Value of Hospice In Medicare

FINAL REPORT

March 2023

Presented by: NORC at the University of Chicago

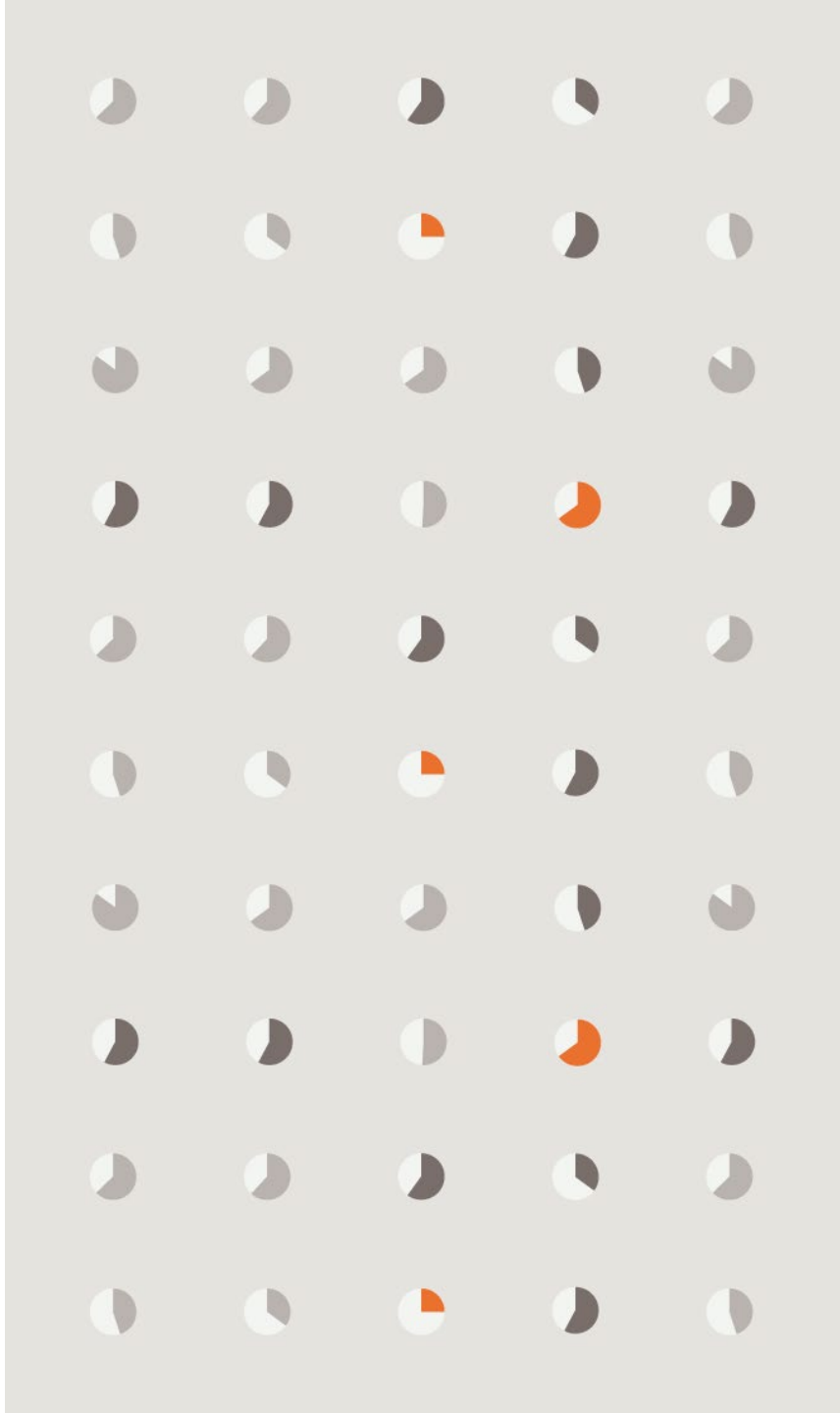
NORC at the University of Chicago

Agenda

01 About NORC

02 Project Overview

03 Key Findings



NORC at the University of Chicago

NORC at the University of Chicago is an objective, nonpartisan, research organization that delivers insights and analysis decision-makers trust.

Research You Can Trust™

One of the largest U.S. Independent Research Institutions

1,000

NORC Professionals

Researchers, Economists,
Data Scientists, Statisticians

1,500

Survey Interviewers

Skilled at discussing sensitive
topics with a variety of subjects

$300M

Annual Revenue

Working with governments,
companies, and foundations

AREAS OF FOCUS

Health Care & Public Health | **Education & Child Development**

Economics, Justice & Society | **International Programs**

Statistics & Methods. | **Public Affairs & Media Research**

The National Association for Home Care & Hospice (NAHC) and the National Hospice and Palliative Care Organization (NHPCO) commissioned NORC at the University of Chicago (NORC) to assess the value of hospice to the Medicare program and to beneficiaries, their families, and caregivers

- NORC conducted a **comparative assessment** of the **financial value** of hospice with administrative claims data representing the **entire population of 2019 Medicare decedents**
- Decedents were categorized based on hospice use in the final 12 months of life
- Analyzed all **medical services spending** and **utilization** in the final 12 months of life
- **Propensity weighting** to determine decedents' **likelihood of using hospice** was applied to **non-hospice users**, and resulting weights were used to **adjust decedents' total cost of care (TCOC)**

NORC's "Value of Hospice" study is one of the ***most statistically grounded*** comparative assessments of hospice spending to date

2.3M

Population study included 2.3M Medicare-enrolled decedents; 500k Medicare FFS Hospice users

12 mos

Aggregated all spending and utilization of care services in 12 months prior to death

