Intergrative Review of Palliative Care in End Stage Heart Failure

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Abstract

The aim of this integrative literature review is to explore and discuss palliative care placement within the trajectory of heart failure in the end stage process. After an extensive search through 200 peer-reviewed studies published from 2009-2013 in the following databases: CINAHL, Academic Search Elite, Health Source Consumer Source Edition, Health Source: Nursing/Academic Edition, MEDLINE, Academic Collection (EBSCOhost), seven articles meeting the constraints were chosen. Common themes of these studies concern symptom management, medication administration, and decision-making tools for assessing patient centered needs and future research regarding effective implementation of palliative care integration in end stage heart failure patients. Nurses advocate the holistic approach of patient symptom control and family support needs through pragmatic, collaborative efforts with physicians and auxiliary professionals in the discussion of goals of care. The difficulty of these conversations with the patient and family regarding disease progression and the importance of doctors direct input in these end of life discussions is critical. Future research should continue to include new strategies implementing palliative care into the plan of care early as originally suggested by The American College of Cardiology Foundation/American Heart Association Guidelines for the Management of Heart Failure at the end of life.

*Keywords*: palliative, heart failure, nursing intervention, research, evidenced based
Palliative Care in End Stage Heart Failure

In data compiled between 2007 and 2009, the Centers for Disease Control and Prevention determined around five to seven million people in the United States have heart failure to some degree. It is the primary cause of 55,000 deaths each year. Heart failure was comorbidity in more than 280,000 deaths in 2008, or a ratio of one in every 9 individuals. Approximately half of the individuals diagnosed with heart failure die within five years (CDC, 2012).

With the onset of heart failure, the pumping action of the heart muscle cannot supply vital organs with enough blood and oxygen to support them. There are many diseases with the potential to damage the heart, including, coronary artery disease, high blood pressure, and diabetes. Behavioral factors such as smoking, being overweight, eating foods high in fat, sodium, and cholesterol without exercising, all increase the risk to individuals for developing this serious condition. The purpose of this paper is to examine the role of palliative care within the trajectory of end stage heart failure. Harding et.al quoted NICE (2003) stating, CHF clinical guidance requires that palliative needs of patients and family care providers should be identified, assessed, and managed at the earliest opportunity (2). The complexity of the problem encompasses the doctors, nurses, patient and family members.

Early intervention of the heart failure trajectory with the Palliative Care team has the potential of ensuring quality end of life care. With the birth of the Affordable Care Act and the impact of the Centers of Medicare and Medicaid Regulations regarding payment withdrawal of less than thirty-day readmission, patient centered care is vital to the profit margin of acute care hospitals. In the United States, $34-4 billion dollars is spent every year on heart failure and this number will continue to grow as aging Baby boomers enter their golden years.
The aim of this integrative literature review is to explore and discuss palliative care placement within the trajectory of heart failure in end stage process. The research question is, in end-stage heart failure, what is the effect of palliative care on end of life?

The integrative research review consists of a problem identification (stated previously), literature search, data evaluation, data analysis and presentation.

An extensive search was performed through 200 peer-reviewed studies published from 2009-2013 in the following databases: CINAHL, Academic Search Elite, Health Source Consumer Source Edition, Health Source: Nursing/Academic Edition, MEDLINE, Academic Collection (EBSCOhost). Of these, seven were selected for this integrative review utilizing the following search terms: palliative, end stage heart failure, heart failure, nursing intervention, nurse research. Each of the seven articles utilized in this integrative review referenced in a matrix titled Research Critique Table located in appendix A.

**Literature Review**

Within the seven articles utilized for this literature review, three were quantitative experimental or non-experimental and four were qualitative grounded theory or ethnographic in design style.

Bekelman et al. (2011) discussed their non-experimental qualitative study, which utilized constant comparison derived from grounded theory. The study participants provided informed consents and Colorado Multiple IRB approved all procedures prior to initiation of the project. Purposive sampling of 33 adult outpatients with symptomatic heart failure (NYHA II-IV) were identified, confirmation by a physician and 20 family caregivers. Mean age of the sample was 64, and included 17 Caucasians and 10 women.
Bekelman et al. (2011) conducted 720 hours of in-depth, semi-structured, 60-90 minute interviews and completed a specific health status self-report questionnaire by the Kansas City Cardiomyopathy. Observer triangulation, participant triangulation, and member checking were employed to increase validity of the findings. External validity was limited by population recruitment from one center.

