Palliative Care

Tom Smith
Thomas Palliative Care Program
Massey Cancer Center
Virginia Commonwealth University Health System
Richmond, Virginia
tsmith@hsc.vcu.edu

*“It’s hard to define it, but you know it when you see it.”
-George Parker, MD

Objectives and plan

• What is palliative care, and why do it?
• How we did what we did, and
• Some research opportunities
The Tao of Cancer…
Berrill Yushomerski Yankelowitz, modified by Smith

Felson’s Law: to steal ideas from one person is plagiarism; to steal from many is research.

Why we did it
The SUPPORT Study JAMA 1995;274:1591-98

• 46% of DNR orders were written within 2 days of death.
• Of patients preferring DNR, <50% of their MDs were aware of their wishes.
• 38% of those who died spent >10 days in ICU.
• Half of patients had moderate-severe pain >50% of last 3 days of life.
• Local needs assessment: 6+ cancer patients dying at any one time, many in need of better care.
Pain data from SUPPORT

% of 5176 patients reporting moderate to severe pain between days 8-12 of hospitalization:

- *colon cancer*: 60%
- liver failure: 60%
- *lung cancer*: 57%
- *MOSF + cancer*: 53%
- MOSF + sepsis: 52%
- COPD: 44%
- CHF: 43%

Patient/family meeting within 1 week of admission: 39.9%
Plan for discharge disposition documented within 4 days of admission: 50.3%

<table>
<thead>
<tr>
<th>Key Performance Measures</th>
<th>UHC, May 2004</th>
<th>Aggregated Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain assessment within 48 hours of admission</td>
<td></td>
<td>95.5%</td>
</tr>
<tr>
<td>Use of a numeric scale to assess pain</td>
<td></td>
<td>75.4%</td>
</tr>
<tr>
<td>Pain relief or reduction within 48 hours of admission</td>
<td></td>
<td>73.2%</td>
</tr>
<tr>
<td>Bowel regimen ordered with opioid therapy order</td>
<td></td>
<td>59.2%</td>
</tr>
<tr>
<td>Dyspnea assessment within 48 hours of admission</td>
<td></td>
<td>89.1%</td>
</tr>
<tr>
<td>Dyspnea relief or reduction within 48 hours of admission</td>
<td></td>
<td>75.8%</td>
</tr>
<tr>
<td>Document patient status within 48 hours of admission</td>
<td></td>
<td>19.5%</td>
</tr>
<tr>
<td>Psychosocial assessment within 4 days of admission</td>
<td></td>
<td>27.6%</td>
</tr>
<tr>
<td>Patient/family meeting within 1 week of admission</td>
<td></td>
<td>39.9%</td>
</tr>
<tr>
<td>Plan for discharge disposition documented within 4 days of admission</td>
<td></td>
<td>50.3%</td>
</tr>
</tbody>
</table>

Also: 20% of Medicare patients starting NEW chemo with 2 weeks of death Hospice referrals coming later, if at all..
Why the mismatch between what we want, what could be provided?

- Health care professionals
  - Lack of time?
  - Lack of training
  - Lack of interest
  - Lack of reimbursement
  - Hard to get/stay involved ("burnout")
  - It’s just hard

- Patients
  - Don’t have high expectations
  - Suffering is good
  - Be a good patient
  - If I tell the doctor…
    - She/he will give up on me
    - It means that the cancer is growing

Why we did it -- Educational


- 74% of residencies in U.S. offer no training in end of life care.
- 41% of medical students never witnessed an attending talking with a dying person or his family, and
- Medically underserved and minorities less likely to use hospice/palliative care…about 50% expected utilization
- Oncologists consistently report lack of training in symptom management, and no one to refer
Costs are a problem: National Health Expenditure Growth 1970-2003

1/8th of Medicare $ spent in last 60 days of life
New drugs: Oxaliplatin, Erbitux $4000/cycle; Avastin $100,000/12 months, adds 2 months life
"Medicare doesn’t pay me enough to talk to people."

There was some experience suggesting that care could be improved… often dramatically
Oncology patient pain management is not optimal, and can be improved by paying attention, following algorithm, ....


Coordinated Care Models

Intervention: a nurse coordinator in charge so that families had someone to call 24/7
- Outcomes did not change for terminally ill cancer patients
- Costs reduced from £8814 to £4414 (-41%)
- Savings came from decreased hospital days, outpatient care
- Keep patients out of the ER
Project Safe Conduct: Ireland CC + Hospice of Western Reserve.