Frailty

Risk adjustment included a newly developed claims-based "frailty index"

NORC analyzed utilization and costs* of healthcare services and prescription drugs, in the period before and during/after the hospice stay

Non-Hospice User

Rx	Curative Medical Services and Prescription Drugs											
Utilization	ER	Hospital		Post Acute Care				ER	Hospital		ER	ER
Months	12	11	10	9	8	7	6	5	4	3	2	1

MM/DD/YYYY
Date of death

Decision to enroll in hospice

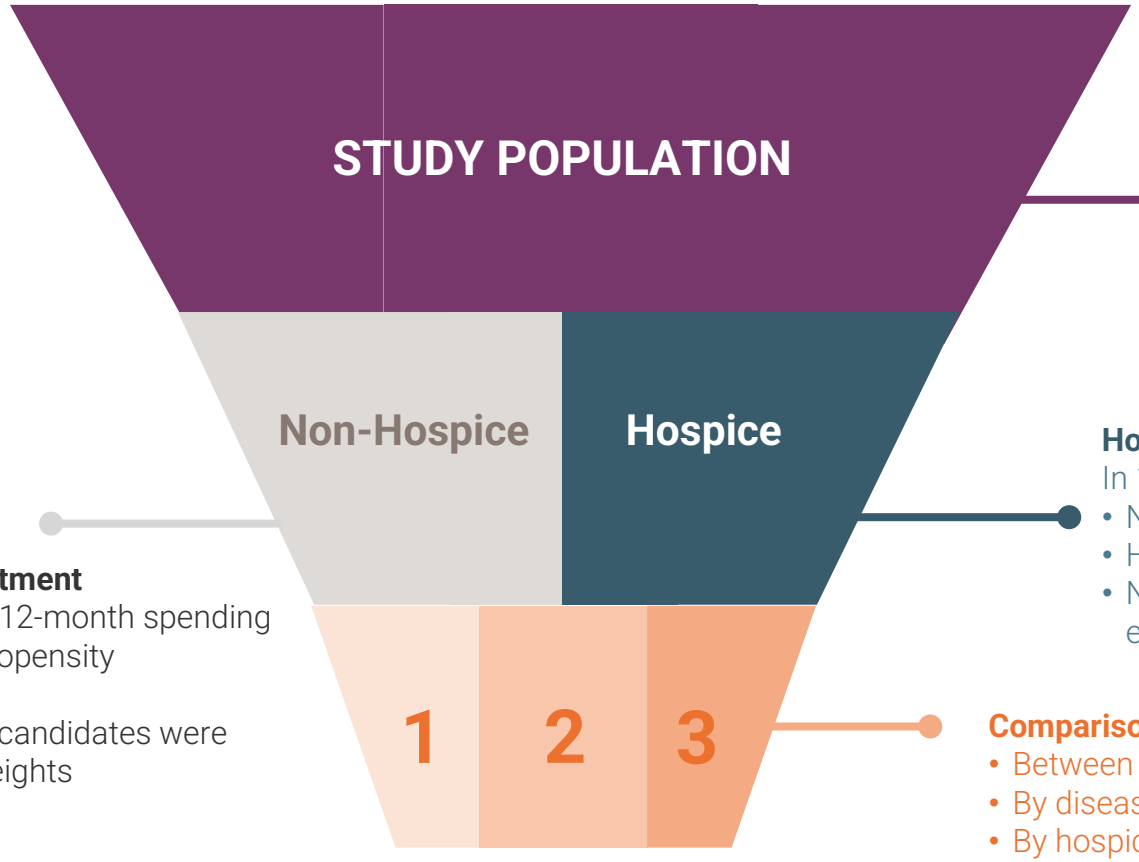
Hospice User

Rx	Curative Medical Services and Prescription Drugs							No Curative Care				
Utilization	ER	Hospital		Post Acute Care				ER	Hospice / Palliative Care			
Months	12	11	10	9	8	7	6	5	4	3	2	1

MM/DD/YYYY
Date of death

* Limited to Medicare FFS beneficiaries only

NORC applied administrative claims data to estimate the impact of hospice use on Medicare spending and utilization of care