Bekelman et al. (2011) interviews digitally recorded, transcribed verbatim and entered into ATLAS.ti for coding and analysis. Granular codes and themes were searched for text patterns within two primary Codes (DBB, CTN).

Bekelman et al. (2011) determined heart failure patients and their family caregivers supported early integration of palliative care services, particularly psychosocial support and symptom control, using a collaborative team approach. Content theme: are topics addressed by the intervention itself. Structure theme: How are such services provided and who is responsible for their provision. Timing theme: When should services begin and how long should they last?

Bekelman et al. (2011) addressed the following limitations: age of subjects, NYHA class II-IV. Three patient supported limitations with disease progression: (1) adjusting to the limitations of illness which have not been characterized in the literature. (2) Anticipatory guidance of patient centered education by medical and nursing staff regarding disease progression. (3) Focusing specifically on patients’ experiences and uncertainty in their illness manifested over the course of the illness. Given the sample size, future research should test the feasibility and effectiveness of integrating such a program. Boyd et al. (2009) focuses on the evaluation of the key components of services for people with advanced heart failure from several perspectives and recommend how care potentially could be delivered according to United Kingdom policies on long-term conditions, both palliative and end-of-life.
Boyd et al. (2009) conducted a Longitudinal Qualitative Study over two years, utilizing serial interviews with patients having advanced heart failure, their family carers and key professionals. Four focus groups provided a broad overview of individual experience and important aspects of services for each individual participant.

Boyd et al. (2009) conducted a purposive sampling recruitment from local epidemiology of NYHA Class II/IV of Southeast Scotland: mixed urban and rural area. 30 patients with advanced heart failure 25 family carers and 41 professionals participated in 162 face-to-face interviews. Some patients and carers were interviewed up to three times: in hospital or shortly after discharge, 4-6 weeks later and 4-6 months later. Concurrent interview triads of patients, family and professionals occurred. The interview and focus group data was recorded, transcribed and analyzed thematically with the aid of Nvivo.

Boyd et al. (2009) Professionals from primary care and specialist services contributed key information and insights about the barriers to delivering better and more accessible care. Interventions that help people navigate changing life circumstances, deal with uncertainty and retain a sense of control. Patients and families highly valued a key health professional and a supportive, continuing relationship with them. Professionals supported systematic, holistic assessment and regular monitoring of the patient’s physical and medication needs. Primary care compromised by a lack of professional time and resources, resulted in inequalities between those receiving well managed care and the remainder who had reactive, episodic services.

Dowding, Spilsbury, Thompson, Brownlow & Pattenden (2009) reviewed the exploration of the decision processes and types of decisions made by heart failure specialist nurses. Qualitative non-participant observation and semi-structured interviews were performed once
informed consent and approval by a Multi-Centre Ethics Committee and Research Governance and Management department were obtained.

Dowding, Spilsbury, Thompson, Brownlow & Pattenden (2009), discussed the purposive approach used to obtain a sample. Audio recordings were made during all interviews with both experienced and non-experienced nurses. Consultants compiled detailed field notes to record non-verbals, with a total of 18 interviews observed. Average interview length was 38 minutes. Total time for all interviews was 630 minutes.

Dowding, Spilsbury, Thompson, Brownlow & Pattenden (2009), transparency of this study through detailed description of the research allows the reader to make judgments: transferability by HFSN. Two decision area keys were expanded upon pharmacological management and managing patients in the palliative phase of their condition. Pharmacological management decisions involved the tradeoff between medication and development of more tailored strategies. Development of tailored decision support tools for medication titration provides structured decision aids for assessing patients’ need for palliative care. Limitations discussed were the exploratory nature, small sample size and the lack of observation data with regard to the nursing consultation process.

Harding et al. (2009) reviewed this quantitative, evidenced based clinical study utilizing a one-day census method to measure the number of inpatients with CHF and those appropriate for palliative care. The larger mixed method of this non-experimental group was granted ethical approval for the full mixed-methods study protocol under a single application to St. Thomas’ Hospital Research Ethics Committee.

Harding et al. (2009) reviewed 365 patient files within the setting: tertiary teaching hospital in London, UK. Of these, 28 were clinically identified with a diagnosis of congestive
heart failure according to NYHA stage III/IV classification appropriate for palliative care. These 28 files represent 4.4% of the total sample reviewed.

