Sharp HospiceCare’s
Transitions Program

A New Model for Late Stage Disease Management

Daniel R. Hoefer, MD
CMO, Outpatient Palliative Care and Hospice

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Vice President
Sharp HealthCare Hospice and Palliative Care
• First generation outpatient palliative care
• Second generation outpatient palliative care

1. UCSF
2. Kaiser
3. Sutter (AIM)
4. VA
5. Care More
6. Health Care Partners
7. Partners Medical Group (Boston)
8. University of Pittsburgh
9. Long Island Jewish
10. Hospice of the Valley
11. Sharp HealthCare
Goals

CMS Goals:
1. Better individual patient care
2. Better population care
3. Lower growth in health care expenditures
4. Prevent readmissions

Sharp *Transitions* Goals:
1. Better individual patient care
2. Better population care
3. Reverse the growth in health care expenditures
4. Better professional caregiver support
5. Better professional family support and conflict resolution
6. Prevent any admissions including primary admissions
Principles of *Transitions*

- Proactive In home Disease Management
- Proactive Psychosocial Management
- Accurate description of what the health care industry can and cannot provide
“The continued application of traditional treatment strategies which are valuable to the patient at an earlier time in their health experience has the opposite effect on patients at end of life resulting in inferior outcomes.”

Daniel Hoefer, MD
CMO, Outpatient Palliative Care and Hospice
Sharp HospiceCare
Up to Date: Physiology and Goals of Care for the Pre-terminal Populations are Not the Same as a Younger and Healthier Geriatric Patient
“Standard of Care” versus “Evidence Based Medicine”

1. Pressure Ulcers
   - No trial has proven an elimination of pressure ulcers over time. Thomas, MD. 2005 jamda
   - Evidence Based Medicine: The development of a pressure ulcer is not necessarily a sign of bad care but a sign that the patient is terminal. Healthcare providers need to acknowledge this issue.

2. Weight Loss
   - Natural part of the life cycle Henderson, MD 1992 J Clin Nutr
   - Evidence Based Medicine: there is a point in the life cycle when efforts to feed the patient are actually associated with increased morbidity and mortality.
3. Delirium

- Associated with statistically significant decreases in mental and physical decline, and higher mortality rates
- Evidence Based Medicine: The induction of delirium by an elective procedure is associated with significant long term health consequences.
“Standard of Care” versus “Evidence Based Medicine”

(continued)

• Delirium accounts for 49% of all hospital days in hospitalized older patients
  Inouye, Sharon K, MD, *Delirium in Older Persons*, NEJM, 2006, vol.354(11), PP.1157-68

• Demented Patients are at 500% the risk of developing Delirium
“Standard of Care” versus “Evidence Based Medicine”

(continued)

4. Infections

a. Immune Senescence Mandates an updated standard of care. Givens, MD 2010, Arch Internal Medicine

b. “We have treated your loved one’s infection. However, the issues which permitted your loved one’s infection to occur in the first place have not gone away. So the issue isn’t is your loved one going to develop the same infection but what do you want us to do about it when it occurs?” D. Hoefer, MD
Evidence Based Potential Harms of Hospitalization: Especially in the Late Stage populations
More Conflict:

Thirteen (13) evidenced based reasons hospitalization harms these demographics: the “iatrogenic consequences of hospitalization.”

1. Physical trauma of transfer
2. High rates of delirium – delirium is NOT necessarily reversible
3. High rates of hospitalization induced functional decline - frequently permanent
4. Inability to address the patient’s special needs
5. Lack of communication of goals of care
6. Falls
7. Medication Errors
8. Adverse Drug Events (ADEs)
9. Polypharmacy
10. Infections
11. Adverse Procedures – e.g. catheters, feeding tubes, CTs/MRIs
   a. “stroke code” on a patient with delirium
12. Burdensome cost to patient/family.
13. Anxiety for Loved Ones
ACP is associated with:

1. Improved Quality of Care
2. Less in Hospital Death
3. Increased Use of Hospice with less stays < 3 days
4. Less likely to be admitted to the ICU
5. Less likely to visit the ED more than once in their last month
6. Fewer stays > 2 weeks if admitted

Bischoff, Kara MD, et al, *Advance Care Planning and the Quality of End-of-Life Care in Older Adults*, 2013, JAGS
Patient Goals of Care Who Completed an Advance Directive:

- 92% requested to prioritize comfort and forgo extensive measures to prolong life
- 5% expressed a desire to limit care in certain situations
- 3% requested all care possible
Current Culture of Health Care