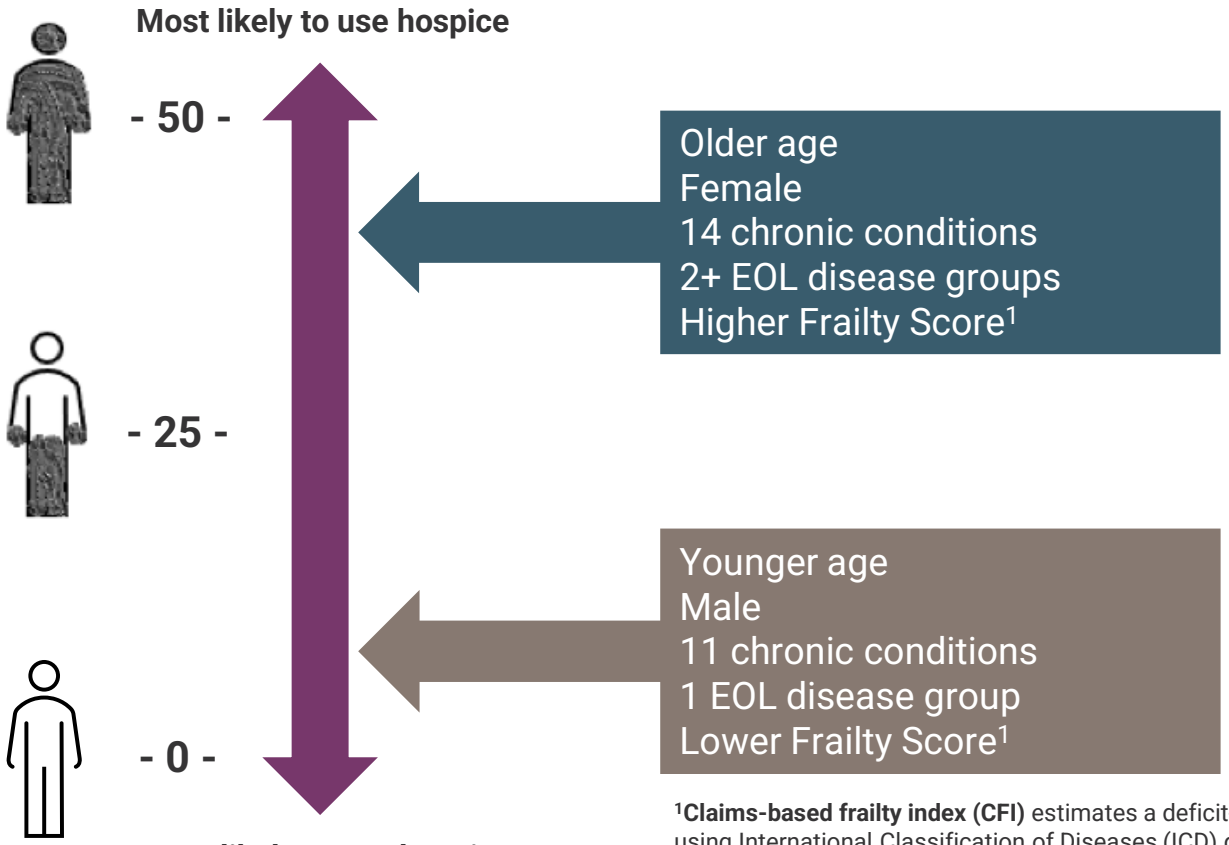
Total Medicare Population & Grouping
- All 2019 Medicare decedents
- Spending & utilization in 12 months prior to death
- Hospice users vs non-hospice users
- Decedents assigned into an end-of-life disease group

Hospice User Spending
In 12 months prior to death, spending broken out by:
- Non-concurrent – Pre-hospice spending
- Hospice – Hospice episode benefit spending
- Non-Hospice Concurrent – Spending during hospice episode, but outside of hospice benefit

Non-Hospice User Spending Adjustment
- Non-hospice users' 12-month spending adjusted through propensity weight modeling
- Most likely hospice candidates were assigned greater weights

Comparison of Average Total Cost of Care (TCOC)
- Between hospice & non-hospice
- By disease group
- By hospice episode length of stay buckets

Adjusting outcomes involves identifying an appropriate comparison group of decedents that "look" like hospice users



[1]**Claims-based frailty index (CFI)** estimates a deficit-accumulation frailty index using International Classification of Diseases (ICD) diagnosis codes, Current Procedural Terminology (CPT) codes, and Healthcare Common Procedure Coding System (HCPCS) codes in the prior 12 months in administrative claims data. *Kim DH, et al., dataverse.harvard.edu/dataverse/cfi*

Propensity weighting (IPTW) determines a Medicare decedent's likelihood of using hospice based on a relevant set of variables

The **weights** are used in our calculation of **average total cost of care (TCOC)** to account for how much of that person's experience should "count" within the comparison group

- In the last year of life, the total costs of care for Medicare beneficiaries who used hospice was 3.1 percent lower than the adjusted spending of beneficiaries who did not use hospice. This relatively modest reduction in adjusted Medicare spending translates to an estimated $3.5 billion less in Medicare outlays for beneficiaries in their last year of life.

- Examination of Medicare spending in policy-relevant length of stay groupings (0-14 days, 15-30, 31-60, etc.) found that total Medicare spending in the 12 months preceding death is consistently lower for beneficiaries with LOS of 15 days or more, compared to beneficiaries who did not use hospice, regardless of disease group.

- Furthermore, analyses to find the specific day when Medicare spending for non-hospice users equals spending for hospice users—revealed the "break-even" point at day 10. Starting on day 11 (prior to death), hospice users' Medicare spending is lower compared to spending for non-hospice users. In other words, earlier enrollment in hospice—and longer lengths of stay—may reduce Medicare spending.

- Hospice stays of six months or more add value to Medicare. For those who spent at least 6 months in hospice in the last year of their lives, spending was 11 percent lower than the adjusted spending of beneficiaries who did not use hospice. When sorted by disease group, spending ranged from being 4 percent lower for neurodegenerative disease to 25 percent lower for chronic kidney disease/end stage renal disease (CKD/ESRD).

- Hospice care benefits patients, family members, and caregivers. From increased satisfaction and quality of life, to improved pain control, to reduced physical and emotional distress, and reduced prolonged grief and other emotional distress, hospice offers multiple benefits to patient, families, and caregivers.

