Improving End-of-Life Cardiac Care Case Studies

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Palliative Care

• provides relief from pain and other distressing symptoms
• affirms life and regards dying as a normal process
• intends neither to hasten nor postpone death
• integrates the psychological and spiritual aspects of patient care
• offers a support system to help patients live as actively as possible until death
• offers a support system to help the family cope during the patient's illness and in their own bereavement
• uses a team approach to address the needs of patients and their families,
• will enhance quality of life, and may also positively influence the course of illness
• is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life and includes those investigations needed to better understand and manage distressing clinical complications
Palliative care in heart failure: a position statement from the palliative care workshop of the Heart Failure Association of the European Society of Cardiology
Classification of HF: ACC/AHA HF stages vs. NYHA functional classes

<table>
<thead>
<tr>
<th>ACC/AHA HF stages¹</th>
<th>NYHA functional classes²</th>
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</table>
| •High risk for developing HF  
•No structural disease | Class I  
Asymptomatic |
| •Structural heart disease  
•No HF symptoms | Class II  
Symptomatic with moderate exertion |
| •Structural heart disease  
•Prior or current HF symptoms | Class III  
Symptomatic with minimal exertion |
| •Refractory end-stage HF requiring special interventions | Class IV  
Symptomatic at rest |

Symptoms of Heart Failure

- Shortness of breath
- Chronic lack of energy
- Cough w/ frothy sputum
- Swelling of feet & legs
- Difficulty sleeping at night due to breathing problems
- Swollen or tender abdomen w/ loss of appetite
- Increased urination at night
- Confusion and/or impaired memory
Fig. 1.1 The Sheffield model of supportive care. Modified from Ahmedzai SH, Walsh D (2000). Semin. Oncol. 27: 1–6. Reproduced with permission.
Mode of Death in Heart Failure by NYHA Functional Class: as heart failure gets worse a greater proportion of deaths are due to pump failure

**NYHA II**
- CHF: 12%
- Other: 24%
- Sudden Death: 64%
  - n = 103

**NYHA III**
- CHF: 26%
- Other: 15%
- Sudden Death: 59%
  - n = 103

**NYHA IV**
- CHF: 33%
- Other: 56%
- Sudden Death: 11%
  - n = 27

The downward spiral of heart failure limits ICD benefit

- Functional Class I
- Functional Class II
- Functional Class III
- Persistent Functional Class IV
- VT/VF
- VT/VF
- VT/VF
- VT/VF
- VT/VF
- VT/VF
- Death

ICD Benefit

No ICD Benefit
HEART FAILURE PATHOPHYSIOLOGY

Symptoms

Functional Limitation

Psychological Distress

Quality of Life

Adapted from Rector’s Model of Quality of Life 2005
Schematic Etiology of Heart Failure Symptoms

Figure 2

RAAS = renin-angiotensin-aldosterone system; TNF = tumor necrosis factor.
Heart Failure Symptoms

- Fatigue
- Nausea, Vomiting, Constipation
- Anxiety, Depression, Cognitive impairment
- Pain

Conditions:
- Heart Failure
- Fluid Overload
- COPD
- Sleep Apnea
- Obesity
- Deconditioning
- Muscle Weakness

Modified from Beattie/Goodlin Supportive Care in Heart Failure 2008
Heart Failure Symptoms

• Dyspnea Management
  1. Comprehensive Clinical & Psychosocial Assessment
  2. Clarify Goals of Treatment and alignment with Pt
  3. Determine place of clinical care & competencies of professional team
  4. Appraise prior experiences and supports
  5. Address reversible causes (Anemia, ischemia, etc)

From Beattie/Goodlin Supportive Care in Heart Failure 2008
Heart Failure Symptoms

• Dyspnea Management

6. Risk/Benefit assessment of Rx/Management

7. Adopt Risk Management approach to care
   ➔ avoid iatrogenesis and avoidable adverse events

8. Develop an action plan anticipating deterioration and averting crisis

9. Regular review of goals and efficacy ➔ modify

10. Insure COMMUNICATION with team and pt/family

From Beattie/Goodlin Supportive Care in Heart Failure 2008
The Chronic Care Model

**Community**
- Resources and Policies
- Self-Management Support

**Health Systems**
- Delivery System Design
- Decision Support
- Clinical Information Systems

**MEDICAL HOME**

**Informed Activated Patient**

**Supportive Integrated Community**

**Prepared, Proactive Practice Team**

**Improved Outcomes**
- Family Centered
- Timely & Efficient
- Coordinated
- Evidence Based and Safe

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Wagner, et al NICHQ; Antonelli, Georgetown University
Essential Elements of Good Chronic Illness Care

- Supportive Integrated Community
- Informed Activated Patient
- Productive Interactions
- Prepared Practice Team
What characterizes an “informed, activated patient”?

