**End of Life Care For Advanced Heart Failure**

Anthony Steimle

**HF patients within 3 days of dying were predicted to have a 54% chance of living 6 mos.**

*JAGS 2000;48:S101-9*

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**Palliative Care in the Treatment of Heart Failure**

Anthony Steimle

Chief of Cardiology, Kaiser Santa Clara

CMI National Clinical Lead for HF

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**This Topic is Important Because**

Heart failure is very common

Death is even more common

- 1 in 5 lifetime risk of Heart Failure
  
  *Look to the left, look to the right...one of you*

- HF Contributes to 1 in 9 deaths

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**Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life**

505 pages

Respecting Choices

Need for more PC

*INSTITUTE OF MEDICINE*

www.iom.edu/endoflife
This Topic is Also Important
73 yo engineer, severe CMY in hospice three times….Ham Radi

Life is pleasant. Death is peaceful. It's the transition that's troublesome.
Isaac Asimov

Palliative Care
"Interdisciplinary...aimed at improving quality of life, relieving suffering, supporting families...not synonymous with end-of-life care or hospice but can encompass them as illness advances. Allows disease-modifying therapies while ensuring symptom relief and addressing psychosocial, physical, spiritual needs. Unlike hospice based on needs rather than life expectancy."
1. treating symptoms.
2. ensuring patients' treatment plans match their values & goals.


Palliative Care Specialist
MDs, RNs, other providers working with patient's other MDs to provide an extra layer of support.

KP NCAL Vision
1. Life Care Planning
2. Palliative Care
3. End-of-Life Services

Challenges in Providing PC
Is Heart Failure Different?
• HF Prognosis unpredictable (more than CA?)


Palliative Care for HF
- Discussing Prognosis
- Advance Care Planning
  LIFE CARE planning
  CPR
- Symptom Palliation

Trajectory of Death from Heart Failure


Center to Advance Palliative Care 2011

Challenges in Providing PC
Is Heart Failure Different?

- HF Prognosis unpredictable (more than CA?)
- Heart disease viewed as curable

**PROGNOSIS**

- Estimation
- Discussion

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**ESCAPE Mortality**

- 86% NYHA IV, EF 19%, 56 yo, pk VO₂ 10, creat 1.5, BP 105/67, Na 137
- Mortality 19% at 6 months – annual 38%

**REMATCH Mortality**

Age 67, NYHA IV, EF 17%, creat 1.7, CI 2.0 on inotropes, Annual mortality 72%

**PARADIGM-HF:** age 63, EF 29%, annual mortality 8%

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**MADIT-CRT**

CRT-D vs ICD. QRS ≥120 ms, NYHA 1/2; EF 24%, age 65, → f/u 2.4 years.

Annual mortality < 3%

**High vs Low-dose Losartan: HEAAL**

Losartan 150 vs 50 mg, NYHA 2/3, EF 33%, age 66,

Annual Mortality 7%

34% died over 4.7 years


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**HF Mortality**

**NYHA Class** 1-year mortality

- Class II (mild sxs): 5-10%
- Class III (mod sxs): 10-15%
- Class IV (severe): 30-40%

**Predictors of Shorter Prognosis**

- Hospitalization (3x)
- Creatinine ≥1.4
- BP <100 or HR >100 (2x)
- Intolerance to meds
- LVEF ≤ 45%
- Hyponatremia (Na ≤136)
- Low output

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**HF Mortality - Summary**

- 3% to 75% per year → 0 - 100% if you round!

- NCal HF Registry (avg 74 yr old):
  - 8% annual mortality
  - High Mortality After Hospitalization
    → 10% one mos
    → 20% one yr
Discussing HF Prognosis - Words

50% mortality at 5-6 years

Average age of HF patient is 74-77, most have other major health problems in addition to HF
And yet.....many will live beyond 80

“People die from HF...... with medications and careful management I hope you will feel well and live many years.... we will do all we can so that do.... but some live shorter, so we need to make sure you have made preparations for that possibility.”

“Days to weeks”, “weeks to mos” “mos to a yr or more”

“Discussing HF Prognosis - Words

My dad lived to 90, so recently I’ve been thinking why not me.”