Harding et al. (2009), Extracted data from wards, placed the information into piloted data sheets and entered them into SPSS for analysis. Descriptive data produced: Classification as appropriate/inappropriate for palliative care was determined by comparing number of previous admissions, multi-professional staff input (each using a parametric comparison) and presence of “do not resuscitate” orders on file (chi square). In a comparison of those remaining patients with a clinical diagnosis of congestive heart failure, those with an ejection fraction of less than or equal to 45 and appropriate for palliative care had a statistically significant higher mean number of previous admissions: 1.9 compared to .057, p – 0.012, t=−2.733.

Harding et al. (2009) 11/365 (3.0%) of the entire inpatient population had clinical diagnosis of CHF and confirmed ejection fraction < or equal to 45% and of those 10 (2.7% of the inpatient population) were appropriate for palliative care. Date of census: the inpatient palliative care team currently knew of only one inpatient clinically identified as having CHF. The study itself was limited because it was based on inpatient admissions for only one day, at one tertiary hospital. Excluded from the study were accidents, emergency, surgical, obstetrics, gynecology and pediatrics. File recording of clinical diagnosis of CHF and symptom prevalence is lower than prevalence when prospectively assessed using a validated tool: methodological reliance on data recorded from routine clinical practice. Appraisal of family needs and communication needs regarding palliative care requires further intervention.

Matlock et al. (2010) Matlock et al. (2011) this quantitative, non-experimental, random sampling utilizing a questionnaire and hypothetical patient scenarios approved by IRB, for the National mail Survey was conducted between May and July 2004. The national mail survey
included a two-week time limit on return, a $20.00 cash incentive and postage paid return envelope.

Matlock et al. (2010) an analytic sampling of 598 cardiologists from the American medical Association Master file was completed. Of those, 81% were Caucasian, 93.1% were male, and 94.6% were board certified. Average age of those sampled was 52. The dependent variable in this sampling was the dichotomized responses and the continuous independent variable of regional spending determined by the EOL-EI, further adjusted by age, sex and specialty.

Matlock et al. (2010) the overall response rate was 62%, Case Scenario: (1) 23-32% for comparisons between the highest and lowest quintiles, p=.04 for trend (2) 35% versus 47%, p=0.008. Despite professional guidelines suggesting that the cardiologist discuss palliative care with patients having late stage heart failure, less than half of cardiologists discussed palliative care in two elderly patients with late-stage heart failure. This percentage was worse in the regions with more health care use in the last 6 months of life.

O’Hanlon & Harding (2011) this quantitative descriptive design utilized a pragmatist approach in the United Kingdom where 145 British heart foundation nurses asked 47 questions. The design followed by Crotty and then Creswell’s adoption concentrated on three areas: knowledge claims, strategies/plan of action and methodology. Their objectives were to (1) appraise the palliative care knowledge held by BHF nurses, (2) identify any gaps in education and experience in symptom control and palliative care.

O’Hanlon & Harding (2011), Logistic regression was used to evaluate the association between end-of-life intensity and guidelines coordination with the dichotomized responses. No differences were found between responders and non-responders in terms of gender, practice type
and year of medical school graduation ($p > 0.05$ for all comparisons). Data was analyzed using descriptive and non-parametric tests (Mann-Whitney U test and Chi-square). The free text gained from open-ended questions was subjected to thematic analysis by categorization into common themes.

O’Hanlon & Harding (2011) in their study brought attention to the 65% response rate. 85% identified first-line pain management, which is in line with WHO pain ladder. The specific problem was knowledge of management including depression and constipation. Nurses self-identified training needs were focused principally on communication and the introduction of palliative care into patient management.

O’Hanlon & Harding (2011) in the discussion of the themes and limitations found the following supporting information. Themes verified and further clarified: (1). Communication skills (2) lack of definition of the role of palliative care. The limitation findings: (1) there was no comprehensive list of all heart failure nurses working within England or UK in which to sample. (2) The non-response bias result supports a previous data study suggesting that social workers had a much lesser role in supporting heart failure patients, which one can assume is further contributing to this gap in a crucial area of patient care.

Schwarz et al. (2012) a qualitative non-randomized ethnographic study of the first 20 patients who received a palliative consultation by the heart failure/transplant team, approved by IRB at CSMC. Consecutive patients with advanced heart failure were referred to palliative care from the heart transplant service. All patients were in New York Heart Association (NYHA) class IV, stage D HF, and patients were on maximal medical therapy including beta-blockers, ACE inhibitors and diuretics. Assessment for the feasibility of implementing the American College of
Cardiology guidelines for early Palliative Care Intervention in patients with advanced heart failure who were seeking or received advanced therapies was to be determined.

