

## IND-014 IDENTIFYING POTENTIAL QUALITY OF CARE INDICATORS FOR END-OF-LIFE CANCER CARE FROM ADMINISTRATIVE DATA

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### 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.

### Methods:

We used literature review and focus groups with patients and bereaved family members to generate potential quality indicators. An expert panel of health care providers then used a modified Delphi approach to rank indicators based on meaningfulness and importance. The resultant measures were operationalized in claims data to establish feasibility. The accuracy of each measure (e.g. for dates +/- 1 day) was assessed by comparing administrative data to detailed chart reviews for 150 consecutive patients from our local tumour registry. Indicators were defined by empirically evaluating the measures in Medicare claims for a cohort of patients identified in the Surveillance, Epidemiology, and End Results (SEER) registries who died of lung, breast, colorectal and other gastrointestinal cancers, to identify cut-off values that detected outlier practice. Using Health Care Service Areas (HCSAs) as the unit of analysis, achievable performance benchmarks for these indicators were identified using the pared-mean method. The statistical properties of the indicators were then assessed using hierarchical regression techniques to compute expected geographic variability among HCSAs, controlling for patient disease and sociodemographic characteristics and provider setting, expressed as the ratio of the rate of the indicator in an area at the 5th percentile versus the rate at the 95th percentile. From these, a core indicator set was defined which was then used to descriptively characterize care based on patient, provider, and regional characteristics, as ascertained by the linked Area Resource File.

### Results:

Three major quality of care themes emerged: 1) overuse of chemotherapy, 2) underuse of hospice services, and 3) misuse of interventions resulting in frequent emergency room visits, hospitalisations, and intensive care unit admissions in the last year of life (J. Clin Oncol 2003;21(6):1133-8). Based on preliminary analyses, a core indicator set for further testing has been defined:

Indicator	Benchmark	Accuracy	Variability
Proportion receiving chemotherapy in the last 14 days of life	< 0.10	0.76	2.24
Proportion starting a new chemotherapy regimen in the last 30 days of life	< 0.02	0.74	3.19
Hospitalizations in the last month of life	< 0.04	0.96	2.38
Emergency room visits in the last month of life	< 0.04	0.83	2.78
Admissions to the intensive care unit in the last month of life	< 0.04	0.85	3.28
Death in an acute care hospital	< 0.17	0.96	2.49
Admission to hospice	> 0.55	0.81	Pending
Admission to hospice < 3 days before death	< 0.08	0.81	Pending

Descriptive analyses among patients receiving chemotherapy in the last year of life show that these processes of care, all of which point towards possible overly aggressive intervention in these terminally ill patients, are more likely to be experienced by African-American patients, those receiving care in a teaching hospital, and patients with less access to hospice services. Moreover, there appear to be trends towards increasingly aggressive end-of-life cancer care over a 4 year period in the mid-1990s (Proc ASCO 2003;22(Abstr.2100).

### Conclusions:

We have identified a set of potential quality of care indicators for end-of-life cancer care that detect significant practice variation and that can feasibly and accurately be assessed using administrative data. Work is under way to validate them by correlating their performance with bereaved caregiver assessments of quality of care using the FAMCARE instrument. Future analyses will evaluate them in different patient populations, validate the concepts against prospectively collected quality ratings from patients and their caregivers, and will look at the effect of aggressive care on outcomes such as survival and resource utilization.