NORC's analysis of the value of hospice has produced key findings centered around the following themes

Overall value of hospice

Cost drivers and actionable opportunities

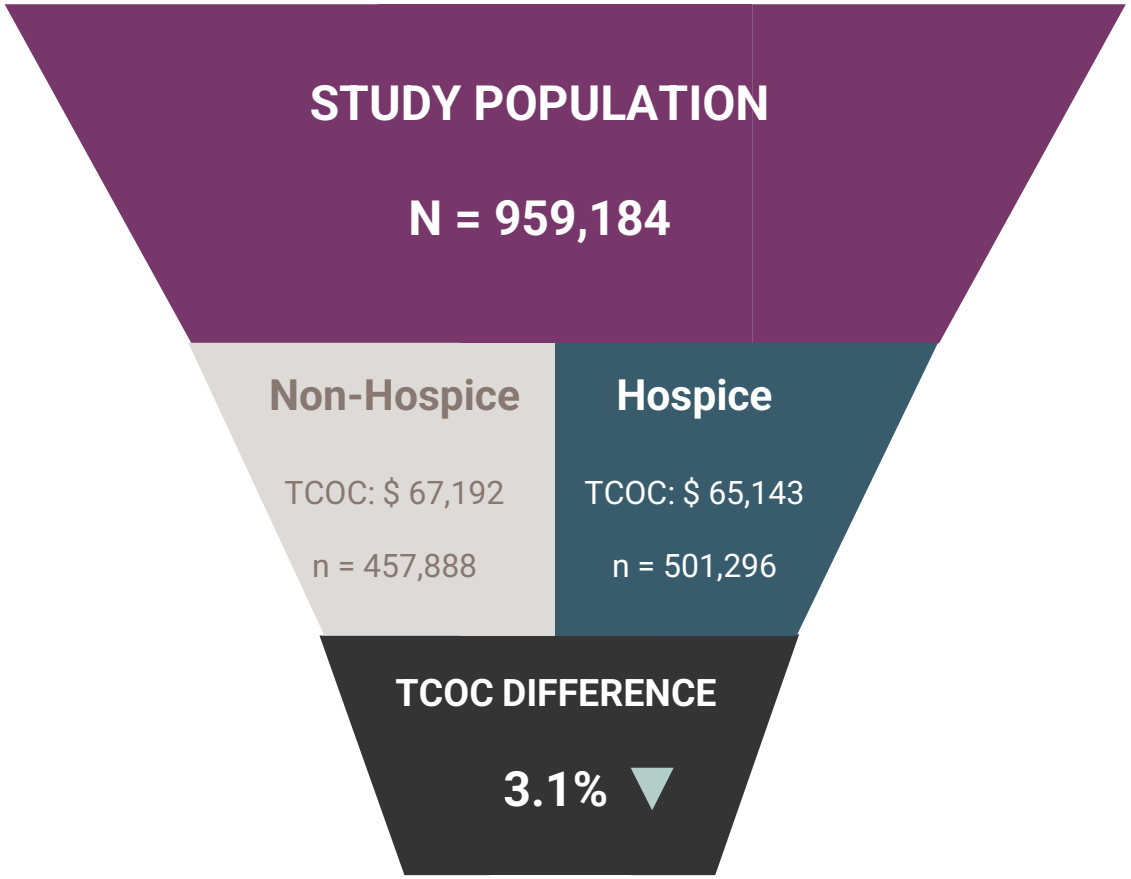
Short Stays: <15-day hospice LOS Opportunity

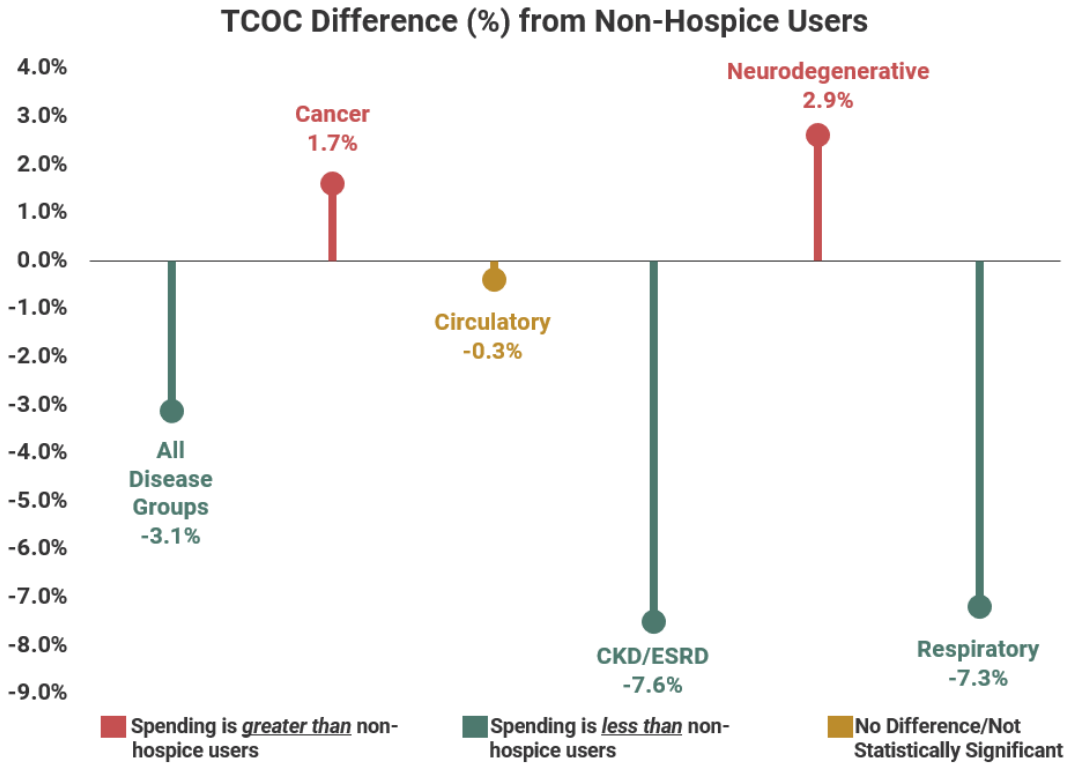
Long Stays: 181+ day hospice value

Patient, family, caregiver experience

*The average hospice users' total cost of care was **3.1% lower** than non-hospice users over the last 12 months of life. This relatively modest reduction in Medicare spending translates to an estimated **$3.5 billion less in Medicare outlays** for beneficiaries in their last 12 months of life*