Schwarz et al. (2012) Palliative care consultation by a retrospective chart review was completed. Open-ended questions were asked to assess the impact of the palliative care service on patient and their families and the health care professionals within the care provider teams. Two independent physicians used a non-standardized tool, one from the heart failure service and one from the palliative care service. A numerical score was used that included a range from 1 to 4: 1 reflected no impact from the service, 2 meant minimal impact, 3 moderate impact and 4 indicated significant impact that potentially changed treatment and outcomes.

Schwarz et al. (2012) Symptoms assessed at the time of initial palliative consultation: 1) generalized or localized pain, 2) dyspnea at rest, 3) insomnia. Patients expressed a relief of symptoms with palliative care involvement. This was also noted by family members and professional staff. Pain complaints by palliative care patients demonstrated a surprising decrease in the use of opioids after involvement. Palliative care in the overall medical management of the heart failure patients is a more holistic approach. Of all the patients with whom advanced directives and goals of care were discussed, only 30% actually completed advance care directives.

Schwarz et al. (2012) discussed the limitations of their retrospective, non-randomized chart review without a control group. This demonstrated feasibility and sufficient evidence of clinical benefit to warrant a larger randomized clinical trial. This trial would assess the benefit of standard involvement by palliative care in patients with advanced heart failure and the independent progress or treatment goals of each patient. Median “wait” time to heart transplant in 2008 was 168 days. This resulted in great distress for patients caught between the cure and death requiring high pharmacology and non-pharmacologic interventions.
Synthesis

Similarities of these studies are clearly defined with regard to symptom management, medication administration, decision-making tools for assessing patient centered needs and future research regarding effective implementation of palliative care integration in end stage heart failure patients. Nurses advocate the holistic approach of patient symptom control and family support needs through pragmatic, collaborative efforts with physicians and auxiliary professionals in the discussion of goals of care.

These seven studies differ in their approach to the topic of relevance of palliative care in end stage heart failure. Of the seven studies, five received full approval by IRB. One of them received an exception from IRB. The remaining study occurred in the United Kingdom without mention of IRB. Cited acknowledgement by O’Hanlon & Harding (2011) supported a process described by (Crotty, 1998) and further adapted by (Creswell, 2003), following the school of thought of a pragmatist approach.

Dowding, Spilsbury, Thompson, Brownlow & Pattenden (2009) design weakness flaw was non-observation of the interaction of specialist heart failure nurses with the patient during palliative care discussion. A quantitative, evidenced based clinical study performed utilizing a one-day census of one facility to measure number of congestive heart failure patients that are appropriate for palliative care (Harding et al., 2009).

Matlock et al. (2010), suggest efforts to increase awareness of palliative care among cardiologists and knowledge about how to best implement palliative care needs are apparent in heart failure patient populations, though no plan or suggestion toward future intervention mentioned. Boyd et al. (2009) discussed concerns about the balance between pain and symptom
control and direct care by specialty nurses. The setting of the study gives way to little variation in terms of ethnicity, thereby limiting the recruitment of minority ethnic groups.

The quality of the research reviewed in the literature supports the need for further research and a change in the current patient centered plan of care. Boyd et al. (2009) noted adequate resources are required especially in primary care, services that respond quickly and dynamically to changing needs and care pathways regarding identification, assessment and care planning for the patient. Harding et al. (2009) revealed that the inpatient palliative care team was only aware of one inpatient clinically identified as having congestive heart failure during the study period. Of the 365 inpatient population (3.0%) or 11 had clinical diagnosis of congestive heart failure and confirmed ejection fraction < or equal to 45 of which 10 were appropriate for palliative care.

Methodology of the literature review comprised of four qualitative studies and three quantitative studies. Qualitative studies were differentiated by utilizing either a grounded theory or an ethnographic approach toward longitudinal, non-randomized, constant comparison, non-participative or non-structured interviews. Quantitative studies were differentiated by non-experimental, cross-sectional, random sample or large mixed method. In addition, questionnaires, mail service surveys and retro reviews were conducted.

The measurements that were used in the qualitative studies reviewed were a retrospective data collection, semi-structured interview and face-to-face interviews. Self-reported questionnaires were also utilized within research articles with one specifically using Nvivo. Observer triangulation, participant triangulation and member checking were used in one study to verify validity of the study. Population recruitment forms could potentially limit the verification of external validity. One study used consensus-based criteria. All qualitative studies included
video monitoring. In addition, one study included the recording of detailed field notes during video monitoring.

