End of Life Care in a Value-based World

Chair: Mark Angelo, Tandigm Health

Penn Medicine

End-of-Life in a Value-Based World

UNDERSTAND PALLIATIVE CARE TO IMPROVE OUTCOMES, QUALITY, AND EXPENDITURES FOR YOUR ACO

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NAACOS Spring Conference 2026

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Medical Director, BJC Accountable Care Organization

Background

- Advance care planning is critically important for improving quality of care, increasing patient/family satisfaction, and reducing unnecessary costs

- ACP and palliative care are significantly underutilized in nearly every health system in the US

- Major barriers:
  - Accurate identification of high-risk patients
  - Engaging providers to participate in goals of care discussions

Right patient – Right time – Right provider

- Requiring ACP for every patient at every encounter is not helpful or realistic

- Invest time and energy into finding the right moment to intervene; match patient acuity with intervention resources

- Implementation and usability are key

Then What?

- Outpatient and tele palliative care
- Home-based palliative care
- Alternative triage
- Hospital at home
- Hospice

Measuring Success

- ACP documentation in EMR (notes and patient forms)
- ACP billing
- Code status orders
- Palliative care utilization
- (Adequate) hospice utilization
- TCOC near end of life
- Site of death

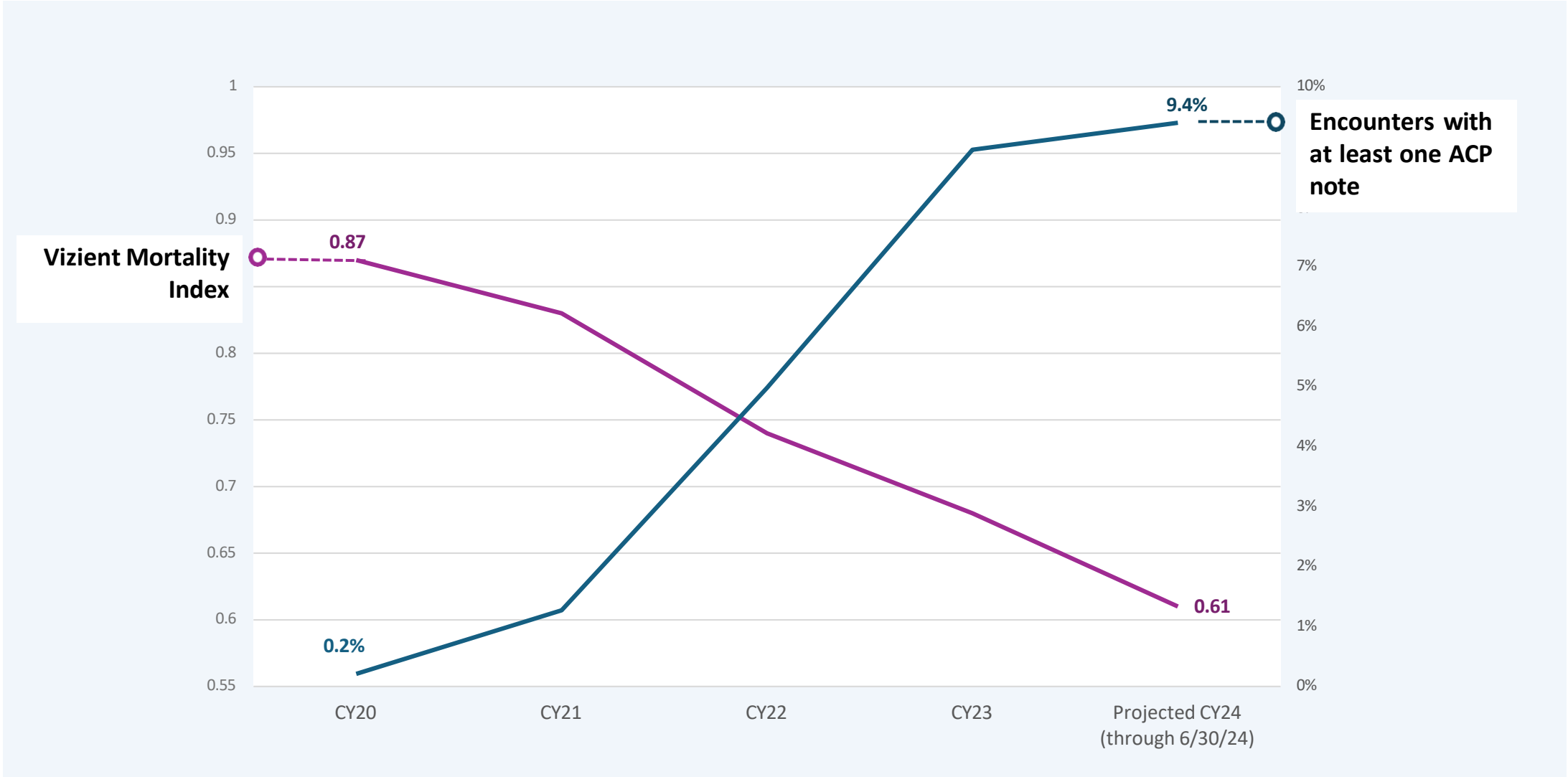
Our Approach

- Machine learning algorithm to identify high risk patients without ACP
- Semi automated opt-out messages to providers
- Small group, in person trainings with standardized patients
- Significant focus on usability / implementation

Our Approach

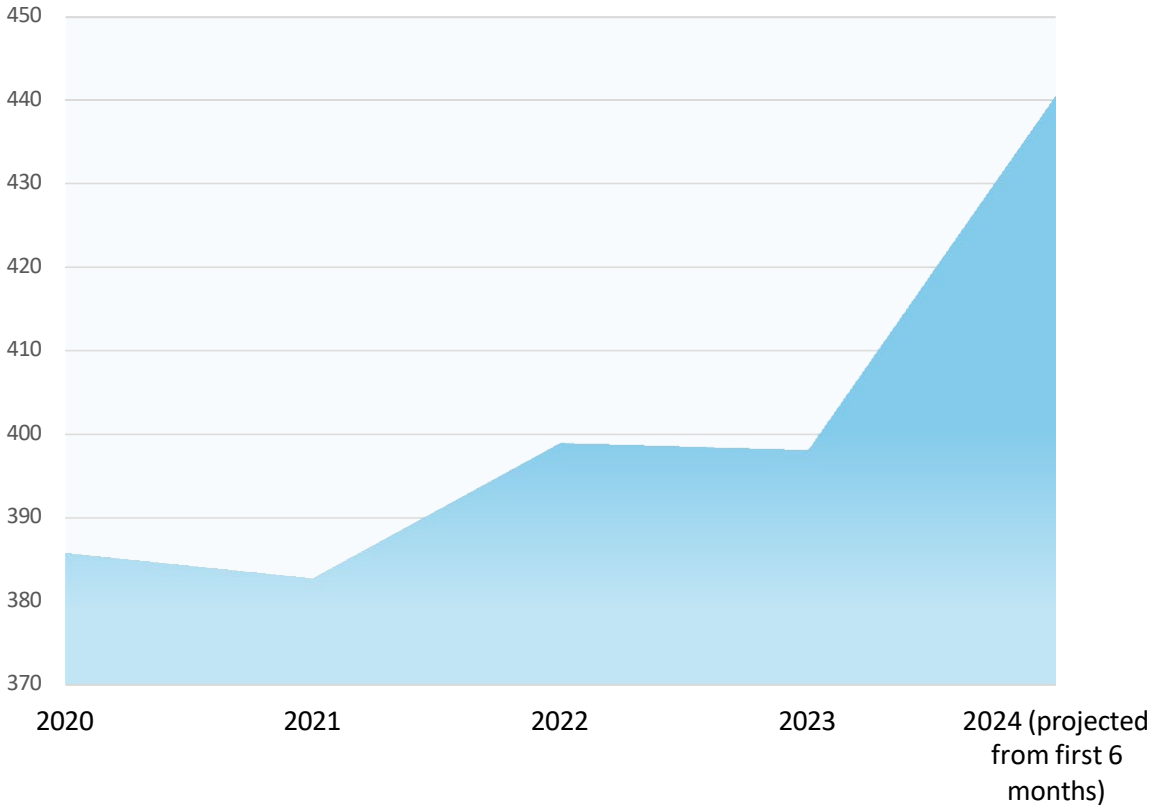
- Phase 1 : Hospital floor
- Phase 2 : ICU
- Phase 3: Primary Care
- Phase 4: Home Health
- Phase 5: Specialty care

