Palliative Care & the Heart Failure Patient

Nathan Goldstein, MD
Associate Professor
Brookdale Department of Geriatrics and Palliative Medicine
Mount Sinai School of Medicine
James J. Peters Veterans Affairs Medical Center

Jill Kalman, MD
Associate Professor
Cardiovascular Institute
Mount Sinai School of Medicine

January 10, 2012
American Heart Association
Neither Dr. Goldstein or Dr. Kalman have any relevant financial conflicts to disclose.
Learning Objectives

After attending this presentation, the learner will be able to:

• Explain the definition of palliative care, and how it differs from the traditional hospice model

• Understand the relationship between palliative care and the complex trajectory of heart failure

• Explain why palliative care is beneficial to patients, clinicians, and hospital systems
Palliative Care

Interdisciplinary care that aims to relieve suffering and improve quality of life for patients with advanced illness and their families.

It is offered *simultaneously* with all other appropriate medical treatment.
Palliative Care in Practice

- Expert control of pain and symptoms
- Uses the crisis of the hospitalization to facilitate communication and decisions about goals of care with patient and family
- Coordinates care and transitions across fragmented medical system
- Provides practical support for family and other caregivers (+ clinicians)
Mount Sinai Palliative Care Service

- 3 Teams (two consult, one inpatient unit) made up of:
  - 3 Attending Physicians (pool of 12)
  - 3 Nurse Practitioners (pool of 6)
  - 1 RN (triage nurse)
  - 2 Social Worker
  - 4 Fellows
  - Chaplain
  - Massage Therapist(s), Yoga Therapist
  - 2-3 Third Year Medical Students
  - 1-2 Other Rotators

- ~ 90 new patients per month
- Over 1100 patients and their families in 2010
The Cure - Care Model: The Old System

Life Prolonging Care

Palliative/Hospice Care

Disease Progression

DEATH
Integrating Palliative Care into Disease Trajectory

Disease-Directed Therapies

Diagnosis

Palliative Care

Death and Bereavement
<table>
<thead>
<tr>
<th>Palliative Care Is</th>
<th>Palliative Care Is NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Excellent, evidence-based medical treatment</td>
<td>✗ Not “giving up” on a patient</td>
</tr>
<tr>
<td>✓ Vigorous care of pain and symptoms throughout illness</td>
<td>✗ Not in place of curative or life-prolonging care</td>
</tr>
<tr>
<td>✓ Care that patients want <em>at the same time</em> as efforts to cure or prolong life</td>
<td>✗ Not the same as hospice or end-of-life care</td>
</tr>
</tbody>
</table>
Growth of Palliative Care Program in Hospitals (>50 Beds)

53% of All Hospitals
75% of All Hospitals with >300 Beds

Goldsmith et al. 2008 Jnl Pall Med. 11(8).
What is the Benefits of Palliative Care to Heart Failure Patients?

1. Clinical Quality
2. Patient and Family Preferences
3. Complexity of HF Trajectory
4. Financial Imperative
What is the Benefits of Palliative Care to Heart Failure Patients?

1. The Clinical Imperative

The need for better quality of care for people with serious and complex illnesses.
Symptoms in Patients with HF

- Volume overload
  - result in abdominal bloating or discomfort, constipation, and altered mobility due to lower extremity edema.
- Dyspnea
  - may be due to hypoperfusion or volume overload
- Uncontrolled pain (chest, joint, leg) as well as a generalized pain syndrome - reported in as many as half of HF patients
- Fatigue, cachexia, and anorexia, caused by hormonal dysregulation and increased inflammatory mediators, occur in 50-90% of patients
- Psychological symptoms include depression and anxiety and many HF patients report significant social isolation
- Insomnia, disrupted sleep, and underlying sleep apnea are frequent co-morbidities and may be undertreated
Symptom Improvement for 3,707 Palliative Care Patients at Mount Sinai

Source: Patient Interviews, Mount Sinai Hospital, New York City
What is the evidence for palliative care improving outcomes for HF patients?