62 Y engineer, CAD, EF 35-40%, Afib, DM, Creat 1.7
Non compliant. Works remodeling without angina, no particular exercise. DOE > 300 feet. If misses diuretic retains.

LIFE CARE planning
my values, my choices: my care

Life Care Planning as Usual Care For HF

First Steps
ACP education
Choose agent
Clarify goals values
Brain injury scenario
Basic AD completion

Part of HF Class
Age 55 and stable chronic illness
Progressive illness
Likely to die < 1 yr

State of Health
Pilot at Two Sites, All Three Steps for HF
‘Built in’

Next Steps
Facilitator, patient, agent
• 90-min
• Discuss goals of care & treatment preferences in four scenarios.
HF Program CM facilitates

Advanced Steps
• 60-min
• Hospice
• POLST

Time (Lifespan)

#1: If I have a serious complication from my heart disease, such as a stroke or a heart attack, am facing a prolonged hospital stay requiring ongoing medical interventions AND my chance of living is low (e.g., only 5 out of 100), I would choose:

• To continue all treatment so I could live as long as possible ("Staying alive is most important to me no matter what.")
• To stop all efforts to keep me alive ("For me, quality of life is more important than length of life.")
Next Steps

#2: If I have a serious complication... have a good chance of living, but I would never be able to walk or talk, and would require 24-hr nursing, I would choose:

#3: If I have a serious complication... have a good chance of living, but would never know who I was or who I was with and I would require 24-hr nursing, I would choose:

“My dad lived to 90...why not me.”

Next Steps

62 yo, engineer, CAD, EF 35-40%, Afib, DM, Cr 1.7

“ Hopes to live independently until 90 ..... If high treatment burden, low chance of survival, continue all treatment for 1 month.... If likely will survive but with cognitive impairment, stop all efforts ....cognitive ability is important to him ....stop all efforts if he will be on dialysis. Wants CPR. Has appointed as his agents ...”

Life Care Planning CPR

FULL CODE

93 yo declined AVR four years ago for severe symptomatic AS. AS is now critical. After sepsis c/b anterior MI, EF is 40%. HF class IV, wheelchair bound.

POLST

Survival After CPR - What We Believe

• 81% of inpatients age ≥ 70 believed their chances of surviving CPR to leave the hospital were > 50%
• 23% believed their chances > 90%

Adapted from: Mary P. Cadogan, DrPH, RN, UCLA School of Nursing
Survival After CPR - Reality

- ≈ 15% undergoing CPR in hospital survive to discharge
- 3.8% for homebound
- 0-2% NH residents survive.

Complications of CPR in Older Adults

Only 13% of CPR conversations include complications:
- Rib fractures up to 97%
- Sternal fractures up to 43%
- Severe neurologic damage up to 50%

Knowledge of Outcomes Influences Decision Making

- 41% older adults desired CPR at baseline
- 10% when actual survival discussed

CPR vs Allow Natural Death

- Discuss benefits, burdens, and risks like other interventions
- Consider making a recommendation

Common Obit: “Died peacefully at home…”

CPR vs Allow Natural Death

<table>
<thead>
<tr>
<th>Code Status History</th>
</tr>
</thead>
</table>

Refractory Symptoms Checklist

- More diuretic? 2nd Vdi? Dig?
- Compliance
- Exercise
- Sleep Apnea
- Depression
- Devices – ?LBBB → CRT, VAD, Transplant
Palliative Care for Patients with HF

- Studies show PC palliative improves symptoms, quality of life, satisfaction, and patient and family outcomes

PC Team:
1. PC MD & RN
2. Pharmacist
3. Social worker
4. Psychologist
5. Chaplain
6. OT/PT
7. Dietician
8. Home Health/Hospice

Symptom Relief in Advanced HF

<table>
<thead>
<tr>
<th>Symptom</th>
<th>% pts</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edema</td>
<td>100%</td>
<td>Diuretics</td>
</tr>
<tr>
<td>Pain</td>
<td>78%</td>
<td>Compression, Opioids</td>
</tr>
<tr>
<td>Depression</td>
<td>59%</td>
<td>SSRIs (if weeks to live)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exercise training</td>
</tr>
<tr>
<td>Fatigue</td>
<td>82%</td>
<td>Optimal medical management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Caffeine, Consider sleep apnea</td>
</tr>
</tbody>
</table>

Who Needs a Palliative Care Specialist?