Quantitative studies extracted data and used SPSS for analysis or staff coding for applicable medical diagnosis, with one study utilizing a specialty code for their region and specific to their study: EOL-EI (end-of-life expenditure index.) applied by Medicare for beneficiaries aged 65 and older in the last 6 months of life. Non-parametric tests: Chi-square, t-test, and Mann-Whitney U test.

General limitations throughout these research articles used were the age of the subjects and New York Heat Association class II-IV. Patient centered care supported three limitations: adjusting to limitations of disease progression, anticipatory guidance by medical and nursing staff, focusing specially on patients’ experiences and small sample size in relation to qualitative studies of research articles used. Provider limitations discussed were lack of patient care time and funding. Specialty nurse education regarding symptom management: unobserved drug intervention and initial discussion of palliative conversation with family and carers.

One study was limited to one facility and collection of data in a twenty-four hour period. One study was of a tertiary center with congestive heart failure patients having higher incidence of comorbidities. A retrospective study utilizing non-randomized chart review without a control group was also conducted.

**Recommendations for Nursing Practice**

Upon completion of this literature review regarding in end-stage heart failure, what is the effect of palliative care on end of life? The authors of all seven articles support progression of nursing process change. Bekelman et al. (2011) advised nurses trained in evidenced based palliative care symptom treatment to supplement patient centered approach. Boyd et al. (2009)
supported managing pragmatic criteria and application of symptom control during the disease progression, reduction of anxiety levels and pain. Dowding, Spilsbury, Thompson, Brownlow & Pattenden (2009) findings correspond with other studies of decision-making carried out by a variety of health care individuals, that further development of tools or guidelines that will assist nurse’s in-patient center care are needed.

Harding et al. (2009), advised education of professional nurses in the signs and symptoms of end stage heart failure, which will enable them to advocate on behalf of the patient and family regarding symptom management during disease progression. Matlock et al. (2010) spoke regarding the difficulty of conversations with the patient regarding disease progression and the importance of a doctors direct input in these discussions. Advocacy training offered to nurses dealing with this population of patient and family will provide educational support.

O’Hanlon & Harding (2011) recommended increased training and understanding of the application of palliative care for specialty nurses thus promoting improvement of patient centered plan of care. Schwarz et al. (2011) discussed that through increased education and understanding of the disease progression, nurses will be able to collaborate with professionals in the creation of a patient center plan of care. Further research would assist with formulating a process change.

The American Nurses Association Scope and Standards of Practice (2010) discusses key points within appendix B. Nurses are responsible for their own personal accountability and maintaining competence within their personal scope of practice. Nurses owe it to their patient population to demonstrate this accountability throughout their career.

Future research should continue to include new strategies implementing palliative care into the plan of care early as originally suggested by The American College of Cardiology
Foundation/American Heart Association Guidelines for the Management of Heart Failure at the end of life.
References