• Studies of comprehensive outpatient case management demonstrate some reduction of hospitalizations and ED use
  

• Question of reducing readmissions
  - Pantilat and colleagues at UCSF have shown reduced readmissions in patients undergoing comprehensive nurse management + includes some palliative care – ongoing study

• No large scale RCTs (stay tuned)
Hospice for HF Prolongs Survival

Using 5% Medicare file – 83 Hospice patients and 457 non-hospice patients - 402 vs. 321 days, $P = 0.05$

Guidelines Promote Pall Care for HF

• ACC/AHA Guidelines for Treatment of HF
  “Patient and family education about...the role of palliative and hospice care services with reevaluation for changing clinical status is recommended for patients with HF.”

• HRS Expert Consensus Statement on the Management of (CIEDs) in Patients Nearing End of Life or Requesting Withdrawal of Therapy
  Referral to palliative care occurs at the time of “progression of cardiac disease, including repeated hospitalizations for heart failure and/or arrhythmias”
  Heart Rhythm 2010; 7(7) 1008-1026
What is the Benefits of Palliative Care to Heart Failure Patients?

2. Concordance with patient and family wishes
What Do Patients with Serious Illness Want?

- Pain and symptom control
- Avoid inappropriate prolongation of the dying process
- Achieve a sense of control
- Relieve burdens on family
- Strengthen relationships with loved ones

And What They Get: Suffering in Hospitals

National Data on the Experience of Advanced Illness in 5 Tertiary Care Teaching Hospitals:

- 9000 patients with life-threatening illness, 50% died within 6 months of entry

- Half of patients had moderate-severe pain >50% of last 3 days of life.

- 38% of those who died spent >10 days in ICU, in coma, or on a ventilator.

Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT)
JAMA 1995;274:1591-98
More Medical Care Leads to *Lower* Satisfaction with Care

- Family members of decedents in high-intensity hospital service areas report lower quality of:
  - Emotional support
  - Shared decision-making
  - Information about what to expect
  - Respectful treatment

“Difficult” Conversations Improve Outcomes

- Multisite, longitudinal study of 332 cancer patient-family dyads
- 37% of patients reported having prognosis discussion at baseline
- These patients had lower use of aggressive treatments, better quality of life, and longer hospice stays
- Family after-death interviews showed better psychological coping for those with conversations as compared to those without

Wright et al. JAMA 2008 300(14):1665-1673.
What is the Benefits of Palliative Care to Heart Failure Patients?

3. Complexity of HF Trajectory

More patients with HF

+ Unpredictable Trajectory of Disease

Increased Need for Palliative Care
Please Submit Your Questions?

You can ask questions at any time during the presentation via the web by clicking your “Ask a Question” button, typing your question in the open area & clicking the “Ask Question” button to submit.
Challenges in Advanced Heart Failure 2012

- **Improve Quantity and Quality of Life**
  - Guideline driven Therapy
  - Medical Therapy
  - Device Therapy

- **Reduce Costs of Care**
  - Readmission Rates
  - LOS

- **Expand Indications for Proven Therapies**
  - Device Therapy: CRT + AICD

- **Find the Next Frontiers of Therapies**
  - Gene Therapy
  - Mechanical Support
Heart Failure
Epidemiology/Facts

• Prevalence: ~ 7 million in US (2.5%)
• Incidence: ~ 550,000/year
• Mortality: ~ 300,000/year
• Office visits: ~ 3.4 million (2004)
• Hospital discharges: ~ 1,000,000 (2001)
• Health care costs exceed $30 billion/year
• Single largest expense for Medicare
Estimated Number of Patients with Advanced HF

