

Introduction

Achieving overall reductions in health care costs and reducing hospital readmission rates are important targets for contemporary health care. Hospital or intensive care unit stays and life-sustaining procedures performed near the end of life represent a substantial portion of health care spending and are frequently associated with a worse quality of death¹. Improving the quality of health care for patients at or nearing the end of life and yielding cost savings are joint benefits of an effective palliative medicine program. Referral to hospice, one important element of palliative care, is associated with reductions in high-intensity care, particularly ICU admissions, hospital admissions, and emergency department visits². Access to palliation is predictive for lower costs, and earlier palliative care consultation during hospital admission is associated with lower cost of hospital stay for patients admitted with an advanced cancer diagnosis³. This project aims to further our understanding of the role that palliative medicine plays in optimizing end-of-life care for patients with serious illnesses.

Objectives

- 1) To compare hospital readmission rates and costs between patients who opted for a palliative plan of care at discharge versus a similar group of patients who did not agree to a palliative plan
- 2) To compare index hospitalization charges based on the timing of palliative consultation and care plan decisions
- 3) To compare the palliative care (PC) group versus the non-palliative group in terms of demographics, primary diagnoses, estimated prognosis, and duration of survival after discharge

Methods

- Index hospitalizations occurred over three months within three inner-city teaching hospitals (MedStar Union Memorial Hospital, MedStar Good Samaritan Hospital, and MedStar Harbor Hospital), each with an established interdisciplinary palliative consultation team. Charts were reviewed retrospectively to collect data for all patients surviving to discharge after receiving an initial palliative consultation from December 2012 to April 2013.
- The Social Security Death Index, obituary archives, and the EMR were queried in an attempt to locate the dates of death of study participants. Death dates were assumed to belong to participants if the name, date of birth, and state of residence listed in the external source matched existing hospital records. Only patients with confirmed dates of death were included in this study.
- Patients were included in the palliative plan of care group if there was agreement at discharge that care would be focused on comfort (e.g., hospice or MOLST form limiting aggressive measures).
- Readmission (RA) data included only MedStar hospital readmissions. RA data will be reported as all-cause overall RA rates as well as adjusted RA rates to account for confounding due to expected high mortality rates. Adjusted RA rates represent the percent of patients readmitted out of those still alive at each time point.
- Financial data were reported from MedStar InfoMart for the study patients to compare charges associated with index hospital admissions and readmissions.

