

Introduction

- ✓ The aging of the population continues to put pressure on the US health system and an area of growing importance is end of life care.
- ✓ Hospitals with inpatient palliative care consultation (IPCC) teams have been shown to reduce costs and improve quality of care.
- ✓ End of life consultation and decision making around hospice are particularly relevant to cancer patients.
- ✓ Differences in costs at end of life remain understudied and estimates of the cost differences across hospice and non hospice cancer patients were not currently available.

Objectives

Evaluate the cost implications for cancer patients at end of life receiving hospice care in Illinois hospitals

Methods

- ✓ Hospital discharge data were acquired from the years 2012-2016 from the Illinois Health and Hospital Association
- ✓ Patients aged 18 or older with neoplasms based on ICD 9 and ICD 10 were selected and visits resulting in death or discharge to hospice were identified.
- ✓ A generalized linear model with a log link was used with total charges as the dependent variable and controls for gender, age, race, payer and MS-DRG category (surgical, medical) along with an indicator for discharge to hospice.
- ✓ Race/ethnicity included White (W), Black (B) and Hispanic (H).
- ✓ Other control variables were as follows: age (0-54, 55-64, 65-74, 75-84, 85+), gender, payer (Medicare, Medicaid, Commercial Insurance), and clinical conditions (based on ICD 9 codes for neoplasms, circulatory disease, respiratory disease, infectious disease, injury, and other).
- ✓ The model was used to predict total charges with and without discharge to hospice holding the controls at their mean levels.
- ✓ All data were analyzed using STATA (version 17.0, STATACorp LP).

Results

Table 1. Patient Characteristics

Characteristic	N (%)
Hospice	64,794 (48.8)
Female	69,669 (52.5)
Insurance	
Medicare	94,166 (70.9)
Medicaid/Uninsured	9,875 (7.4)
Commercial	21,258 (16.0)
Other	7,533 (5.7)

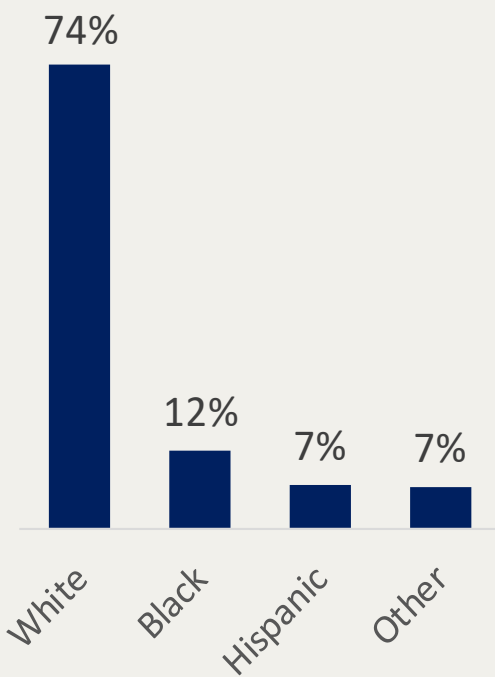
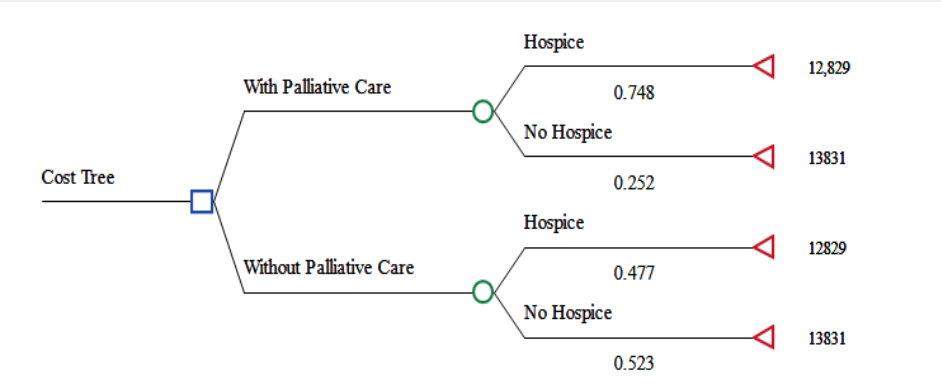


Table 2. Key Inputs for Model

Input	
Probability of hospice ¹	
With palliative care	0.748 (0.703, 0.793)
Without palliative care	0.477 (0.414, 0.540)
Estimated hospital costs ²	
With hospice care	\$12829 (11832, 13825)
Without hospice care	\$13831 (12208, 15453)
Marginal effect	\$1003
Baseline palliative care use for advanced cancer ³	13.1%

¹ Coleman Palliative Care Training Program; ² Illinois COMPData; ³ Nicholson et al, *Cancer Nursing* 2022

Figure. Decision Tree Analysis of Terminal Hospitalization Costs with and Without Palliative Care



Palliative care is associated with \$271.50 in savings per patient based on the above tree. Hence of 1000 more cancer patients received palliative care it would be expected to generate \$271,500 in savings to the health system. Currently, despite these potential savings only 13.1% of the advanced cancer patients in Illinois hospitals were receiving palliative care.

Discussion and Conclusions

- ✓ Use of Hospice is associated with savings in hospitalization costs for patients with cancer at the end of life in Illinois
- ✓ Policy makers should consider cost savings in other patient populations in Illinois associated with use of hospice services
- ✓ Overall the data suggest end of life consultations promoting hospice can help reduce the costs of end of life care