- Unmet needs, not prognosis
  1. Refractory symptoms.
  2. Difficult Decision Making
  3. Clues:
     - Multiple hospitalizations
     - Low BP, Cardiorenal
     - Increasing Med intolerance
     - Loss of ADLs, Falls
     - Considering Dialysis
     - Evaluation for ICD, MCS, high-risk Surgery

Life Care Planning as Usual Care For HF

Screen for Palliative Care Referral

First Steps
Part of HF Class
Age 55 and stable chronic illness

Next Steps
Part of HF Program
Progressive illness

Advanced Steps
Likely to die < 1 yr

PC

State of Health

Time (Lifespan)

Illness and Death - Starting the Conversation

Ask Open-ended Questions

“How was this last hospitalization?”

“What is bothering you the most?”

“When you think about what lies ahead, what worries you the most? What do you hope for?”

“Many patients with heart failure tell me they think about the possibility of dying. They have questions about this. How about you?”

Useful Words – Hope, Wish, Sorry

Being There

If a patient has decided to limit ‘curative’ treatments, end each encounter with plan for follow-up.

When patients are on hospice, call and end each call with when you will call again.

To Do List:

- Discuss prognosis
- Know LCP: Read Advance directive
  - Ensure Agent / Directive / Discussion
  - Note prior code status, discuss benefits and burdens of CPR → recommendation
- Screen for non-cardiac symptoms (pain, depression, anxiety)
- Milestones: e.g., post hosp, ICD, CKD
- Refer to PC Specialists when appropriate
- Integrate PC into usual care

QUESTIONS?

Thanks to:
Steve Pantilat
Esther Luo
Jill Jarvie
Melissa Stern
Lisa F Anderson
Nina Kim
Julie Chang
Ashraf Hosseinian
Mai Nguyen
Kim Wasson
My patients
MamaGaga
PoPo
Inpatient Palliative Care Referral Assessment Tool for HF TCP Inpatient Care

Managers

Use the following tool to determine whether a patient should receive a consultation with the Inpatient Palliative Care team during this admission.

Patients scoring 6 points or more should be targeted for the IPC team consult.

Sex = male 1 point
1-4 dependant ADLs* 2 points
5 or more dependant ADLs* 4 points

HF 2 points
Cancer – local 3 points
Cancer – mets 8 points
Renal impairment – creatinine >3.0 2 points
Poor nutritional index Albumin 3.0-3.4 1 point
Poor nutritional index Albumin <3.0 2 points

This validated index predicts a 68% of 1-year mortality for patients scoring 6 points and above.

ADL (Activities of Daily Living) (ignore points listed but follow point system above)

Three Methods to Identify Patients Appropriate for Palliative Care

A. The question, “would you be surprised if this patient died in the next 1-2 years?”

B. Needs help with symptoms, family support, advance planning regardless of disease status.

C. Screening tool:

Basic Disease Process 2 points each
1. cancer: metastatic/recurrent
2. advanced COPD
3. stroke with decreased function of 50 % or >
4. end stage renal or liver disease
5. advanced cardiac disease; CHF, CAD, Cardiomyopathy
6. other life limiting illness (Ex: ALS, dementia)

Functional Status (Using ECOG Performance Status)

Fully active without restriction 0 points
Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, eg, light housekeeping. 1 point
Ambulatory and capable of self care but not work activities. Up more than 50 % of waking hours 2 points
Completely disabled. Not able to do self care. Confined to bed or chair more than 50 % of waking hours 3 points

The patient is: 1 point each
1. not a candidate for curative therapy
2. has a life limiting illness and has chosen not to have life prolonging therapy
3. has unacceptable pain > 24 hours
4. has uncontrolled symptoms (ie, nausea, vomiting)
5. has uncontrolled psychosocial or spiritual issues
6. has frequent visits to the ER (> 1 x month for same dx)
7. has more than one hospital admission for the same dx in last 30 days
8. has prolonged LOS without evidence of progress
9. is in an ICU with documented poor or futile prognosis
10. family support needs or communication challenges

Total Score
2 points =  no intervention needed
3 points = observation only
4 or > = consider palliative care consult