Results

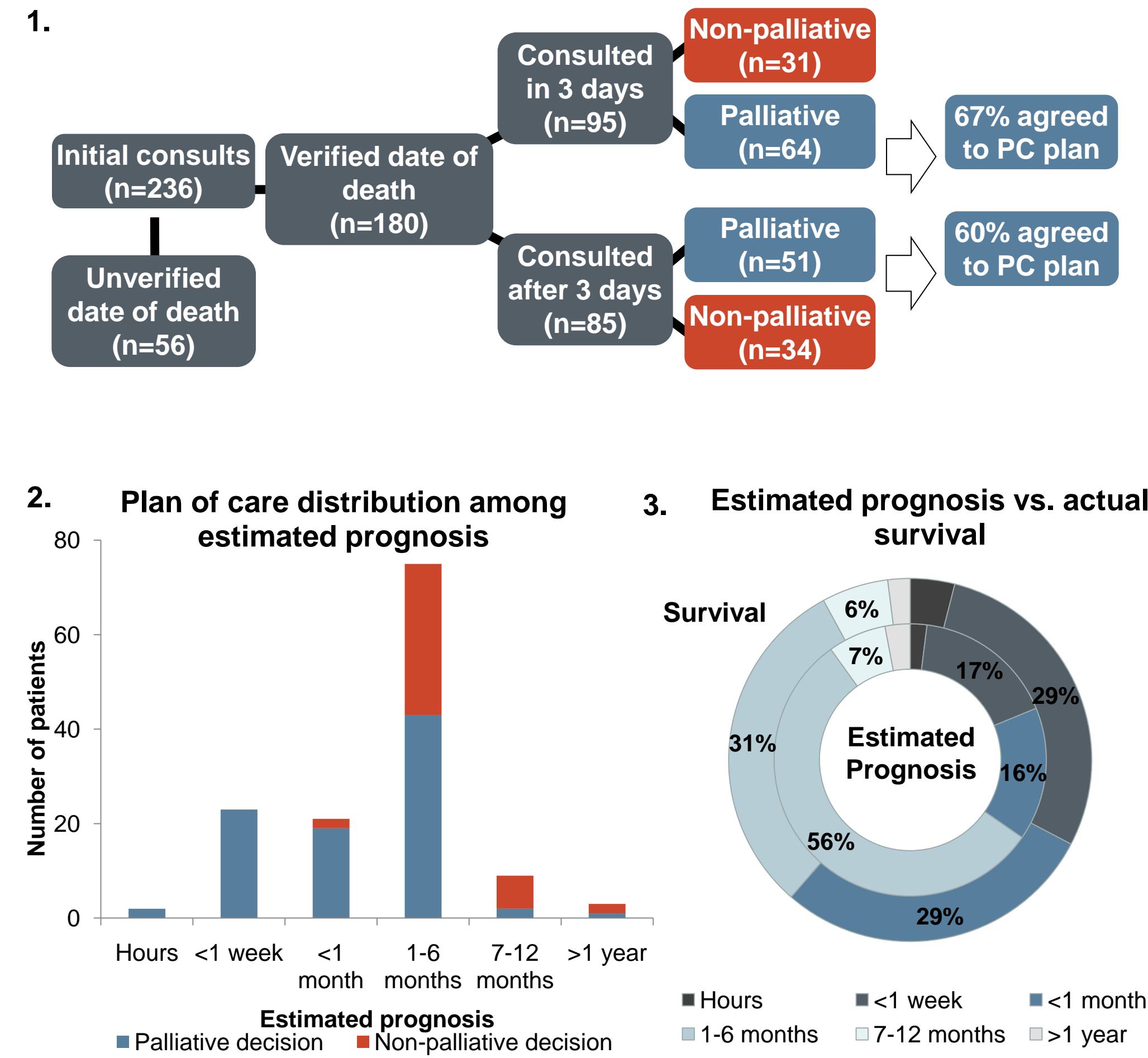


Figure 2. Discharge care plans organized by clinician estimated prognosis show increased preference for a PC plan when prognosis is less than six months.

Figure 3. Clinicians tend to overestimate life expectancy in the last year of life, particularly in patients surviving one month or less.