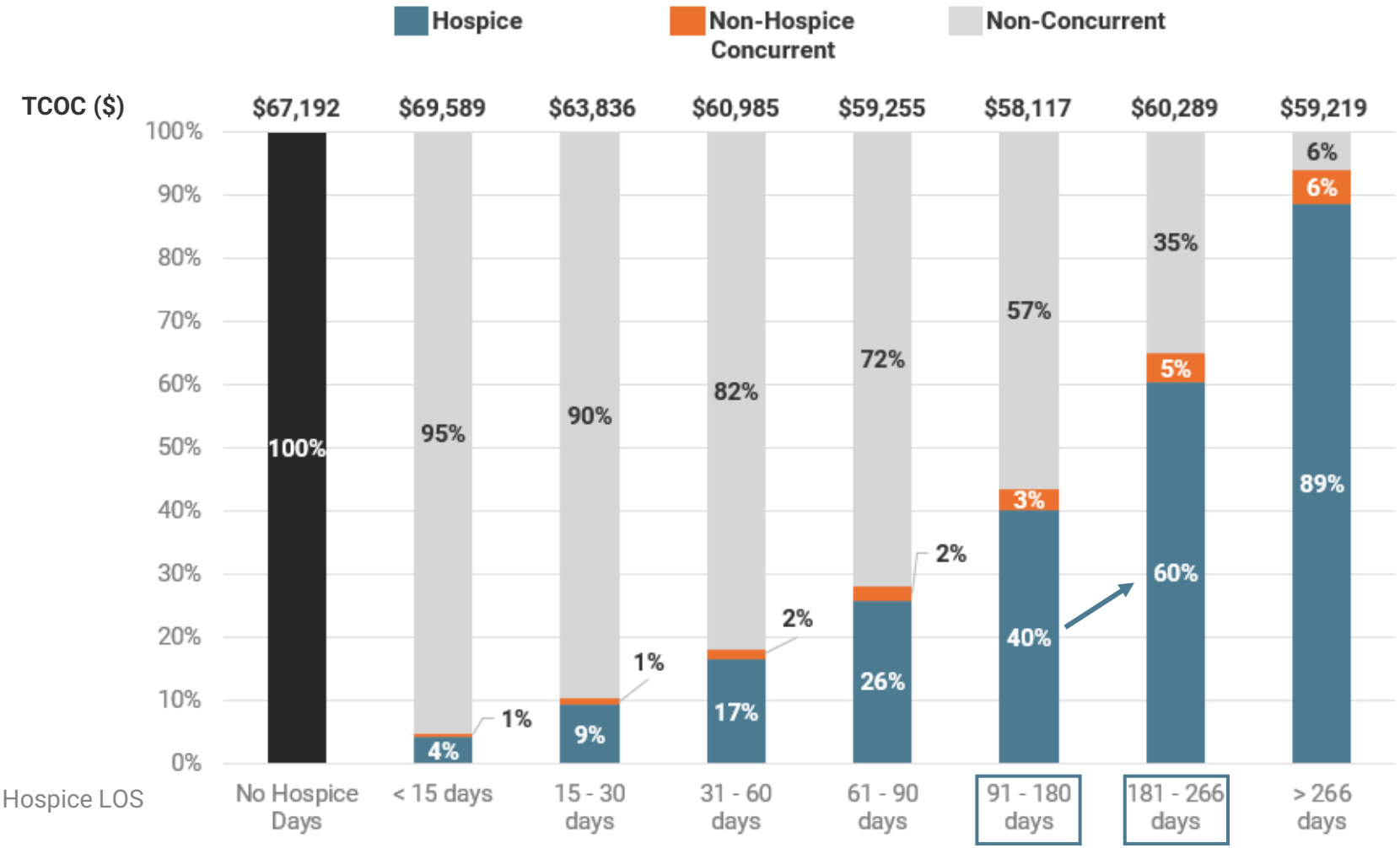
Study found that hospice showed the most value for Medicare beneficiaries with CKD/ESRD or Respiratory conditions—lower relative value for Cancer and Neurodegenerative conditions





*For **90%** of hospice stays, hospice spending is **less than HALF** of total costs of care*