*Screening tool was adapted from Central Baptist Hospital Palliative Care Team, Kentucky, by the Fairview Palliative Care Program, Minnesota


3-Phases of HF Readmission Risk

Site of Death in the US

<table>
<thead>
<tr>
<th>Site</th>
<th>All*</th>
<th>Heart Failure*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>50%</td>
<td>35%</td>
</tr>
<tr>
<td>Nursing home</td>
<td>23%</td>
<td>34%</td>
</tr>
<tr>
<td>Home</td>
<td>23%</td>
<td>31%</td>
</tr>
<tr>
<td>Hospice</td>
<td>39%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Teno et al. JAMA 2004;291:88-93

Pain in People with Heart Failure

- Up to 78% of patients
- Etiologies includes
  - Heart disease
  - Treatments
  - Co-morbidities
- Associated with depression, poor quality of life
- No trials of interventions, but no reason to think that pain is different in HF
Palliative Care for HF

- Combine optimal medical therapy with PC
  - Concurrent care model inpt and output
  - Symptom management, prognosis, advance care planning, psychosocial support, hospice referral
- Use existing interdisciplinary PC and HF specialist teams and self care interventions

Pantilat and Steimle JAMA 2004;291:2476-82
McAlister et al. JACC 2004;44:810-19

Which HF Patients Need PC?

- Every patient initially?
- Unrelieved symptoms, esp 'non-cardiac'
- Not be surprised if died in next year
- Worsening HF, multiple hospitalizations, hypotension, renal insuff.
- Considering intervention- VAD, transplant, high risk heart surgery

HFSA 2006 Comprehensive HF Practice Guideline
Hunt et al. Circ 2001 104:2997-3007

Next Steps

80 y/o male restrictor, CA, chemo and CAD, EF 20%.

“Hopes to live independently, be active, enjoy his grandchildren.

If high treatment burden and low survival or good survival with significant functional or cognitive decline → stop all efforts.

Quality of life is more important to him than quantity, and he prefers natural death....completed POLST.....appointed his wife as agent”

When to Reassess Your Advance Directive

The Five D’s

- Decade – e.g., turn 70 yrs old
- Death of a loved one.
- Divorce
- Diagnosis of a serious health condition.
- Deterioration of existing condition, especially when it diminishes ability to live independently

When to Reassess Life Care Plan

Three D’s in HF

- Diagnosis – especially if hospitalized
- Deterioration - readmitted, low BP, worsening renal function or functional status
- Device – considering ICD, CRT, VAD....shocks

Model of palliative care

“Best care possible”

“Curative care”

“Palliative care”

“Bereavement”

“Terminal phase”

“Death”
Functional status and non cardiac symptoms – pain, depression, anxiety
Ask about goals of care, treatment preferences
Consider prognosis, treatment preferences
Desire for advanced therapies, major surgery, hospice

Symptoms in People with HF

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Inpt CA</th>
<th>Outpt CA</th>
<th>HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>43-81%</td>
<td>50%</td>
<td>41-78%</td>
</tr>
<tr>
<td>Fatigue</td>
<td>81%</td>
<td>18%</td>
<td>69-82%</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>19-61%</td>
<td>71%</td>
<td>60-88%</td>
</tr>
<tr>
<td>Depression</td>
<td>37%</td>
<td>59%</td>
<td>9-56%</td>
</tr>
</tbody>
</table>

Breathlessness in HF
- Feared symptom
- Develop plan for home
  - Awareness of early signs of volume overload
  - Oral nitrates, diuretics and opioids
  - Oxygen if hypoxemic

Jennings. Cochr Database Syst Rev 2001;CD002066
Chua et al. JACC 1997;29:147-52

Better Words to Say
- ☹️There is nothing more we can do ☹️
  - I wish I had a treatment which could improve your heart's pumping. ☹️

- ☹️Would you like us to do everything possible? ☹️
  - How were you hoping we could help? ☹️

Pantilat JAMA 2009;301:1279-81

Symptoms in People with HF

Hig and von Gunten J Pain Sympt Man 1998;16:307
Levenson et al. JAGS 2000;48:S101-9
Solano et al. J Pain Sympt Man 2006;31:58-69