- Reactive versus Proactive
- Paternalistic
- Dependent
Medicare Cost in Matched Hospice and Non-Hospice Cohorts

Comparing Hospice and Non-Hospice Patient Survival Among Patients Who Die Within a Three Year Window

Increased by 29 days for patients who chose hospice over non-hospice care:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Increase in Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF</td>
<td>+ 81 days</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>+ 39 days</td>
</tr>
<tr>
<td>Pancreatic Cancer</td>
<td>+ 21 days</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>+ 33 days</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>+ 12 days</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>+ 4 days</td>
</tr>
</tbody>
</table>
The Traditional Medical Model
“This Disease Can Be Cured”

27% of patients with incurable terminal disease believed they could have been cured

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unresectionable non-small-cell lung cancer</td>
<td>54%</td>
</tr>
<tr>
<td>AIDS</td>
<td>32%</td>
</tr>
<tr>
<td>CHF</td>
<td>22%</td>
</tr>
<tr>
<td>ALS</td>
<td>16%</td>
</tr>
<tr>
<td>COPD</td>
<td>12%</td>
</tr>
</tbody>
</table>

Hospitalizations last year of life - CHF Acceptable or Not?

- Historical average hospitalizations for CHF during the last year of life 3.5
Where Patients with CHF Die Acceptable or Not?

• Historically 63% of CHF patients died in the hospital (2005)
**Back Again**

Portion of patients on Medicare who were rehospitalized within 30 days of leaving the hospital, by reason for original hospital stay

<table>
<thead>
<tr>
<th>Medical problems</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart failure</td>
<td>26.9%</td>
</tr>
<tr>
<td>Psychosis</td>
<td>24.6%</td>
</tr>
<tr>
<td>COPD⁹</td>
<td>22.6%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>20.1%</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>19.2%</td>
</tr>
</tbody>
</table>

**Surgical procedures**

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac stent placement</td>
<td>14.5%</td>
</tr>
<tr>
<td>Other vascular surgery</td>
<td>23.9%</td>
</tr>
<tr>
<td>Major hip, knee surgery</td>
<td>9.9%</td>
</tr>
<tr>
<td>Other hip, femur surgery</td>
<td>17.9%</td>
</tr>
<tr>
<td>Major bowel surgery</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

⁹Chronic obstructive pulmonary disease

Note: Analysis of 11,855,702 Medicare beneficiaries between Oct. 1, 2003 and Dec. 31, 2004

Source: The New England Journal of Medicine
Expanding the Care Continuum

- Home Setting
- Focus on high risk late stage chronic illnesses
- Skilled Clinicians
- Flexible Models
- Cost efficient
Four Pillars of *Transitions*

Extending the evidence based benefits of Hospice Care to patients at an earlier point in their healthcare.

1. Comprehensive in-home patient and family education about their disease process; proactive medical management
2. Evidence-based Prognostication
3. Professional Proactive Management of the Caregiver
4. Advance Health Care Planning
Pillar One
In Home Proactive Disease Management

Registered Nurse
Medical Social Worker
Spiritual Care
Primary Care MD
Palliative Care MD
Improved Compliance

Decrease Primary Admissions & Re-admissions

Improved Symptom Management

Improved Disease Management

The best medication reconciliation occurs in the home
1. 343 doctors
2. Estimates on 468 terminally ill patients
3. Mean patient survival – 24 days
4. Considered accurate if estimate within 33% for any given patient
5. 20% of the time accurate
   a) 80% of the time inaccurate
   b) 63% over-optimistic

British Medical Journal; Extent and Determinants of Error in Doctors Prognoses in Terminally Ill patients; Prospective Cohort Study; Vol 320(7233), 19 Feb 2000 pp.469-473
The Clinical Consequences of Institutionalized Over-optimism
(Pillar two continued)

6. The average over-optimistic estimate was off by 530%

   a. Increases the risk that treatment decisions by patients, families and healthcare providers are NOT consistent with reality

   b. Leaves patients and families emotionally unready for inevitable outcomes

   c. Increase risk that providers will lose credibility

British Medical Journal; Extent and Determinants of Error in Doctors Prognoses in Terminally Ill patients; Prospective Cohort Study; Vol 320(7233), 19 Feb 2000 pp.469-473
Diagnosis and Treatment
vs.
Diagnosis, Treatment and Prognosis
The only group more overly optimistic than healthcare providers are patient and families.
General Prognostic Data