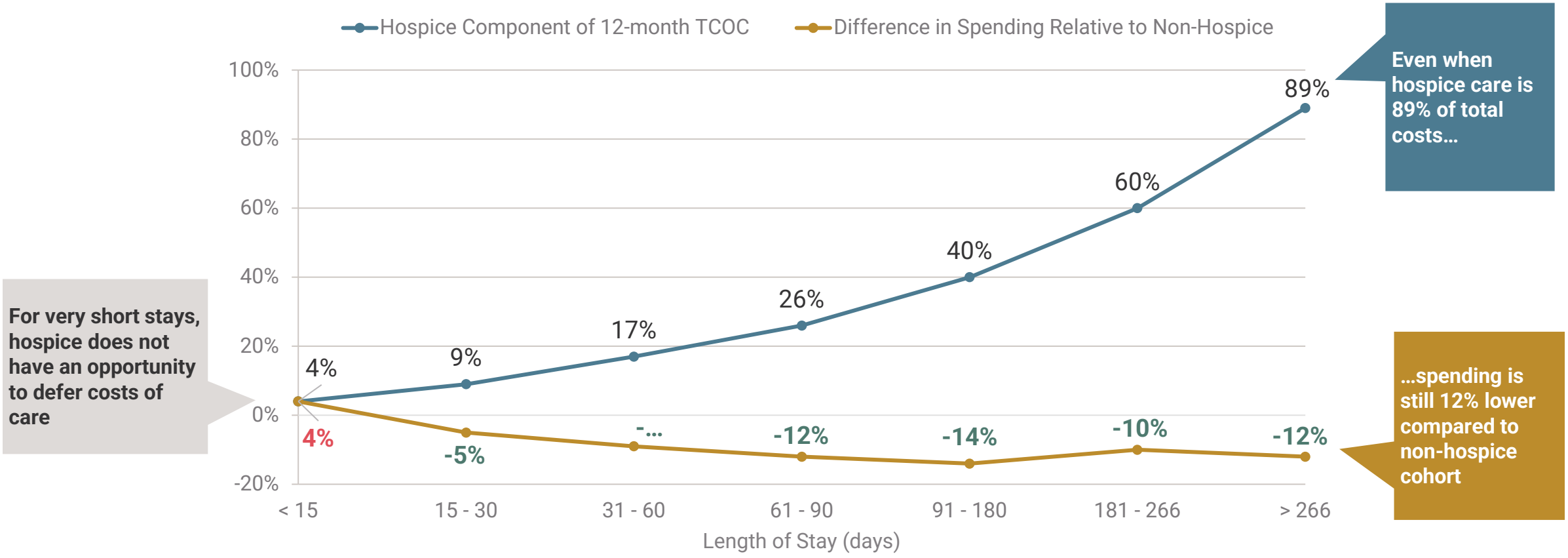
ALL Disease Groups – Spending Breakdown by Hospice LOS



Spending Relative to Non-Hospice Cohort	-	4%	-5%	-9%	-12%	-14%	-10%	-12%
Beneficiary Count (n)	457,888	248,217	69,444	56,600	29,556	42,202	19,015	36,262

Spending outside the hospice benefit drives the greatest financial impact to Medicare costs—for hospice and non-hospice users

Over the last 12 months of life, as hospice use increases, total spending decreases relative to non-hospice users



Opportunities to derive greater hospice value are on the short and long stay sides of the episode distribution

Disease Group	No Hospice Days	Hospice Episode LOS						
		< 15 Days	15 – 30	31 – 60	61 – 90	91 – 180	181 – 266	> 266
ALL	$67,192	4%	-5%	-9%	-12%	-14%	-10%	-12%
Circulatory	$66,041	7%	-4%	-8%	-10%	-11%	-8%	-10%
Cancer	$76,625	10%	-1%	-6%	-9%	-13%	-14%	-20%
Neuro-degenerative	$61,004	12%	-6%	-9%	-11%	-11%	-5%	-4%
Respiratory	$77,892	-2%	-11%	-14%	-17%	-19%	-18%	-22%
CKD/ESRD	$82,781	1%	-14%	-21%	-24%	-24%	-23%	-27%

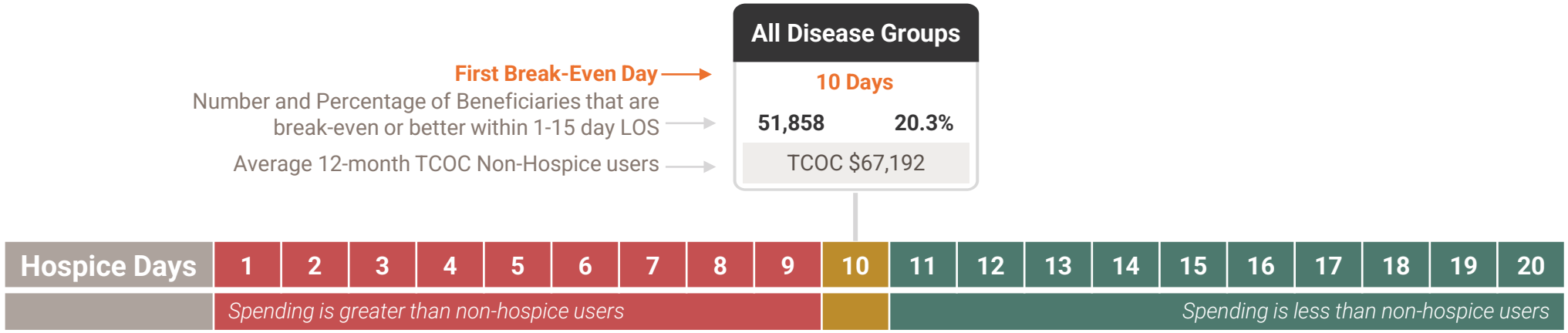
Spending is *greater than* non-hospice users