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<th>Authors, Title, Journal and year</th>
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<td>Bekelman, D.N., Nowels, C.T., Retrum, J.H., Allen, L.A., Shakar, S., Hutt, E., Heyborne, R. T., Main, D., and Kutner, J.S.</td>
<td>Giving voice to patients’ and family caregivers’ needs in chronic heart failure: implications for palliative care programs. <em>Journal of Palliative Medicine</em> 2011</td>
<td>Qualitative Study Grounded Theory: constant comparison Informed consent. All study procedures approved by IRB</td>
<td>Purposive sampling non-probability 33 adult outpatients with symptomatic heart failure identified and 20 family caregivers. HF diagnosis confirmed by physician and NYHA functional class II-IV. Age mean: years 64 patient, 59 caregiver. Women: 10 patients, 18 caregivers. Race: black 7, white 17 and other 8.</td>
<td>In-depth semi-structured 60-90 minute interviews: 720 hours. Kansas City Cardiomyopathy (HF-specific health status self-reported) Questionnaire. Observer triangulation, participant triangulation, and member checking were all employed to increase validity of the findings. External validity potential to be limited by population recruitment forms one center.</td>
<td>Interviews were Digitally recorded, transcribed verbatim and entered into ATLAS.ti for coding and analysis Team approach maintaining an audit trail. Text within 2 primary Codes (DBB, CTN), granular codes and themes were searched for patterns.</td>
<td>HF patients and their family caregivers supported early integration of palliative care services, particularly psychosocial support and symptom control, using a collaborative team approach. Content theme: topics that should be addressed by the intervention. Structure theme: How should services be provided and who should provide them. Timing theme: When should services begin and how long should they last? Limitations: age of subjects, NYHA class II-IV. Patient supported 3 limitations with disease progression: (1) adjusting to the limitations of illness, which has not been characterized in the literature. (2) Anticipatory guidance by medical and nursing staff about disease progression. (3) Focusing specifically on patients’ experiences, uncertainty in their illness manifested over the course of the illness. Sample size Future research should test the feasibility and effectiveness of integrating such program.</td>
<td>Nurse trained in evidenced based palliative symptom treatments to supplement patient centered approach. Advocacy role in patient and family focus support assisting with holistic approach to a progressive disease.</td>
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<td>Boyd, K.J., Worth, A., Kendall, M., Pratt, R., Hockley, J., Denvir, M., and Murray, S.A.</td>
<td>Making sure services deliver for people with advanced heart failure: a longitudinal qualitative study of patients, family carers, and health professionals. Palliative Medicine 2009</td>
<td>Evaluation of the key components of services for people with advanced heart failure from several perspectives and recommend how care might be delivered according to United Kingdom policies on long-term conditions, palliative and end-of-life.</td>
<td>Longitudinal Qualitative Study Serial interviews with patients having advanced heart failure, their family carers and key professionals. Ethnology. They were followed by four focus groups to provide a broad overview of individual experience and important aspects of services.</td>
<td>Consensus based criteria</td>
<td>Each patient and carers interview up to three times: in hospital or shortly after discharge, 4-6 weeks later and 4-6 months later. Regular input or key roles: nurses, cardiologist, elderly medicine and primary care</td>
<td>Professionals from primary care and specialist services contributed key information and insights about the barriers to delivering better and more accessible care. Little variation in terms of ethnicity, so unable to recruit any patients from minority ethnic groups. Interventions that help people navigate changing life circumstances, deal with uncertainty and retain a sense of control. Patients and families highly valued a key health profession in a supportive, continuing relationship with them. Professionals supported systematic, holistic assessment and regular monitoring of the patient’s physical and medication needs. Inequalities between those receiving well managed care and the remainder who had reactive, episodic services. Primary care compromised by a lack of professional time and resources. Patterns in the data were considered in relation to the broader conceptual literature about the experience and management of progressive chronic illness and have been interpreted with reference to the developing policy framework.</td>
<td>Professional nurses roles are on a change continuum of change in end stage heart failure patients. Boyd et al., clearly support the need of managing pragmatic criteria and its application in the plan of care. Symptom control of the disease progression, reduction of anxiety levels and pain control at heightened. Nurses that are involved or specialized in this field require further education and knowledge enabling them to advocate proactively patient centered needs.</td>
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<td>Dowding, D., Spilsbury, K., Thompson, C., Brownlow, R., and Pattenden, J.</td>
<td>Exploring the decision processes and types of decisions made by heart failure specialist nurses</td>
<td>Qualitative non-participant observation and semi-structured interviews</td>
<td>Purposive sampling used to identify a sample: experienced and non-experienced. Each consultant had three consultation observed: a total of 18 consultations observed. Average consultation length was 38 minutes (range 10-79 minutes, total 630 minutes). Thirteen male and five female patients consented to be observed, age range 28-94.</td>
<td>All interviews were audio recorded. Consultations completed detailed filed notes to record nonverbal. Interviews lasted approx. 55 minutes. 12 semi-structured interviews conducted with six experienced and six newly appointed FSNs.</td>