- 233 NSCLC pts seen concurrently with HWR
- APN/HWR, MSW, chaplain + oncologist
- Hospice use: 13% to 80%, and LOS 10 to 44 days
- *Once project over, ICC hired team from HWR to expand the program*

Pitorak E, J Pall Med 2003;6: 645-655
http://www2.edc.org/lastacts/archives/archivesJuly02/featureinn.asp

RCT of usual oncology vs. usual oncology + concurrent hospice care. J Finn, ASCO 2002

- 167 Pts on concurrent care vs. 166 on usual care
  - had preserved QOL longer
  - used less chemo
  - lived slightly longer
  - Caregiver burden less
- Intervention saved $2500/pt in hosp days
- Intervention cost an additional $17,500/pt for 6 months
Improvement in Symptoms for 2500 Mount Sinai Hospital Patients Followed by the Palliative Care Service (6/97-10/02)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Initial Evaluation</th>
<th>Final Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Nausea</td>
<td>Moderate</td>
<td>Mild</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>Mild</td>
<td>None</td>
</tr>
</tbody>
</table>

Percent of Palliative Care Families Satisfied or Very Satisfied Following Their Loved Ones Death With:

- Control of pain - 95%
- Control of non-pain symptoms - 92%
- Support of patient’s quality of life - 89%
- Support for family stress/anxiety - 84%
- Manner in which you were told of patient’s terminal illness - 88%
- Overall care provided by palliative care program - 95%

Source: Post-Discharge/Death Family Satisfaction Interviews, Mount Sinai Hospital, New York City
So, what did we do?

TPCU of VCU-Massey Cancer Center
- 11 bed inpatient dedicated unit, 5/1/00
- ~1800 nursing and medical consultations a year
- 2 APNs (Pat Coyne clinical director)
- 4 oncology attendings + geriatrician (1 FTE),
- Shared MSW and Care Coordinator
- Chaplain
Where do hospital-based PC programs focus?

TPCU of VCU-Massey Cancer Center

- Start up funds limited
  - Hospital remodeled one wing of old hospital
  - Jessie Ball duPont Foundation $300K
  - Thomas (Hospice) Foundation $150K
TPCU of Massey Cancer Center and VCUHS

- *ALL* standardized orders
  - RNs make decisions, manage by algorithms

- High Volume, Standardized care
  - Limited Attendings, much supervision
  - Feedback: tests, $/day spent

TPCU of VCU-Massey Cancer Center

- Only 50% have cancer
  - CVAs, MOSF, renal/hepatic failure, AIDS
  - 1% BMTU
  - Sickle cell (when beds available)
- 52% of admissions end in death
  - Of discharges, 90% in hospice eventually
- Average age ~55
- African-American 56%, same as VCU Medical Center overall
- Main referring center to 4 hospices
TPCU Objective: a Good Death

-29% of all deaths
-64% of all cancer deaths

Better Care
-94% highly satisfied
-90+% excellent symptom control

Symptoms are improved by PC consultation or transfer

ESAS scale 0-3
30 pts with at least 2 consult days and symptoms >0
Khatcheressian J, et al. Oncology September 2005
PC service does provide better care than average, on most measures

<table>
<thead>
<tr>
<th>Key Performance Measure</th>
<th>Median</th>
<th>VCU</th>
<th>VCU PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain assessment within 48 hours of admission</td>
<td>98.5%</td>
<td>97.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Use of a numeric scale to assess pain</td>
<td>85.2%</td>
<td>85.2%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Pain relief or reduction within 48 hours of admission</td>
<td>78.3%</td>
<td>77.8%</td>
<td>83%</td>
</tr>
<tr>
<td>Bowel regimen ordered with opioid therapy order</td>
<td>59.1%</td>
<td>63.6%</td>
<td>95%</td>
</tr>
<tr>
<td>Dyspnea assessment within 48 hours of admission</td>
<td>95%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Dyspnea relief or reduction within 48 hours of admission</td>
<td>80%</td>
<td>78.6%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Document patient status within 48 hours of admission</td>
<td>15.6%</td>
<td>17.1%</td>
<td>95%</td>
</tr>
<tr>
<td>Psychosocial assessment within 4 days of admission</td>
<td>17.8%</td>
<td>9.8%</td>
<td>40%</td>
</tr>
<tr>
<td>Patient/family meeting within 1 week of admit</td>
<td>40.5%</td>
<td>0%</td>
<td>65%</td>
</tr>
<tr>
<td>(discussion must include planning and/or preferences for disch)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan for discharge disposition documented within 4 days of admission</td>
<td>55%</td>
<td>43.9%</td>
<td>90%</td>
</tr>
<tr>
<td>Discharge planner / social services arranged services required for disch</td>
<td>75%</td>
<td>68.3%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Khatcheressian J, et al. Oncology September 2005