Spending is *less than* non-hospice users

No Difference / Not Statistically Significant

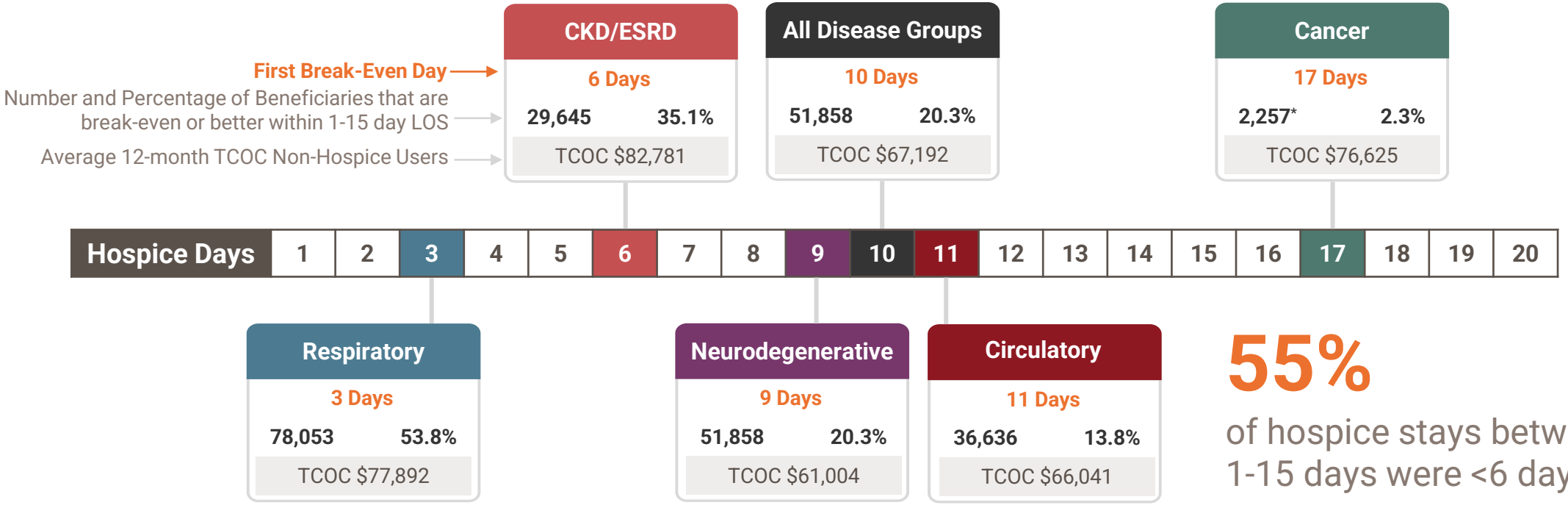
Earlier enrollment *into hospice may generate Medicare* ***savings***

Hospice stays longer than 10 days are associated with greater value to Medicare, potentially deferring alternative high-cost EOL treatment



*Total beneficiary count includes LOS between 1-17, due to breakeven at 17 days

Hospice stays longer than 10 days are associated with greater value to Medicare, potentially deferring alternative high-cost EOL treatment



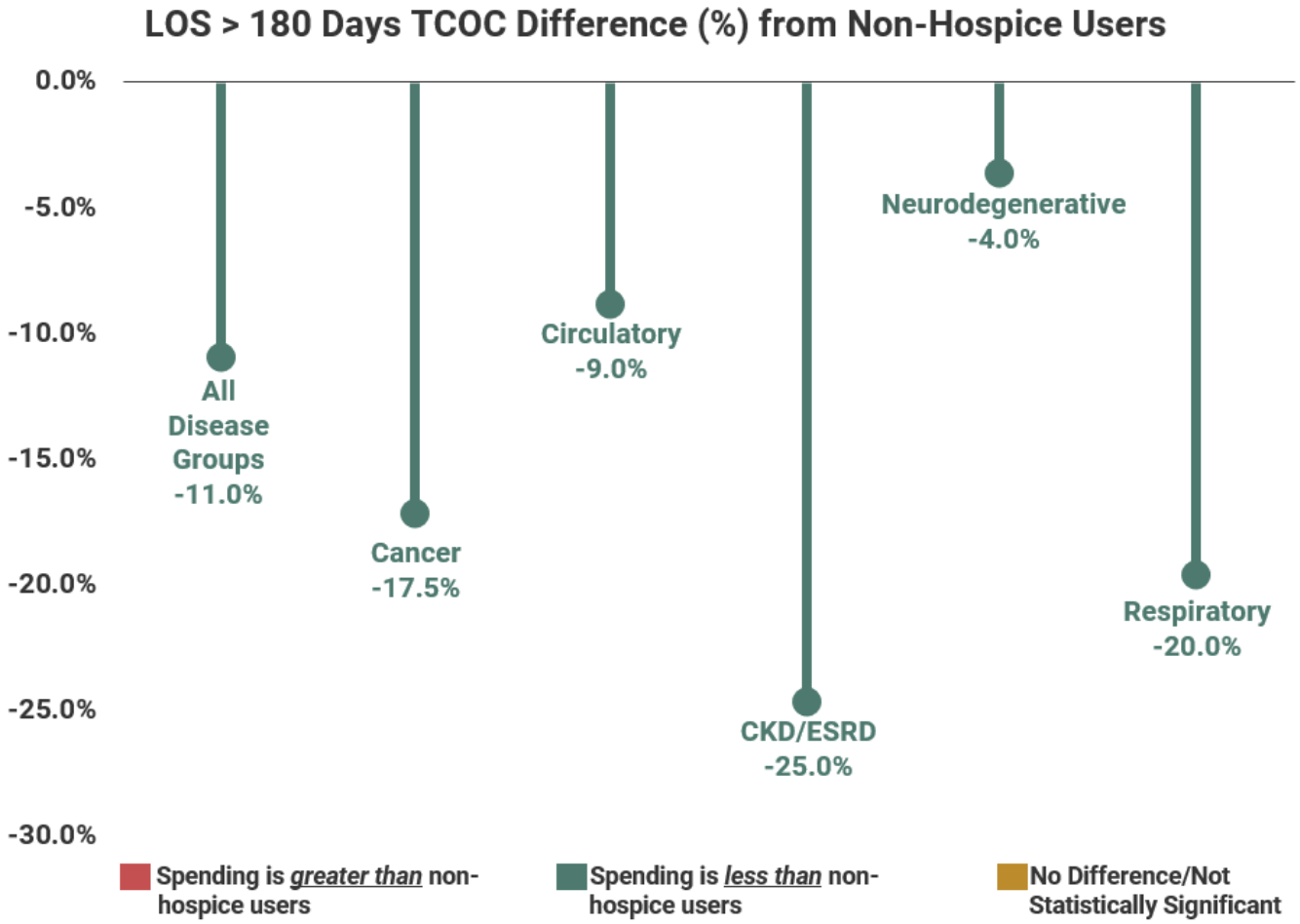
55%

of hospice stays between 1-15 days were <6 days

**Total beneficiary count includes LOS between 1-17, due to break-even at 17 days*

*Total Medicare spending for hospice users with a **LOS > 6 months is still lower than non-hospice decedents**, even for Neurodegenerative conditions*