1. Age
2. Male
3. BMI
4. Weight Loss
5. Depression
6. Geriatric Frailty Syndrome
Biometric models + functional decline patterns + specific biological data + general biological data + adjusting for your personal tendencies = accurate, effective, professional and compassionate information.
Event Prognostication – Prognostication which guides the patient in an expected series of events.
<table>
<thead>
<tr>
<th>Age (mos)</th>
<th>Diet</th>
<th>Safety</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>breast/bottles</td>
<td>car seat (all)</td>
<td>rolling</td>
</tr>
<tr>
<td></td>
<td>solids</td>
<td>fever/signs of illness</td>
<td>shaking (0-6 mos)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>scalds (all)</td>
<td>passive smoke (all)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sleep (all)</td>
<td>crib</td>
</tr>
<tr>
<td>2</td>
<td>reaching</td>
<td>walkers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>finger foods</td>
<td>wean bottle/reduced appetite</td>
<td>healthy diet</td>
</tr>
<tr>
<td>6</td>
<td>choking/poison prevention</td>
<td>crawling</td>
<td>baby proofing</td>
</tr>
<tr>
<td>9</td>
<td>water safety (6-24 mos)</td>
<td>sunscreen</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>supine bot</td>
<td>stranger anxiety</td>
<td>exploring</td>
</tr>
<tr>
<td>16</td>
<td>discipline/tantrums</td>
<td>toileting</td>
<td>hands in mouth</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
82 Year old male
Co-managed with specialist
Functional Decline
Progressive decline SOB
Slow rise in ADL decline

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Flag</th>
<th>Reference</th>
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<tr>
<td></td>
<td>21 Jan 11</td>
<td>8:43 am</td>
<td>21 Jan 11</td>
</tr>
<tr>
<td>BNP</td>
<td>1270</td>
<td>631</td>
<td>386</td>
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<tr>
<td></td>
<td>25 Mar 10</td>
<td>9:47 am</td>
<td>25 Mar 10</td>
</tr>
<tr>
<td></td>
<td>28 May 09</td>
<td>8:11 am</td>
<td>28 May 09</td>
</tr>
<tr>
<td></td>
<td>02 Dec 08</td>
<td>8:07 am</td>
<td>02 Dec 08</td>
</tr>
<tr>
<td></td>
<td>17 June 08</td>
<td>8:43 am</td>
<td>17 June 08</td>
</tr>
<tr>
<td></td>
<td>07 May 07</td>
<td>8:33 am</td>
<td>07 May 07</td>
</tr>
<tr>
<td></td>
<td>07 Nov 06</td>
<td>7:57 am</td>
<td>07 Nov 06</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Sodium</td>
<td>Potassium</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>21Jan2006</td>
<td>AM</td>
<td>142</td>
<td>4.4</td>
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<tr>
<td>13Dec2005</td>
<td>AM</td>
<td>142</td>
<td>4.7</td>
</tr>
<tr>
<td>25Mar2005</td>
<td>AM</td>
<td>145</td>
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<tr>
<td>29Dec2004</td>
<td>AM</td>
<td>141</td>
<td>4.6</td>
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<tr>
<td>28May2004</td>
<td>AM</td>
<td>143</td>
<td>4.8</td>
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<tr>
<td>02Dec2003</td>
<td>AM</td>
<td>142</td>
<td>4.8</td>
</tr>
<tr>
<td>17Jun2003</td>
<td>AM</td>
<td>143</td>
<td>4.5</td>
</tr>
<tr>
<td>07May2003</td>
<td>AM</td>
<td>139</td>
<td>5.1</td>
</tr>
<tr>
<td>12Feb2003</td>
<td>AM</td>
<td>142</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Glucose Non-Fasting *107
Results History

