The aggressiveness of cancer care near the end of life: Is it a quality of care issue?

Craig Earle, MD MSc FRCPC
Director, Health Services Research Program for Cancer Care Ontario & the Ontario Institute for Cancer Research

Identifying potential indicators of the quality of end of life cancer care from administrative data - J Clin Oncol 2003;21(6):1133-8

Objective:
- To identify feasible indicators that could use existing administrative data to evaluate the quality of end-of-life cancer care for patients with incurable malignancies.
Qualitative Methods

- Literature Review
- Focus groups
  - Patients
  - Families
- Expert Panel of health care providers
  - Modified Delphi approach to approve and rank indicators

“You’ve got six months, but with aggressive treatment we can help make that seem much longer.”
Major Themes

- *Overuse* of chemotherapy near death
- *Underuse* of hospice services
- “*Misuse*” of interventions, causing high rates of complications that result in Emergency Room visits, hospitalization, or intensive care admissions

*Institution of new anti-cancer therapies or continuation of ongoing treatments very near death may indicate overuse*

“We can treat with many lines of chemotherapy in appropriate patients, but there’s a time to stop.” (medical oncologist)
A high number of emergency room visits, inpatient hospital admissions, and days spent in the ICU near the end of life may indicate poor quality care

• “I’ve come to terms with dying from my cancer. I don’t want to die from complications of the treatment.” (patient)
• “For most of our patients, a visit to the ICU is kind of a failure.” (medical oncologist)

A high proportion of patients never referred to hospice or only referred in the last few days of life, or death in an acute care setting, may indicate poor quality care

“I think the earlier the doctor mentions (hospice), the better it is for the patient because the patient could plan for things ahead, rather than to spend so much time doing the treatment.”

(family member)
Methodologic Evaluation

- Medicare claims (> 65 yo) linked to SEER tumor registry
- Indicators operationalized and performance evaluated
  - Accuracy
  - Variation
  - Reliability
  - Achievable benchmarks
  - Beginning of validity testing

In the course of these exercises, secular trends became apparent

% of patients


< 3 days in hospice
Last dose of chemotherapy within 14 days of death
ICU admission in the last month of life
> 1 ER visit in the last month of life
> 1 hospitalization in the last month of life

1Among patients admitted to hospice

Associations with aggressive care

<table>
<thead>
<tr>
<th></th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of death</td>
<td>1.06</td>
<td>(1.02, 1.10)</td>
</tr>
<tr>
<td>Age</td>
<td>0.98</td>
<td>(0.97, 0.99)</td>
</tr>
<tr>
<td>Female</td>
<td>0.80</td>
<td>(0.73, 0.87)</td>
</tr>
<tr>
<td>Comorbidity</td>
<td>1.14</td>
<td>(1.06, 1.23)</td>
</tr>
<tr>
<td>Teaching hospital</td>
<td>1.24</td>
<td>(1.12, 1.38)</td>
</tr>
</tbody>
</table>
| Black race
  Teaching hospitals            | 0.80 | (NS)       |
  Non-teaching hospitals         | 1.25 | (1.01, 1.55) |
| Teaching hospital density      | 1.10 | (1.04, 1.17) |
| Density of hospices            | 0.93 | (0.88, 0.98) |
Relationship between the aggressiveness of cancer care and hospice utilization

![Graph showing the relationship between number of indicators of aggressive care and percent admitted to hospice.]

**Iowa HSAs 1991 – 2000**

Most Recent Chemo/2 Weeks of Death

- Least Aggressive
- Moderate
- Most Aggressive

Map of Iowa showing the distribution of cancer care aggressiveness and hospice utilization across different areas.
QOPI : Quality Oncology Practice Initiative

- 125 practices, > 2000 MDs, 10,000 patients
- Chemotherapy use within 14 days of death ranged from 0 to 53% in participating practices
- Strongly correlated to admission to hospice < 1 week before death (p=.03)
  (Proc Am Soc Clin Oncol Abstr. 8573)

...why do they put nails in coffins?
Quality Oncology Practice Initiative (QOPI)

Patient enrolled in hospice before death

Mean = 62%

Trends in end-of-life care in Ontario, > 65 yo

Copyright © 2004, 2005 American Society of Clinical Oncology. All rights reserved.
Trends in end-of-life care: US vs Ontario, > 65 yo

ER visits

Trends in end-of-life care: US vs Ontario, > 65 yo
Chemotherapy in the last 2 weeks of life
Trends in end-of-life care: US vs Ontario, > 65 yo
ICU admission in the last month of life

Trends in end-of-life care: US vs Ontario, > 65 yo
>1 hospitalization in the last month of life
Validity testing: Do these issues affect family satisfaction with care?

Patient and Caregiver Study (E. Grunfeld, PI)

- Small (51 patient) validation study related these measures to family member’s satisfaction with care (FAMCARE instrument) as death approached for 51 women that died of breast cancer
- Trends: worse satisfaction associated with:
  - Chemotherapy overuse
  - Death in hospital or ICU
  - No hospice admission or shorter LOS in hospice
- ‘Information giving’ and ‘physical care’ subscales drove the results

Does aggressive treatment improve survival?
(Stage IV NSCLC, IVA & PS)

![Graph showing survival probability over time after diagnosis for different treatment regimens](image-url)
Rationales for futile chemotherapy

Evidence shows aggressiveness of chemotherapy near death is unrelated to the likelihood of success of treatment, however:

– Patients often request it
– Seen as preserving ‘hope’, being a ‘fighter’ or ‘winner’
– ‘Doing something is better than doing nothing’
– It’s easier (for us)
– Occasional patients respond & have meaningful palliation
– Patients will accept much more toxicity for less benefit than health care providers would
– Financial incentives?

“You’ve come to the right place, Ms. Colburne. I specialize in futile treatment”
Is this a quality of care issue?

- The utility of any of these measures depends on whether the concept of overuse near death is acceptable to the various stakeholders as a valid quality issue.
- How easy is it to identify the end-of-life period prospectively?
- Is it possible to both achieve patient satisfaction and avoid futile care?