TPCU Education

- It is “normal” to have good EOL care, and this is an attainable goal
- Fellowship in Palliative Care
- Elective in palliative care
- Work closely with GYN Onc, Surg Onc, Rad Onc, ICU staff, esp. Neurosurgery
- JCAHO help
- “Magnet designation” help
TPCU of Massey Cancer Center and VCUHS

- We still do the cool stuff, and research
  - intrathecal pain management
  - hypofractionated and stereotactic radiation
  - palliative stents
  - bisphosphonates
  - chemotherapy
  - nerve ablation, celiac blocks
  - acupuncture
  - music, pet, massage therapy

TPCU of Massey Cancer Center and VCUHS
Research

- Dyspnea research
  - The most common end of life symptom, after pain
  - 20% of all cancer patients
  - Major cause of family and patient suffering
  - Phase II trial of 25 mcg fentanyl in 2 ml NS nebulized saline
Nebulized fentanyl for dyspnea

Patients said that it helped
- Improved 26/37 (79%)
- Unsure 3/27 (9%)
- None 4/37 (12%)

![Graph showing oxygen saturation and respiratory rate changes over time, with statistical significance levels P=0.002 and P=0.03.]

Implantable Drug Delivery Systems
Research

As Randomized

As Treated

Significantly improved pain control with IDDS (p=0.055 as randomized; p=0.007 as treated).
As treated, there was significant reduction in 7/15 symptoms measured.

Individual Toxicity

- Fatigue
- Confusion
- Reduced Level of consciousness
- Memory loss
- Personality
- Anorexia
- Constipation
- Dehydration
- Nausea
- Vomiting
- Weight loss
- Pruritus
- Urticaria
- Impotence
- Reduced libido

Reduction in Mean Severity

*p≤0.05.

Overall Survival was better with IDDS (Kaplan-Meier, intention to treat)

ΔOS ∝ ΔPS, p<0.05

<table>
<thead>
<tr>
<th>Days</th>
<th>No. at Risk</th>
<th>CMM</th>
<th>IDDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>99</td>
<td>101</td>
</tr>
<tr>
<td>30</td>
<td>76</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>60</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>90</td>
<td>57</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>120</td>
<td>46</td>
<td>46</td>
<td>49</td>
</tr>
<tr>
<td>150</td>
<td>38</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>180</td>
<td>20</td>
<td>20</td>
<td>35</td>
</tr>
</tbody>
</table>

Percentage of surviving patients implanted

<table>
<thead>
<tr>
<th>Days</th>
<th>CMM Percentage</th>
<th>IDDS Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>6.6%</td>
<td>24.6%</td>
</tr>
<tr>
<td>60</td>
<td>21.1%</td>
<td>78.6%</td>
</tr>
<tr>
<td>90</td>
<td>33.9%</td>
<td>79.0%</td>
</tr>
<tr>
<td>120</td>
<td>39.5%</td>
<td>84.0%</td>
</tr>
<tr>
<td>150</td>
<td>45.0%</td>
<td>83.7%</td>
</tr>
<tr>
<td>180</td>
<td>50.5%</td>
<td>85.7%</td>
</tr>
</tbody>
</table>
Other trials

- RCT of nebulized fentanyl vs. placebo
- RCT of Zinc vs placebo for chemo-induced dysgeusia
- Cultural attitudes about use of Palliative Care.
- Website with truthful information about prognosis, options, survival
- “What would you do differently?” longitudinal study of the decisions patients make
- PET therapy

Be prepared for the long haul
Sounds great... who’s gonna pay for it?