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>WBC</th>
<th>Hgb</th>
<th>Hct</th>
<th>Platelet</th>
<th>Rdw For SRS</th>
<th>MCV</th>
<th>RBC</th>
<th>MCH</th>
<th>MCHC</th>
<th>MPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>13Dec2010</td>
<td>8:00 AM</td>
<td>6.5</td>
<td>12.0</td>
<td>37.9</td>
<td>210</td>
<td>14.0</td>
<td>92</td>
<td>4.09</td>
<td>29</td>
<td>32.0</td>
<td>6.9</td>
</tr>
<tr>
<td>25Mar2010</td>
<td>9:47 AM</td>
<td>8.0</td>
<td>12.6</td>
<td>38.2</td>
<td>182</td>
<td>13.4</td>
<td>93</td>
<td>4.11</td>
<td>31</td>
<td>33.0</td>
<td>6.2</td>
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<tr>
<td>29Dec2009</td>
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<td>7.9</td>
<td>13.1</td>
<td>39.1</td>
<td>179</td>
<td>13.2</td>
<td>90</td>
<td>4.33</td>
<td>30</td>
<td>33.5</td>
<td>6.8</td>
</tr>
<tr>
<td>28May2009</td>
<td>8:11 AM</td>
<td>8.3</td>
<td>13.4</td>
<td>40.1</td>
<td>189</td>
<td>13.3</td>
<td>90</td>
<td>4.44</td>
<td>30</td>
<td>33.4</td>
<td>6.3</td>
</tr>
<tr>
<td>02Dec2008</td>
<td>8:07 AM</td>
<td>8.3</td>
<td>14.4</td>
<td>42.7</td>
<td>171</td>
<td>12.3</td>
<td>90</td>
<td>4.76</td>
<td>30</td>
<td>33.7</td>
<td>7.6</td>
</tr>
<tr>
<td>07Nov2006</td>
<td>7:57 AM</td>
<td>8.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PROGNOSTIC DATA

71 Year old male
CHF - Moderate
Dementia - Moderate
Tib Fib FX

a. 20% of Medicare - Hospital to Skilled
b. 1/3 of Skilled to Custodial
c. Greater than 50% of new Custodial patients die within 6 months

- Complete ADL deficit
  - Worst 1st year Prognosis

- Anticipate:
  - Pressure Ulcers
  - Weight Loss
  - Delirium
  - Infection

- Death
  - Decubiti
  - Delirium
  - Infection

- Hospice

- EOL

- Anticipatory Guidance

- 5/11/12 Death

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>206</td>
<td>208</td>
<td>206</td>
<td>204</td>
<td>206</td>
</tr>
<tr>
<td>ADL (Assist)</td>
<td>Assisted Living → 3 ADL</td>
<td>-4</td>
<td>-4</td>
<td>-5</td>
<td>-6**</td>
</tr>
<tr>
<td>Alb</td>
<td>3.6</td>
<td>3.6</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4(6/13/11)</td>
</tr>
<tr>
<td>Chol</td>
<td>LDL 109</td>
<td>161(LDL 101)</td>
<td>178(114)</td>
<td>156(90)</td>
<td></td>
</tr>
<tr>
<td>Hgb</td>
<td>12.5</td>
<td>12.1</td>
<td>12.2</td>
<td>12.2</td>
<td>11.4</td>
</tr>
<tr>
<td>BNP</td>
<td>294</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cr</td>
<td>1.2</td>
<td>1.1</td>
<td></td>
<td>0.8</td>
<td></td>
</tr>
</tbody>
</table>

*Cholesterol less than 150 in men 63% mortality at 14 months
** Worst 1 year prognostic marker
† Low cholesterol, low albumin, low hemoglobin = 84% 1 year mortality
Evidence-based medicine - Hospice care is associated with an absolute reduction in death rates in the caregiver at 18 months post death of the patient of 0.5% (1 in 200)

Evidence based medicine shows that AHCDs (which would include POLST) do not consistently match the health care desired by the patient with the care received by the patient.
Problems with Advance Health Care Directives

- They are not disease specific
- They are too vague or contradictory to be interpreted in the context of the care which is being provided

Resolve Morale Conflict Proactively

Create Disease Specific Directives
Issues Important in the Management of a Pre-terminal Aging Population:

- Mobility Deficit
- Transportation Deficit
- Financial Restraint
- Social Support/Family Deficit
- Cognitive Deficit
- Compliance Deficit
- Change in Goals of Care

It is better to bring healthcare to patients at this time, than to bring patients to healthcare.
What **Transitions** does not do …

- We do not prevent or discourage the patient from seeing their cardiologists or PCPs
- We do not prevent or discourage state-of-the-art cardiology therapies or interventions
- We do not discourage hospitalizations
- We do not "take over" the medical management of the patient
Key Performance Indicators

- Reduction of hospitalizations/ED visits
- Completion of advance healthcare plan
- Timely referral to hospice
- System cost savings
- Patient/family satisfaction
Transitions – Interventions