NORC's analysis found that hospice spending for all-disease groups is 11% lower compared to non-hospice users for stays exceeding 6 months



*"**Greater utilization of hospice** during the last 6 months of life is associated with **improved patient experience** and **clinical outcomes**"*

- Kleinpell et al. 2019

Published literature and research reinforce the experiential value that hospice provides to patients, families, and caregivers

Less physical and emotional distress and better quality of life at EoL*

Families remarked patients received **just the right amount** of **pain medicine** and **help with dyspnea**

Families more often reported patients' **EoL wishes were followed** and rated **quality of EoL care as excellent**

Family

Patients

Families of patients receiving **>30 days of hospice** reported the **most positive EoL outcomes**

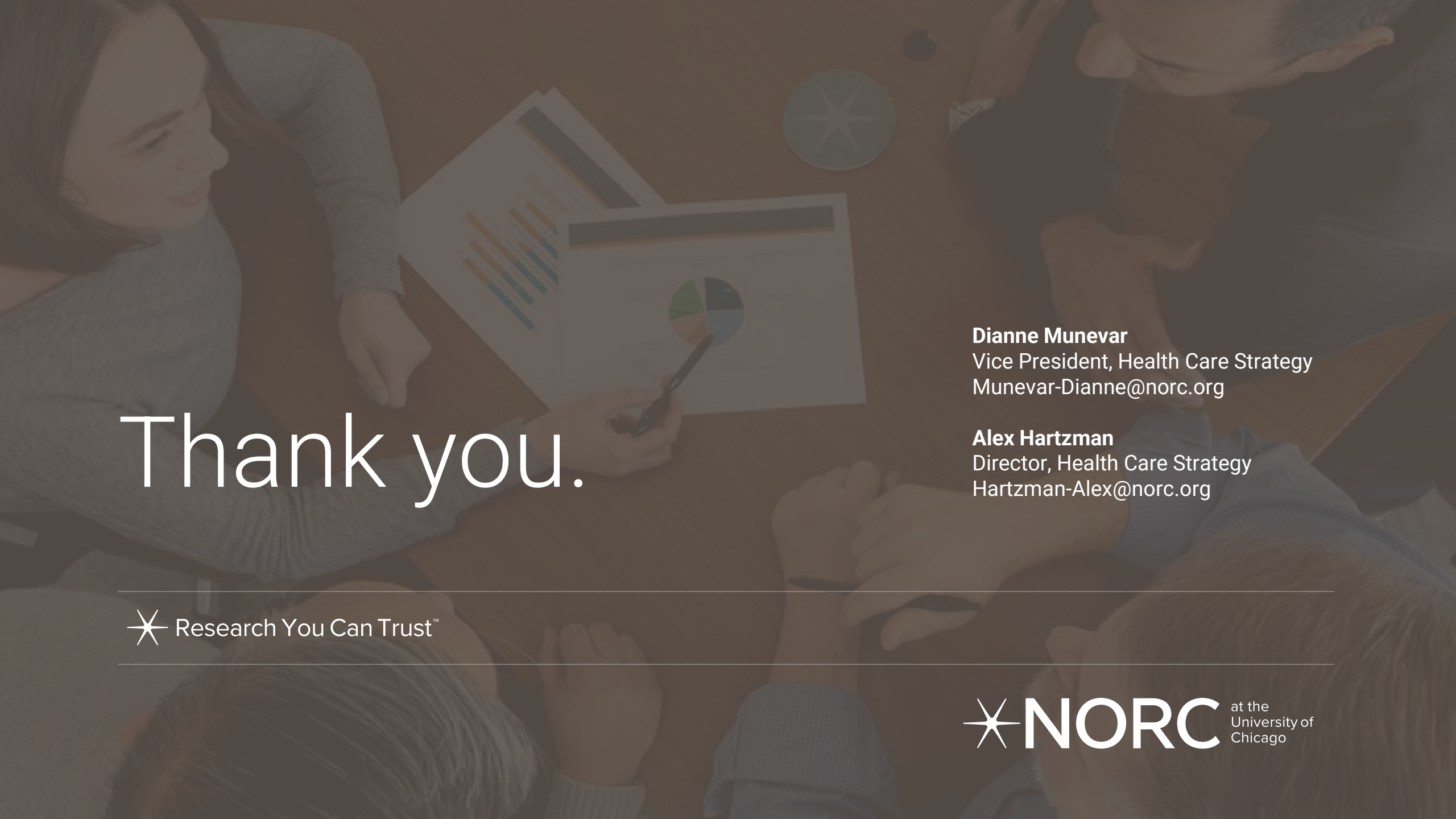
Home hospice **reduced risk** for **prolonged grief disorder*****

Hospice admission in last 6 months of life correlated with **increases in patient satisfaction** and **better pain control, reductions in hospital days**

Less risk for PTSD with home hospice deaths**

Caregivers

*Cancer patients, when comparing death in hospital to death in hospice **Compared to death in ICU ***Compared to hospital deaths



Thank you.

Dianne Munevar
Vice President, Health Care Strategy
Munevar-Dianne@norc.org

Alex Hartzman
Director, Health Care Strategy
Hartzman-Alex@norc.org

Research You Can Trust™

NORC at the University of Chicago