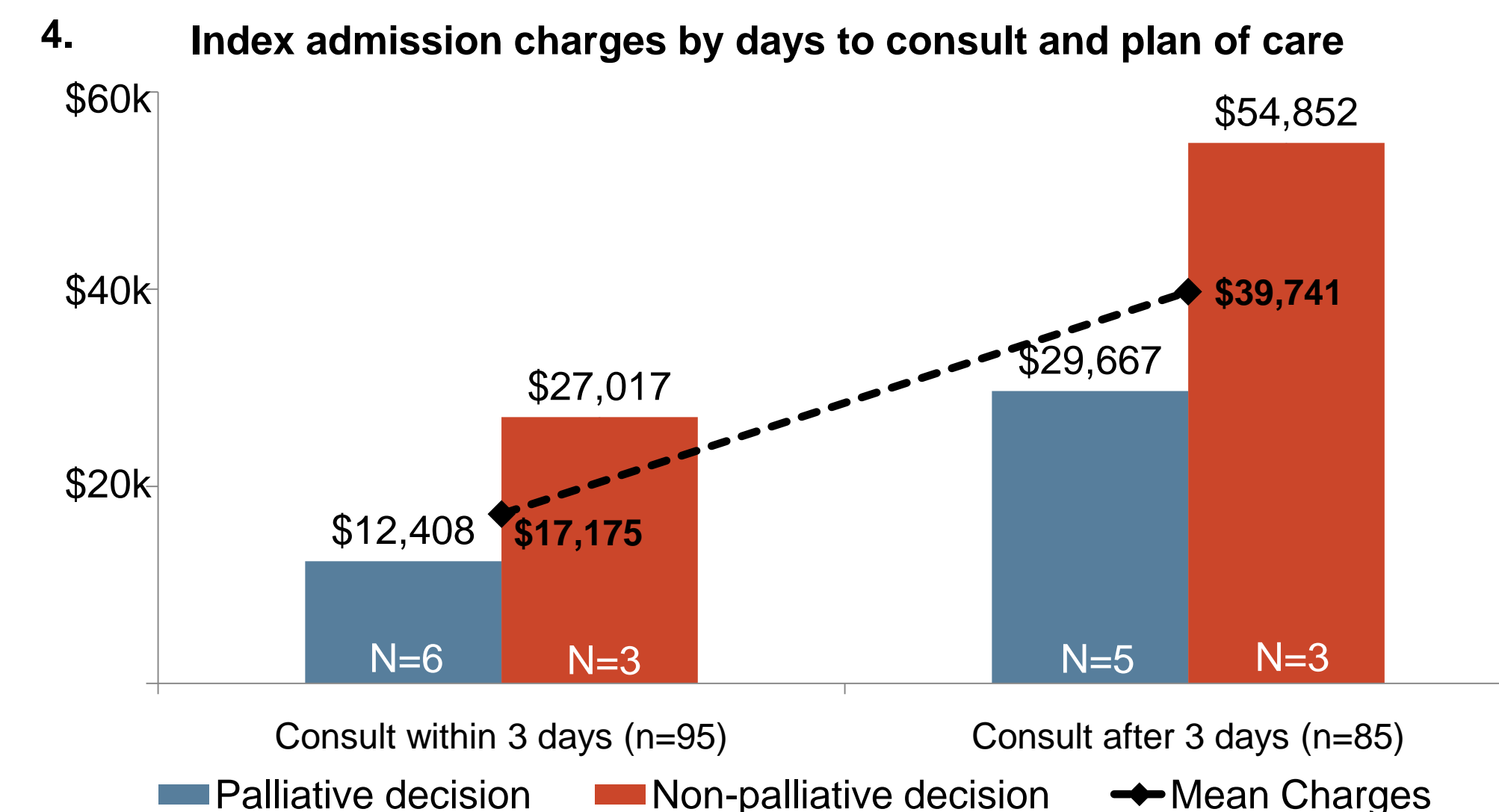
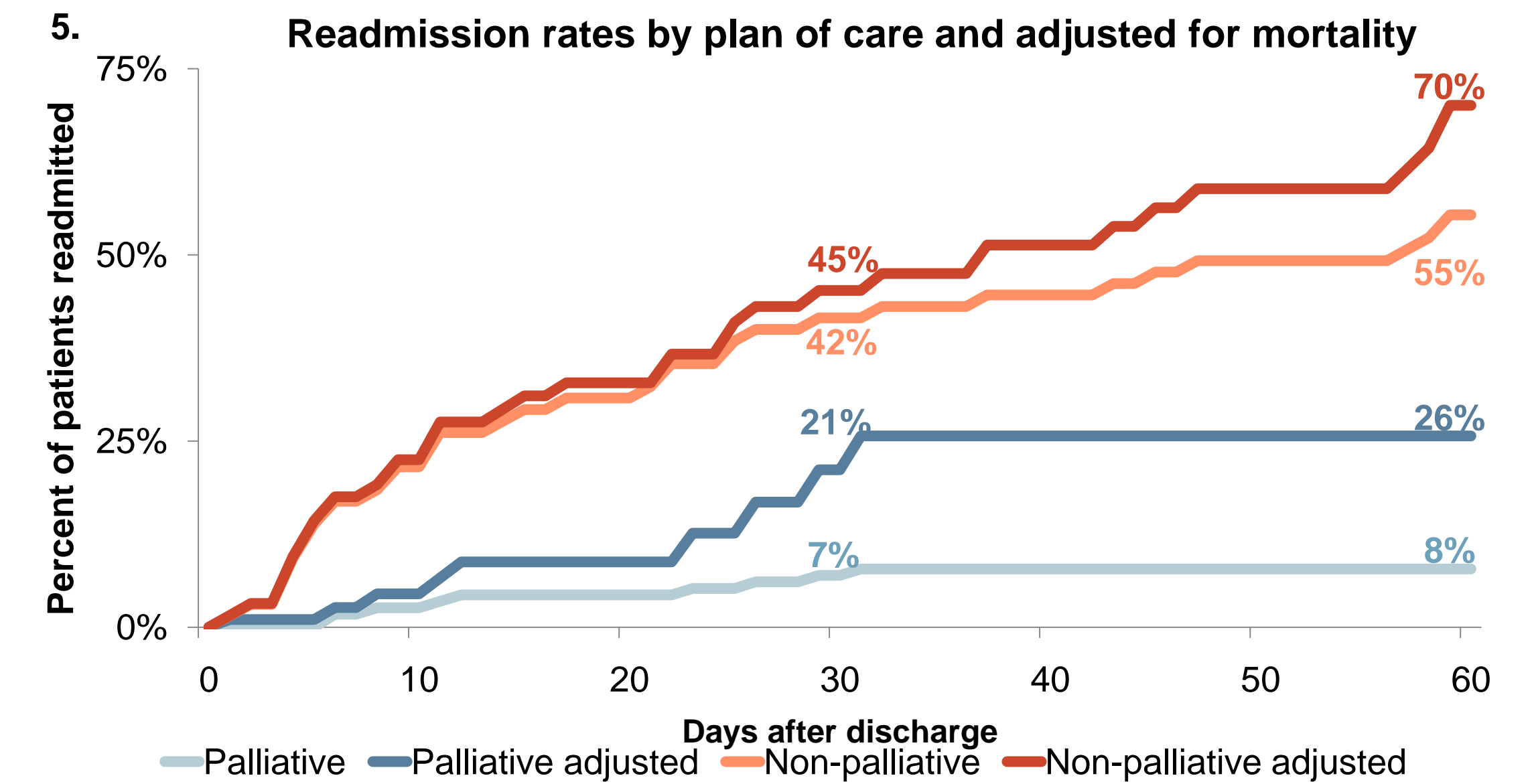