300 Million Population

HF = 2.5% Population* or 6.5-7 Million Total

50-55% Systolic HF 3.0-3.5 Million

Class III B 300-350,000

Class IV 150-200,000

Class IIIB+IV < 75 yrs 250-300,000 Pts

45-50% Preserved Systolic Function 3.0-3.5 M

35% Class I
35% Class II
25% Class III (10% IIIB)
5% Class IV

* HF = Heart Failure
Heart Failure
Secular Trends in Survival

Owan, *N Engl J Med* 2006; 355; 251
Prognosis
Heart Failure vs. Cancer Mortality

One year survival rate (%)

Adapted from Heartstats.org (BHF 2006)
Based on Cowie et al. Heart 2000;83:505-510
Severity of Heart Failure
Modes of Death

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: 56%
- Other: 33%
- Sudden Death: 11%

n = 27

## Classification of Heart Failure: ACC/AHA Stage vs NYHA Class

<table>
<thead>
<tr>
<th>ACC/AHA Heart Failure Stage</th>
<th>NYHA Functional Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. At risk for heart failure but without structural heart disease or symptoms</td>
<td>None</td>
</tr>
<tr>
<td>B. Structural heart disease but without heart failure</td>
<td>I. Asymptomatic</td>
</tr>
<tr>
<td>C. Structural heart disease with prior or current heart failure symptoms</td>
<td>II. Symptomatic with moderate exertion</td>
</tr>
<tr>
<td></td>
<td>III. Symptomatic with minimal exertion</td>
</tr>
<tr>
<td>D. Refractory heart failure requiring specialized interventions</td>
<td>IV. Symptomatic at rest</td>
</tr>
</tbody>
</table>

Prognosis - Plasma Norepinephrine

SOLVD - prevention

- Absolute number of patient events
- Mortality, CVS mortality, Hospitalization, CHF, Ischemia

Benedict et al Circ 1996
Kaplan-Meier survival curves to 60 days by serum sodium quartiles (unadjusted analysis) – OPTIME CHF


Kaplan-Meier survival curves to 60 days by serum sodium quartiles (unadjusted analysis) – OPTIME CHF
Renal Dysfunction and HF outcomes

Death or unplanned admission
By quintile of eGFR
N=2680

Cumulative incidence

Years

CHARM study

Hillege, H. L. et al. Circulation 2006; 113: 674-678

Renal Dysfunction and HF outcomes
### Adjusted risk for in-hospital death for patients with heart failure by risk factors

<table>
<thead>
<tr>
<th>Features</th>
<th>Adjusted OR (95% CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and current symptoms</td>
<td></td>
</tr>
<tr>
<td>• Past renal failure</td>
<td>0.89 (0.53–1.52)</td>
</tr>
<tr>
<td>• CAD</td>
<td>0.66 (0.46–0.97)</td>
</tr>
<tr>
<td>• Diabetes</td>
<td>0.81 (0.51–1.29)</td>
</tr>
<tr>
<td>• Chest pain</td>
<td>0.58 (0.36–0.95)</td>
</tr>
<tr>
<td>• Weight gain</td>
<td>0.35 (0.13–0.98)</td>
</tr>
</tbody>
</table>

### Adjusted risk for in-hospital death for patients with heart failure by risk factors

<table>
<thead>
<tr>
<th>Features</th>
<th>Adjusted OR (95% CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body mass index (relative to &lt;25)</strong></td>
<td></td>
</tr>
<tr>
<td>25–29.9</td>
<td>0.82 (0.52–1.32)</td>
</tr>
<tr>
<td>&gt;30</td>
<td>0.73 (0.42–1.25)</td>
</tr>
<tr>
<td><strong>BUN &gt;45 mg/dL (relative to &lt;20)</strong></td>
<td>2.13 (1.02–4.34)</td>
</tr>
<tr>
<td><strong>Sodium (mg/dL, relative to &lt;135)</strong></td>
<td></td>
</tr>
<tr>
<td>137-139</td>
<td>0.49 (0.30–0.81)</td>
</tr>
<tr>
<td>&gt;140</td>
<td>0.68 (0.43–1.07)</td>
</tr>
</tbody>
</table>