<td>Analysis of the observational data and informed previous studies examining nurses. Transcripts were coded using typology by two researchers. Transparency of the study through detailed description of the research process and participants’ characteristic promotes transferability of finds to other settings.</td>
<td>Two decision area keys: pharmacological management and managing patients in the palliative phase of their condition. Pharmacological management decisions that involved the trading off medication. Development of more tailored strategies. Development of tailored decision support tools for medication titration. Provision of structured decision aids for assessing patients’ need for palliative care. Limitations: Exploratory in nature Small sample size Lack of observation data Exploratory nature of the study based on a small sample size. Study allows the reader to make judgments: transferability by HFSN. Contextual details and characteristics of the HFSNs provided to allow judgments about the findings and their transferability to the decision making of HFSNs. Particular challenges of HFSNs during drug intervention were not observed. Lack of observation of HFSNs.</td>
<td>This article brings value to the educational application toward nursing pain management and care of heart failure patient at end of life. The findings correspond with findings of other studies of decision-making carried out with a variety of health care individuals. Assisting with further development of tools or guidelines that will assist nurse’s in-patient centered care.</td>
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<td>Harding, R., Beyond, T., Hodson, F., Coady, F., Hodson, T., Selman, M., Kinirons, E., and Higginson I.</td>
<td>Provision of palliative care for chronic heart failure inpatients: how much do we need?</td>
<td>Measure point prevalence of inpatients appropriate for palliative care. Identify patient characteristics associated with palliative care appropriateness. Aim to measure problems unresolved after seven days under a cardiology admission and which benefit from the referral to hospice.</td>
<td>Quantitative Propose evidenced based clinical Study utilized a one-day census method to measure the number of inpatients with CHF and those appropriate for palliative care. Larger mixed method Non experimental group Ethical approval granted for the full mixed-methods study protocol under a single application to St. Thomas’ Hospital Research Ethics Committee.</td>
<td>Setting: tertiary teaching hospital in London, UK 365 patient files were reviewed 28 clinically identified, 4.4% of reviewed inpatient population with clinical diagnosis of CHF appropriate for palliative care. NYHA stage III/IV classification, cross-referenced with Echo and unresolved pain: need for palliative care. Non probability Each patient was revised and coded by their ward medical staff according to whether they had a recorded clinical diagnosis. Demographic and clinical file data extracted Clinical diagnosis of CHF was coded according to whether they were appropriate for palliative care. Extracted data from wards into piloted data sheets and entered into SPSS for analysis. Descriptive data produced. Classification as appropriate/inappropriate for palliative care comparing number of previous admissions, and multi-professional staff input (each using parametric comparison of means) and presence of “do not resuscitate” orders on file (chi square).</td>
<td>Compared to all those remaining patients with a clinical diagnosis of CHF, those with an ejection fraction of less than or equal to 45 and appropriate for palliative care had a statistically significant higher mean number of previous admissions 1.9 compared to .057, p – 0.012. File recording of clinical diagnosis of CHF and symptom prevalence is lower than prevalence when prospectively assessed using a validated tool. File recording of clinical diagnosis of CHF and symptom prevalence is lower than prevalence when prospectively assessed using a validated tool.</td>
<td>11/365 (3.0%) of the entire inpatient population had clinical diagnosis of CHF and confirmed ejection fraction &lt; or equal to 45% and of those 10 (2.7% of the inpatient population) were appropriate for palliative care. Date of census: the inpatient palliative care team currently knew 1 of the inpatient clinically identified as having CHF. Limitations: Inclusion adult inpatient one day study of one tertiary hospital. Exclusion accident, emergency, surgical, obstetrics, gynecology and pediatrics. Point prevalence of CHF inpatients. Possible exclusion of recent admission who were actively dying Problems that was unresolved from prior admissions.</td>
<td>Education of professional nurses in the signs and symptoms of end stage heart failure, which will enable them to advocate in behalf of the patient and family regarding symptom management of disease progression.</td>
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<td>Matlock, D.D., Peterson, P.N., Sirovich, B.E., Winnberg, D.E., Gallagher, P.M., and Lucas, L.</td>
<td>Regional Variations in Palliative Care: Do Cardiologist follow guidelines? Journal Palliative Medicine 2010</td>
<td>Examine whether an association exists between cardiologist’s tendencies to discuss palliative care for patients with advanced heart failure and the regional use of health care in the last 6 months of life.</td>
<td>Quantitative Descriptive Non experimental Random sample Hypothetical patient scenarios used to explore physician management of patient scenarios. National mail Survey conducted between May and July 2004. Survey focus on palliative care approved by IRB.</td>
<td>1340 cardiologist were identified, 183 deemed ineligible based on the initial telephone screening. Of the 1157, 994 eligible Cardiologists from the American medical Association Master file. Respondent must be actively practicing at least 20 hours a week. Analytic sample of 598. 81% white, male 93.1%, board certified 94.6% cardiologist with an average age of 52.</td>