Figure 4. Factors associated with increased index hospital charges include late consultation ($p < .0001$) and non-palliative plan of care at discharge ($p < .05$).



	Palliative (n=115)		Non-palliative (n=65)	
Days	30	60	30	60
Readmission rate	7%	8%	42%	55%
Mortality	80%	86%	29%	48%
Adjusted RA rate	21%	26%	45%	70%
Charges per patient	\$608.28	\$662.66	\$7,639.24	\$12,441.42
Charges per RA	\$8,744.04	\$8,467.30	\$18,390.76	\$22,463.67
Total charges	\$69,952.35	\$76,205.69	\$496,550.56	\$808,692.12

Figure 5 and associated table. A palliative plan of care is associated with decreased all-cause 30 day readmission rates ($p < .0001$), (adjusted $p = .0003$). Charges per readmission are less in the palliative group at 30 days ($p = .0119$) and 60 days ($p = .0028$).

Discussion

A palliative plan of care is associated with decreased hospital readmission rates and related charges. Early palliative care consultation and agreement for a palliative plan of care following discharge are linked to decreased charges for the index admission.

The timing of consultation did not impact the likelihood of patients and families agreeing to a palliative plan of care at discharge.

References

1. Zhang B, et al. 2009. Health care costs in the last week of life: associations with end-of-life conversations. *Arch Intern Med.* 2009 Mar 9;169(5):480-8.
2. Bergman J, et al. Hospice use and high-intensity care in men dying of prostate cancer. *Archives of internal medicine.* 2011;171(3):204-10.
3. May P, et al. 2015. Prospective Cohort Study of Hospital Palliative Care Teams for Inpatients With Advanced Cancer: Earlier Consultation Is Associated With Larger Cost-Saving Effect. *J Clin Oncol.* 2015 Jun 8.