Survival with Heart Failure:
Decreased Utility of LVEF
After Development of Class III-IV Symptoms

N = 500

Survival without urgent transplant

Months after Evaluation

Stevenson, Couper et al. Circulation 1996
Heart Failure Risk Stratification

Cardiopulmonary Exercise Testing

Prognostic Significance of Oxygen Consumption

Albouaini Heart 2007;93:1285-1292

Mancini Circulation 1991;83:778-786
INTERMACS Levels

- Profile 1: Critical cardiogenic shock
- Profile 2: Progressive decline
- Profile 3: Stable but inotrope dependent
- Profile 4: Resting symptoms
- Profile 5: Exertion intolerant
- Profile 6: Exertion limited
- Profile 7: Advanced NYHA III
Heart Failure Outcomes of Hospitalized Patients

Hospital Readmissions
- N = 38,702
- 30 Days: 20%
- 6 Months: 50%

Mortality
- N = 38,702
- 30 Days: 12%
- 12 Months: 33%
- 5 Years: 60%

Median length of hospital stay: 6 days

References:
Prognostic Models

- In patient
  - EFFECT
  - ESCAPE
  - ADHERE
- Ambulatory
  - HFSS
  - SHFS
  - MUSIC risk score
Recurrent Hospitalizations – EFFECT study

Figure 3. Among 1-year survivors after index EFFECT-HF discharge, the number of heart failure hospitalizations in the preceding year stratified the risk of death in crude analyses.

Figure 4. Mortality risk according to the number of subsequent hospitalizations for heart failure, ischemic heart disease, and any cardiovascular disease, adjusted for EFFECT-HF mortality risk score. CV = cardiovascular.

Lee et al, Am J Medicine 2009;122:162-169
Risk Stratification: Predictors of Mortality

BUN 43
N = 33,046

Less than

2.68%
n = 25,122

SYS BP 115
n = 24,933

5.49%
n = 4099

2.14%
n = 20,834

Greater than

8.98%
n = 7202

SYS BP 115
n = 7150

15.28%
n = 2048

6.41%
n = 5102

Cr 2.75
2045

12.42%
n = 1425

21.94%
n = 620

Highest to Lowest Risk Cohort
OR 12.9 (95% CI 10.4-15.9)

Adapted with permission from Fonarow GC et al. JAMA. 2005;93:572
Risk Stratification in Advanced HF Heart Failure Survival Score

components

- MAP
- HR
- Long QRS
- Pk VO2
- CAD
- LVEF
- PCW
- Na

Death, Urgent Tx, LVAD

Aaronson, Mancini *Circulation* 1997; 95: 2660-7
HF Stratification for Mortality
Seattle Heart Failure Score

Natural History of Chronic and Acute Heart Failure

Normal heart

Chronic heart failure

5 million in the US
10 million in Europe

Death

Heart Viability

Initial myocardial injury

Initial phase

First ADHF episode:
Pulmonary edema
ER admission

Later ADHF episodes:
Rescue therapy
ICU admission

Last year

What if fluid overload causes progressive HF?

Gheorghiade M. Am J Cardiol. 2005;96(suppl 6A):1-4G.
Which HF Patients to Refer for Consideration of Advanced Rx?

- Symptoms
- Recurrent Hospitalizations
- Inability to tolerate HF meds
- Worsening end-organ damage (kidneys, liver etc)
- LV size
- Age
- (Refractory ischemia or ventricular arrhythmias)
- Tests: RHC, Oxygen Consumption
Options for Management of Patients with Refractory End-Stage HF

Optimized Oral HF Drug Rx

- High Risk CV Surgery
- Investigational Drugs
- BiV Pacer
- Hospice
- Inotropes
- VADs
- Tx
- DT
Therapies Demonstrated to Reduce Mortality in Heart Failure

ACE Inhibitors (ARB)