TPCU Fiscal Evaluation
Smith, Coyne, Cassel, Hager. J Pall Med 2003

• On PCU care is less expensive and variable than elsewhere in hospital.
• “Cost avoidance”
  – In the 1st 2 years, TPCU lost $90,000 but saved the health system ~$1,800,000
Impact of Palliative Care on Cost per Day for Deaths

- Died elsewhere: (mean prior to May 2000 = $3,341; after May 2000 = $2,970)
- Died on PCU: (mean = $1,474)
Lower Cost Per Day After Transfer To Palliative Care
Cohort study: 60% less cost
Case Control study: 67% less cost

Have “the talk”:
- Review orders
- oxygen
- antibiotics
- tube feeds
- multiple meds
- Standard algorithms
- POS correction
- High volume, expert attendings

Even Palliative Care (MCVH) can be profitable

<table>
<thead>
<tr>
<th></th>
<th>FY03</th>
<th>FY04</th>
<th>FY05 Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Admits to PCU</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharges</td>
<td>233</td>
<td>204</td>
<td>222</td>
</tr>
<tr>
<td>Inpatient Days</td>
<td>1,244</td>
<td>879</td>
<td>917</td>
</tr>
<tr>
<td>Avg LOS</td>
<td>5.3</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Gross Charges</td>
<td>$2,339,265</td>
<td>$1,712,256</td>
<td>$2,334,138</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$1,639,059</td>
<td>$1,115,008</td>
<td>$1,407,836</td>
</tr>
<tr>
<td>Direct Cost</td>
<td>$817,757</td>
<td>$651,851</td>
<td>$793,619</td>
</tr>
<tr>
<td>Variable Cost</td>
<td>$648,203</td>
<td>$483,615</td>
<td>$587,924</td>
</tr>
<tr>
<td>Mixed Reimbursement</td>
<td>$1,691,855</td>
<td>$1,407,375</td>
<td>$1,881,649</td>
</tr>
<tr>
<td>Contrib Margin (dir cost)</td>
<td>$874,098</td>
<td>$755,524</td>
<td>$1,086,032</td>
</tr>
<tr>
<td>Contrib Margin (var cost)</td>
<td>$1,043,652</td>
<td>$923,760</td>
<td>$1,293,725</td>
</tr>
<tr>
<td>Total Profit (loss)</td>
<td>$52,796</td>
<td>$292,367</td>
<td>$473,812</td>
</tr>
</tbody>
</table>
“If you listen carefully to your patients they will tell you not only what is wrong with them but what is wrong with you.”

Walker Percy MD, Love in the Ruins 1971

### TPCU and the ICUs

#### Table 1: Referrals from ICUs

<table>
<thead>
<tr>
<th></th>
<th>FY 00</th>
<th>FY 01</th>
<th>FY 02</th>
<th>FY 03 (6 mos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% from ICUs (%)</td>
<td>10.7</td>
<td>21.4</td>
<td>19.8</td>
<td>29.0</td>
</tr>
<tr>
<td>LOS before Transfer (days)</td>
<td>11.4</td>
<td>9.1</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>LOS after Transfer (days)</td>
<td>6.9</td>
<td>6.1</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>Total LOS (days)</td>
<td>18.3</td>
<td>15.2</td>
<td>13.0</td>
<td></td>
</tr>
</tbody>
</table>

NP makes rounds to identify patients for consults, MD-MD
Earlier transfer of dying patients may improve EOL care and reduce cost.
“Off-loads” ICUs and avoids diversion.
TPCU Evaluation

- Clinical care excellent
- Health System impact
  - Helps bed availability
  - Profitable for direct admits
  - Save VCUHS $900,000 to $1,200,000
- Research growing, important to NCI
- Educational progress across the Health System
- Little staff turnover, better VCUHS satisfaction
Don’t reinvent the wheel, or, *why not learn from our mistakes?*

- Center to Advance Palliative Care, [www.capc.org](http://www.capc.org)
- 6 National Palliative Care Leadership Centers

Carrie Cybulski  
Program Coordinator  
Massey Cancer Center  
804-628-1918 (phone)  
804-828-5083 (fax)  
ccybulski@vcu.edu

**Conclusions**

- Better symptom management and end of life care is important, do-able, and part of our mission
- Starting a program is a major undertaking like any other multidisciplinary service/research/education program
- PC can improve care, be focus of research in real-world problems, be cost-neutral