Medicine	2,307	69
Cardiology	282	8.5
Family Medicine	146	4.4
Critical Care	67	2
Surgical Oncology	54	1.6
Medical Oncology	6	0.18

Note. $N = 3{,}322^{\dagger}$ patients admitted with diagnosis of CHF.
†Of the 3,322 patients' admitted with the diagnosis of CHF, some accounted for a few triggers in the total of 3,487 triggers that were activated. In this table, patients were only counted once, no matter how many times a trigger was fired on their behalf.

Patient Readmissions Data

Patient readmit	*n*
Yes	1147
No	2347

Note. $N = 1{,}147$ patients readmitted with diagnosis of CHF. At the time of first hospitalization, electronic triggers in the EMR were activated to notify physicians that patients with CHF had just been admitted.

Findings
Number of Patients Admitted with CHF by Disposition and

Location	Specialty Group	n	%
2 Core	Cardiology/Thoracic	469	13
4 Tower	Cardiology	435	12.48
5 Tower	Cardiology	330	9.5
6 Tower	Cardiology	513	14.7
7 Tower	Medical	46	1.3
8 Tower	Medical	19	0.2
9 Tower	Surgical	69	2.0
6 North	Surgical Oncology	18	0.5
5 North	Medical Oncology	8	0.2
4 North	Medical Oncology	8	0.2
BMT	Bone Marrow Transplant	6	0.17
CCU	Critical Care	47	1.3
CVICU	Critical Care	151	4.3
MICU	Critical Care	52	1.5
SICU	Critical Care	37	1.06
SBMU	Medical	53	1.5
4West	Medical	449	12.9
RCU	Medical Respiratory	96	2.754
EMA (Surge Area)	Medical/Surgical	631	18
TCU (Transitional Care Unit)	Medical/Surgical	57	1.6

Note. $N = 3{,}487^{\ddagger}$ triggers were activated in the EMR for the 3,322 patients with CHF admitted to the hospital. ‡Although a total of 3,487 triggers were activated in the EMR to notify physicians that a patient with CHF had been admitted, some of the triggers were repeated several times for the same patient. In this table, each trigger was counted as a separate instance, even when several triggers were activated on a patient's behalf.

Discussion

This DNP project set out to discover whether providing palliative care consults within 24-48 hours of hospital admission for CHF improves QoL and reduced hospital readmissions for those patients. Indeed, it is human nature to assume that patients diagnosed with CHF will do whatever is in their power to remain healthy.

Despite 3,487 triggers alerting physicians when their patients with CHF were admitted, no patients were referred to palliative care, so no conclusions could be made about the impact of early palliative care QoL and hospital readmissions. In future projects, triggers could directly refer patients for palliative care consult without requiring MD referral.

Strengths

- PAPNs credentialed/knowledgeable care of chronic illnesses
- Project site IT team
- Admission and readmission data

Limitations

- Physician maintain control of trigger
- Trigger-based referral in EMR must go directly to PAPNs on admission
- Physicians knowledge of palliative care
- Organizational culture
- Organizational policy
- Incentive program

Recommendations

- Educate healthcare providers on chronic illnesses
- Engage healthcare providers to become advocates
- Performance incentives to physicians
- Develop system-wide policies to integrate IT into the EMR
- Create system-wide culture that promotes palliative care
- Electronic trigger hard stop/Daily reports
- Utilize trigger to identify CHF on admission and categorize high or low risk (Bakitas et al., 2020)
- Nurse-led model (Bakitas et al., 2020)
- Organizational culture

Conclusion

The benefits of palliative care on symptom management, depression, and QoL must be examined further on a larger scale through additional research. How? To extrapolate the potential impact of implementing palliative care consult principles, many stakeholders must be included in studies, including healthcare workers, patients, families and communities.

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