Beta Blockers

Aldosterone Antagonists

Hydralazine-Isosorbide dinitrate

ICD (LVEF ≤ 35, Class II or II)

Cardiac Resynchronization + ICD

(LVEF ≤ 35, QRS > 120 ms, Class III or IV)

Cardiac Resynchronization: Meta-analysis

HF Hospitalizations

Progressive Heart Failure Mortality

Favors CR  Favors No CR  Favors CR  Favors No CR

Study

CONTAK CD

InSync ICD

MIRACLE

Overall

Odds Ratio (95% CI)

0.1  0.5  1.0  2.0

0.1  0.5  1.0  2.0  4.0

MADIT II

Mortality over an average follow-up of 20 months

<table>
<thead>
<tr>
<th>Conventional Group (n=490)</th>
<th>ICD Group (n=742)</th>
<th>Hazard Ratio (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.8 (97)</td>
<td>14.2 (105)</td>
<td>.69 (0.51-0.93)</td>
<td>0.016</td>
</tr>
</tbody>
</table>

- 31% reduction in the risk of death at any interval among patients in the defibrillator group as compared with patients in the conventional-therapy group

- The cumulative survival curves represent a decrease in death rates in the defibrillator group (95% confidence limits; P-value) of 12% at 1 year (27 to 40%), 28% at 2 years (4 to 46%), and 29% at 3 years (5 to 46%).
### SCD-HeFT Trial: Survival

<table>
<thead>
<tr>
<th>Treatment</th>
<th>HR</th>
<th>97.5% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amiodarone vs Placebo</td>
<td>1.06</td>
<td>0.86-1.30</td>
<td>0.53</td>
</tr>
<tr>
<td>ICD vs Placebo</td>
<td>0.77</td>
<td>0.62-0.96</td>
<td>0.007</td>
</tr>
</tbody>
</table>

2521 patients with ischemic or non-ischemic NYHA class II-III heart failure and LVEF 35% or less
Interactions Between Cardiac Signalling Pathways

Restoration of SERCA 2A

- **Adenovirus**
  - Affinity for the heart
  - Can replicate

- **Adeno-associated virus (AAV)**
  - Particles of the viral shell
  - Affinity for heart
  - **CANNOT** replicate

- **Splice Human SERCA 2A gene into AAV genome**
- **Harvest AAV-vector and deliver to the heart**
CUPID Trial (*first in humans*)

- Age 18-75 years old
- NYHA class III/IV
- Ischemic (vessel patency) or non-ischemic cardiomyopathy
- Maximal oxygen consumption (VO2max) of ≤ 16 mL/kg/min
- Left ventricular ejection fraction ≤ 30%
- ICD implanted
- If indicated, resynchronization pacemaker implanted for >6 months
- Stable, optimized HF regimen for 30 days, except for diuretics
Left Ventricular Ejection Fraction
Remodeling Domain

Mean (SE) Change From Baseline (%)

Low
Mid
High
Placebo

* $0.05 < p < 0.1$ (High vs Placebo)
Cumulative Clinical Event Rate
Adjusted for Competing Risk of Terminal Event
(CV Death, Transplant, LVAD)

P (N=14)  L (N=8)  HR(CI)=0.40 (0.13, 1.21), p = 0.11  M (N=8)  HR(CI)=0.44 (0.16, 1.24), p = 0.12  H (N=9)  HR(CI)=0.12 (0.03, 0.49), p = 0.003