• To educate patient/family
  – Disease process
  – Early symptom recognition
  – Medication management
  – Dietary considerations
• To facilitate the development of a long term care plan that aligns with patient goals of care
• To improve care coordination between PCP/Specialist and patient/family
• To improve the end-of-life care by creating the option for the hospice pathway
Transitions
Case Management Design

• Active Phase
• Maintenance Phase
• Role of Hospice
  – 24 hour call availability
  – Full integration and hand offs between programs
Transitions
Active Phase

RN Case Manager
- 4-6 visits in 6 week time frame

MSW
- 1-2 visits for goals of Care discussion; completion of POLST
**Transitions**

**Maintenance Phase**

RN Case Manager

- Telephonic case management – every 2-4 weeks until transferred to hospice
- Home visits as needed for assessment
- Coordinate care with MD ongoing
- Transfer to hospice when appropriate
Hospitalization ER Utilization: All cause

94% reduction in primary CHF admissions
It’s not about the hospital…
it’s about the “non-event”
Cost of Care

Average total cost of care

43% reduction

Pre-Transitions vs. During Transitions
<table>
<thead>
<tr>
<th>Statistics</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total N</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>Age on enrollment</td>
<td>84</td>
<td>Range: 45 – 102</td>
</tr>
<tr>
<td>Average LOS in Transitions</td>
<td>165 days</td>
<td>Range: 2 – 726</td>
</tr>
<tr>
<td>Reasons for Discharge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer to Hospice</td>
<td>116</td>
<td>74.8%</td>
</tr>
<tr>
<td>Death at Home</td>
<td>8</td>
<td>5.2%</td>
</tr>
<tr>
<td>Death in a Facility</td>
<td>9</td>
<td>5.8%</td>
</tr>
<tr>
<td>No Further Care Needed</td>
<td>3</td>
<td>1.9%</td>
</tr>
<tr>
<td>Moved From Service Area</td>
<td>1</td>
<td>0.65%</td>
</tr>
<tr>
<td>Discharged: Other</td>
<td>18</td>
<td>11.6%</td>
</tr>
<tr>
<td>Percent VERY satisfied</td>
<td>CHF</td>
<td>COPD</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>1. The extent to which you were taught to manage your medications and symptoms related to your diagnosis</td>
<td>76%</td>
<td>75%</td>
</tr>
<tr>
<td>2. The education you received regarding contacting the Transitions team at any time for assistance in managing your symptoms</td>
<td>75%</td>
<td>88%</td>
</tr>
<tr>
<td>3. The assistance you received with long term care planning and advanced directives</td>
<td>81%</td>
<td>86%</td>
</tr>
<tr>
<td>4. Improvement in your quality of life</td>
<td>69%</td>
<td>57%</td>
</tr>
<tr>
<td>5. Assistance received from the nurse or medical social worker when problems occurred</td>
<td>69%</td>
<td>75%</td>
</tr>
<tr>
<td>6. Likelihood of recommending the Sharp Transitions Program to others for managing advanced chronic illness</td>
<td>78%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Synergy

Transitions to Hospice

….The impact of change…
1. Heart Disease - Number of deaths 585,444 - 25% decrease in death rate
2. Cancer - Number of deaths 573,855 – 7.5% decrease in death rate
3. Chronic Lung Disease - Number of deaths 137,789 - 25% decrease in death rate
4. Strokes - Number of deaths 129,180 – 31% decrease in death rate
5. Accidents - Number of deaths 118,043 – 7.6% decrease in death rate
6. Alzheimer’s Disease - Number of deaths 83,308 - 50% decrease in death rate
7. Diabetes Mellitus - Number of deaths 68,905 - 11% decrease in death rate
8. Renal Disease - Number of deaths 50,472 - 21% decrease in death rate
9. Pneumonia/Flu - Number of deaths 50,003 - 32% decrease in death rate
10. Suicide - Number of deaths 37,793 - 15% decrease in death rate

Centers for Disease Control and Prevention (CDC) Estimated causes of death for 2010
Current Programs

- CHF
- COPD
- Dementia
- Cancer
- Geriatric Frailty Syndrome
- ACP
- Nursing Home Care

Coming soon…Renal Failure, other neurodegenerative disorders
Hospice Transitions Transfers to Hospice

- FY '07: 2
- FY '08: 31
- FY '09: 54
- FY '10: 99
- FY '11: 101
Hospice Admissions - Heart Failure

FY '07: 111
FY '08: 147
FY '09: 158
FY '10: 178
FY '11: 169
Thank You