They have the motivation, information, skills, and confidence necessary to effectively make decisions about their health and manage it.
What characterizes a “prepared” practice Team?

At the time of the interaction they have the patient information, decision support, and resources necessary to deliver high-quality care.
Assessment of self-management skills and confidence as well as clinical status.
Tailoring of clinical management by stepped protocol.
Collaborative goal-setting and problem-solving resulting in a shared care plan.
Active, sustained follow-up → coordination of care
Heart Failure Multidiscipline Team Approach

- Specialist MD
- Primary Care MD
- Clinic Nurse
- Mid Level ARNP
- Nurse Care Manager
- Cardiac Rehab
- Inpatient Nurse
- Nurse Educator
- Research nurse
- Dietician
- Social Worker
- Palliative Care
- VNA
- Hospice

HEART FAILURE PATIENT
Dartmouth-Hitchcock
Patient Diaglogue
Treating Heart Failure

- Heart Failure can’t be cured, but it can be managed”
- Best results require a patient’s active participation”
- Depending on your specific needs and stage, your heart failure treatment plan may include
  - Medications
  - Self-care and Care Management
  - Surgery or Percutaneous revascularization
  - Implantable heart devices
  - Palliative Care
• Palliative care is appropriate at any age and at any stage in a serious illness, and can be provided together with curative treatment
Algorithm for integrating palliative care into the care of patients with advanced heart failure. ICD indicates implantable cardioverter-defibrillator; LV, left ventricular; LVF, LV function.

Figure Legend:
Algorithm for integrating palliative care into the care of patients with advanced heart failure. ICD indicates implantable cardioverter-defibrillator; LV, left ventricular; LVF, LV function.
New Diagnosis of HF or Recent Exacerbation

- Treat or address exacerbating factors
- Administer maximal medical/Device Rx
- Discuss prognosis & Goals of Therapy
- Address all symptoms
- Coordinate Care with Multidiscipline Team

ASSESS CLINICAL STATUS

Disease Progression

RE-ASSESS CLINICAL & PSYCHOSOCIAL STATUS

- Re-assess & Treat exacerbating factors
- Re-assess Functional status and Prognosis
- Consider Advanced Therapy Options
- Address all symptoms
- Re-Align Goals of Therapy
- Expand Multidiscipline Team and Roles

Candidate for Advanced Therapies

Inotropic Therapy

Advanced Therapies

Palliative Care / Hospice

Higher staffing results in palliative care serving more patients, 2012

This chart shows the mean palliative care service penetration for palliative care teams, from the lowest to highest quartiles in terms of staffing.

Higher staffing levels are a key determinant of higher penetration rates (serving more patients in need).

Insufficient staffing continues to present a barrier to reaching patients in need.

Source: CAPC analysis of 2012 National Palliative Care Registry™ Annual Survey
This chart shows the mean length of stay in days (pre-consult, post-consult and overall) for patients seen by a palliative care team. The x-axis represents the participating palliative care teams from the lowest to the highest quartiles in terms of staffing. Programs with higher staffing levels see patients earlier in their stay. This leads to shorter overall length of stay for palliative care patients.

Source: CAPC analysis of 2012 National Palliative Care Registry™ Annual Survey
Managing Chronic Heart Failure as a Long Term Health Condition (SNM611)

This page has details of this module at masters level, if you wish to study this topic at diploma/undergraduate degree level please see Chronic Heart Failure (SNM2108/SNM3087).

Who is it for?
This unit is suitable for health care professionals who need knowledge, understanding and clinical skills in care and management of those with heart failure.

What is it about?
Facilitated by lecturers and clinical experts, this module is about ensuring that health care professionals are equipped

Overview of content:
- Physiology and pathophysiology in cardiac failure
- Epidemiology
- Presentation and investigations
- Pharmacological management
- Non-pharmacological management
- Organisation of care