Timing of Mechanical Circulatory Support

NYHA IIIa
IM 7
IM 6
IM 5
IM 4
IM 3
IM 2
IM 1
Death

Functional Class

Time →

Too “well”
Optimal
Too sick

IM 1
IM 2
IM 3
IM 4
IM 5
IM 6
IM 7

Too “well”
Optimal
Too sick
Ventricular Assist Devices

HeartMate XVE

HeartMate II
## Survival Outcomes of Destination Therapy

<table>
<thead>
<tr>
<th>Clinical Trials of DT</th>
<th>REMATCH</th>
<th>CUBS</th>
<th>INTREPID</th>
<th>Post-REMATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. patients</td>
<td>61</td>
<td>68</td>
<td>23</td>
<td>37</td>
</tr>
<tr>
<td>Mean age (y)</td>
<td>68 ± 8</td>
<td>66 ± 9</td>
<td>65 ± 4.3</td>
<td>60 ± 11.2</td>
</tr>
<tr>
<td>Cardiac index (L/min/m²)</td>
<td>2 ± 0.6</td>
<td>1.9 ± 1</td>
<td>1.7 ± 0.4</td>
<td>Not available</td>
</tr>
<tr>
<td>Left-ventricular ejection fraction (%)</td>
<td>17 ± 4.5</td>
<td>17 ± 5.2</td>
<td>22 ± 5</td>
<td>14.2 ± 4</td>
</tr>
<tr>
<td>Ischemic cardiomyopathy (%)</td>
<td>69%</td>
<td>78%</td>
<td>61%</td>
<td>57%</td>
</tr>
<tr>
<td>Long-term outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% 1-year survival</td>
<td>25%</td>
<td>52%</td>
<td>39%</td>
<td>27%</td>
</tr>
<tr>
<td>% 2-years survival</td>
<td>8%</td>
<td>23%</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>Fatal device failure</td>
<td>None</td>
<td>7</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Survival After LVAD Implantation as DT by the Candidate's Operative Risk

<table>
<thead>
<tr>
<th>OPERATIVE RISK</th>
<th>N</th>
<th>6-Mos</th>
<th>1-Yr</th>
<th>2-Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>65</td>
<td>88.7</td>
<td>81.0</td>
<td>48.4</td>
</tr>
<tr>
<td>Moderate</td>
<td>111</td>
<td>73.8</td>
<td>62.4</td>
<td>34.5</td>
</tr>
<tr>
<td>High</td>
<td>18</td>
<td>27.8</td>
<td>27.8</td>
<td>13.9</td>
</tr>
<tr>
<td>Very high</td>
<td>28</td>
<td>10.7</td>
<td>10.7</td>
<td>-</td>
</tr>
</tbody>
</table>

Long-term Outcomes and Costs of Ventricular Assist Devices Among Medicare Beneficiaries

Mean 1-year Medicare payments for inpatient care for patients in the 2000–2005 cohorts were $178,714 (SD, $142,549) in the primary device group and $111,769 (SD, $95,413) in the postcardiotomy group.

Total Artificial Heart vs. Axial Flow Pumps

Abiocor TAH

Jarvik

DeBakey
Treatment of Severe HF by Mechanical Devices

• Expectations
  • Miniaturization of systems
  • Better durability
  • Easier mode of operation
  • Totally implantable designs
Waitlist and Transplant Activity for Heart, 2000-2009

- Waiting List at Year End
- Total Heart Transplants
- Deaths on Waiting List

Source: OPTN/SRTR Annual Report Tables 1.3, 1.6, 1.7
One Year Unadjusted Graft Survival by Year, Deceased Donor Heart Transplants

Source: OPTN/SRTR Annual Report Tables 1.11b
ADULT HEART TRANSPLANTATION

All comparisons significant at p < 0.0001


1982-1991 (N=18,844)
1992-2001 (N=34,987)
2002-6/2005 (N=9,459)

ISHLT
J Heart Lung Transplant 2007;26: 769-781
Transplantation for Severe Heart Failure

- Areas of Improvement
  - Improved methods of organ preservation
  - Extension of the donor pool
  - Prevention of rejection
Conclusions: Advanced Heart Failure

- Aggressive Optimal Medical Therapy
- Marriage of Pharma and Device Therapy
- Assessment of Prognosis
- Promise of Gene Therapy and Stem Cell Therapy
- Consideration of Advanced Therapies
- Mechanical Support
- Cardiac Transplantation
- When do we consider Palliative Care
Reminder to Submit Questions