<td>Logistic regression used to evaluate the association between end-of-life intensity and guidelines coordination with the dichotomized responses. No differences between responders and nonresponses in terms of gender, practice type and year of medical school graduation (p&gt;0.05 for all comparisons).</td>
<td>62% response rate. Case Scenario: (1)23-32% for comparisons between the highest and lowest quintiles, p=.04 for trend (2) 35% versus 47%, p=0.008. Despite professional guidelines suggesting that cardiologist discuss palliative care with patients with late stage heart failure, less than half of cardiologists would discuss palliative care in two elderly patients with late-stage heart failure and this was worse in the regions with more health care use in the last 6 months of life.</td>
<td>Difficult conversations regarding disease progression and options should be addressed through encouragement of professionals. Advocacy training offered to nurses dealing with this population of patients and family will assist in controlling symptoms.</td>
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<td>O’Hanlon, D. and Hardin, R. Are specialist heart failure nurses currently able to provide palliative care to their patients? Progress in Palliative Care 2011</td>
<td>Describe the current palliative care skills and knowledge of specialist heart failure nurses.</td>
<td>Quantitative Descriptive design Non-experimental Cross-sectional self-report survey compromising of 147 questions. Pragmatist approach. (1) Appraise the palliative care knowledge held by BHF nurses, (2) identify any gaps in education and experience in symptom control and palliative care. COREC advised that no ethical approval was required. Design followed by Crotty and then Creswell’s adaption with concentration on three areas: knowledge claims Strategies/plan of action and Methods.</td>
<td>145 BHF nurses in the United Kingdom were sent a questionnaire compromising of 47 questions with a second remind letter in 2 weeks.</td>
<td>Data was analyzed using descriptive and non-parametric tests (Mann-Whitney U test and Chi-square). The free text gained from open-ended questions was subjected to thematic analysis by categorization into common themes.</td>
<td>65% response rate. 85% identified first-line pain management which is in line with WHO pain ladder. Specific problem was knowledge of management including depression and constipation. Nurses self-identified training needs focused on principally on communication and the introduction of palliative care into patient management.</td>
<td>Themes: (1). Communication skills (2) lack of definition of the role of palliative care. Limitation: (1) Sampling no comprehensive list of all heart failure nurses working within England or UK. (2) non-response bias Result supports previous data study concurred with this by suggesting that social workers had a much lesser role in supporting heart failure patients, which one can assume is further leading to this gap in a crucial area of patient care.</td>
<td>Increased training and understanding of the application of palliative care of specialty nurses promoting patient centered plan of care.</td>
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<td>Schwarz, E.R., Baraghoush, A., Morrissey, R.P., Sharah, A.B., Shinde, A.M., Phan, A., and Bharadwaj, P.</td>
<td>Pilot study of palliative care consultation in patients with advanced heart failure referred for cardiac transplantation</td>
<td>Qualitative Non-randomized Pilot Study Ethnographic holistic approach Approved by IRB at CSMC First 20 patients who received a palliative consult by the heart failure/transplant team</td>
<td>Sample setting Twenty consecutive patients with advanced heart failure that were referred to palliative care from the heart transplant service with stage setting. All patients were in New York Heart Association (NYHA) class IV, stage D HF, and patients were on maximal medical therapy including beta-blockers, ACE inhibitors and diuretics.</td>
<td>Retrospective collection by chart review of the following: Reason for palliative care consults. Symptoms at consult Symptom improvement after involvement of palliative care. Open-ended questions: assess the impact of the palliative care service on patient and their families and the health care professionals within the care provider teams. Non-standardized tool used independently by two physicians, 1 from the heart failure service and 1 from the Palliative care service. A numerical score was used that included a range from 1 to 4: 1 reflect no impact from the service, 2 meant minimal impact 3 moderate impact and 4 indicated significant impact that potentially changed treatment and outcomes.</td>
<td>Symptoms assess at the time of initial Palliative consultation: 1) generalized or localized pain, 2) dyspnea at rest 3) insomnia. Patients expressed relief of symptoms with palliative care involvement also noted by family members and professional staff. Pain complaints managed by palliative care patients demonstrated a surprising decrease in the use of opioids after involvement. Palliative care overall medical management of the heart failure patients is a more holistic approach.:30% completed advance care directives</td>
<td>Limitations retrospective, non-randomized chart review without a control group. Demonstrated feasibility and sufficient evidence of clinical benefit to warrant a larger randomized clinical trial assessing the benefit of standard involvement by palliative care in patients with advanced heart failure, independent of progress or treatment goals of the patient. Median time to heart transplant in 2008 was 168 days “wait” invoke great distress for patients caught between the cure and death requiring high pharmacology and non-pharmacologic interventions.</td>
<td>Nurses through increased education and understanding of the disease progression will be able to collaborate with professionals in the creation of a patient centered plan of care. Further research would assist with formulating a process change.</td>
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