Click your “Ask a Question” button, type your question in the open area & then click the “Ask Question” button.
Acknowledging Complexity at the Bedside

• First step is to acknowledge this complexity
  – Depending on the patient, “cure” (transplant) or “stabilization” (VAD) may be right around the corner

• Goal of palliative care is not to force acceptance that patient is at the end of life
  – i.e. not to force this idea on patient, family, or clinicians
  – Instead to help patients / families understand complex trajectory
  – Clarify goals, review over time (assist—not take over-conversations)
  – Assure symptom control at all times
Why palliative care?

4. The fiscal imperative

Hospital and insurers of the future will have to efficiently and effectively treat serious and complex illness in order to survive.
The Financial Landscape of Healthcare

- $2.2 trillion dollars spent in 2007 on healthcare
- Medicare spending expected to increase from $426 billion in 2007 to $844 billion in 2017

Source: WSJ, 2/26/2008
How Palliative Care Reduces Length of Stay and Cost

Palliative care:

- Clarifies goals of care with patients and families
- Helps families to select medical treatments and care settings that meet their goals
- Assists with decisions to leave the hospital, or withhold or withdraw treatments that don’t meet goals
- Lowers costs (for hospitals and payers) by reducing hospital and ICU length of stay, and direct (such as pharmacy) costs.

## Costs Associated with Hospital Palliative Care Consultation Across 8 Hospitals

<table>
<thead>
<tr>
<th>Costs</th>
<th>Live Discharges</th>
<th>Hospital Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Usual Care</td>
<td>Palliative Care</td>
</tr>
<tr>
<td>Total Per Day</td>
<td>$1,450</td>
<td>$1,171</td>
</tr>
<tr>
<td>Directs Per Admission</td>
<td>$11,1240</td>
<td>$9,445</td>
</tr>
<tr>
<td>Laboratory</td>
<td>$1,227</td>
<td>$803</td>
</tr>
<tr>
<td>ICU</td>
<td>$7,096</td>
<td>$1,917</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>$2,190</td>
<td>$2,001</td>
</tr>
<tr>
<td>Imaging</td>
<td>$890</td>
<td>$949</td>
</tr>
<tr>
<td>Died in ICU</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Adjusted results, n>20,000 patients

Costs/day for patients who died with palliative care vs. matched usual care patients
What Does All this Mean from the Patient Perspective?

For patients, palliative care is a key to:

– relieve symptom distress
– navigate a complex medical system
– understand the plan of care
– help coordinate and control care options
– allow simultaneous palliation of suffering along with continued disease treatments (no requirement to give up life prolonging care)
– provide practical and emotional support for exhausted family caregivers
What Does All this Mean from the Clinician Perspective?

For clinicians, palliative care is a key tool to:

• Save time
  help to handle repeated, intensive patient-family communications, coordination of care across settings, comprehensive discharge planning

• Provide Symptom Control
  assists with controlling pain and distress for highly symptomatic and complex patients, 24/7
  -thus supporting clinician’s treatment plan

• Promote Satisfaction
  increases patients’ and families’ satisfaction with the quality of care provided by the clinician
What Does All this Mean from the Hospital Perspective?

For hospitals, palliative care is a key tool to:

– effectively treat the growing number of people with complex advanced illness
– provide excellent patient-centered care
– increase patient and family satisfaction
– improve staff satisfaction and retention
– meet accreditation and quality standards
– increase bed/ICU capacity, reduce costs
Summary: Pall Care for Patients with HF

- Palliative care improves quality of care for our sickest and most vulnerable patients and their families.

- While integrating palliative care into the course of heart failure is complex, its need is particularly important given the high symptom burden and complex trajectory.

- Serious illness is a universal human experience and palliation is a universal health professional obligation.
For Further Reading…


• Contact us:
  – Nathan.Goldstein@mssm.edu
  – Jill.Kalman@mssm.edu