System Wide Results

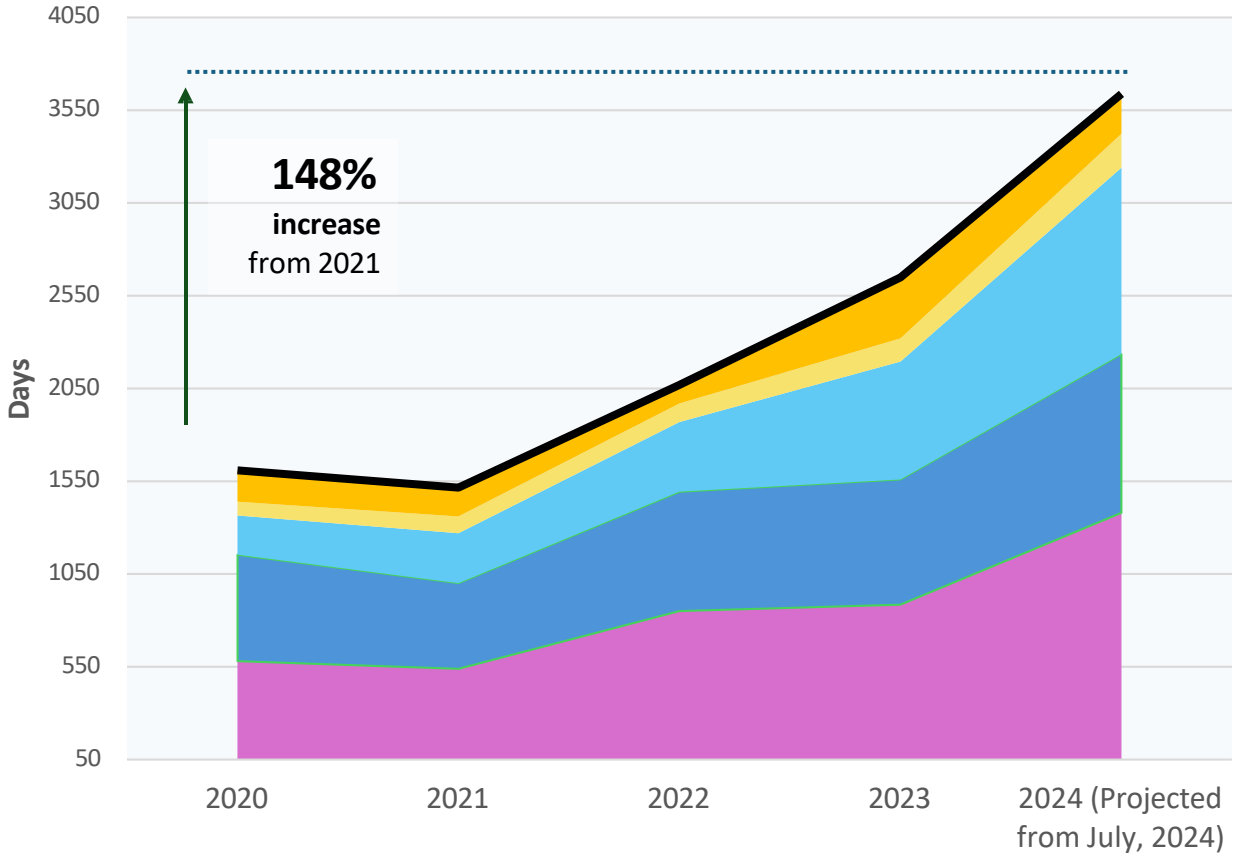


System Wide Results

Average Daily Hospice Census



General Inpatient Hospice (GIP) Days



Questions?

BJC HealthCare

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How Duke Health is using design thinking to promote goal-concordant care

David Casarett, co-director, .carelab

Jessica Ma, co-director, .carelab

Are patients getting care that is consistent with their goals?

One example: Patients receiving chemotherapy

Journal of Clinical Oncology®
An American Society of Clinical Oncology Journal

J Clin Oncol. 2009 Feb 20; 27(6): 953–959.
Published online 2008 Dec 29. doi: 10.1200/JCO.2008.17.8079

PMCID: PMC2738432
PMID: 19114698

The Terrible Choice: Re-Evaluating Hospice Eligibility Criteria for Cancer

David J. Casarett, Jessica M. Fishman, Hien L. Lu, Peter J. O'Dwyer, Frances K. Barg, Mary D. Naylor, and David A. Asch

12% of patients with advanced, incurable cancer wouldn't want chemotherapy even if it would extend their lives by at least 1 year

Q: Are patients getting care that is consistent with their goals?

A: Most of the time, but not always

All Duke Health patients should have a goals of care conversation in the last 6 months of life

How???

Design thinking

Psychology

Social psychology

Implementation science

Education

"Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for [business] success." –Tim Brown

Sociology

Human factors

Anthropology

Engineering

3 ways we used design thinking to promote more goal-concordant care

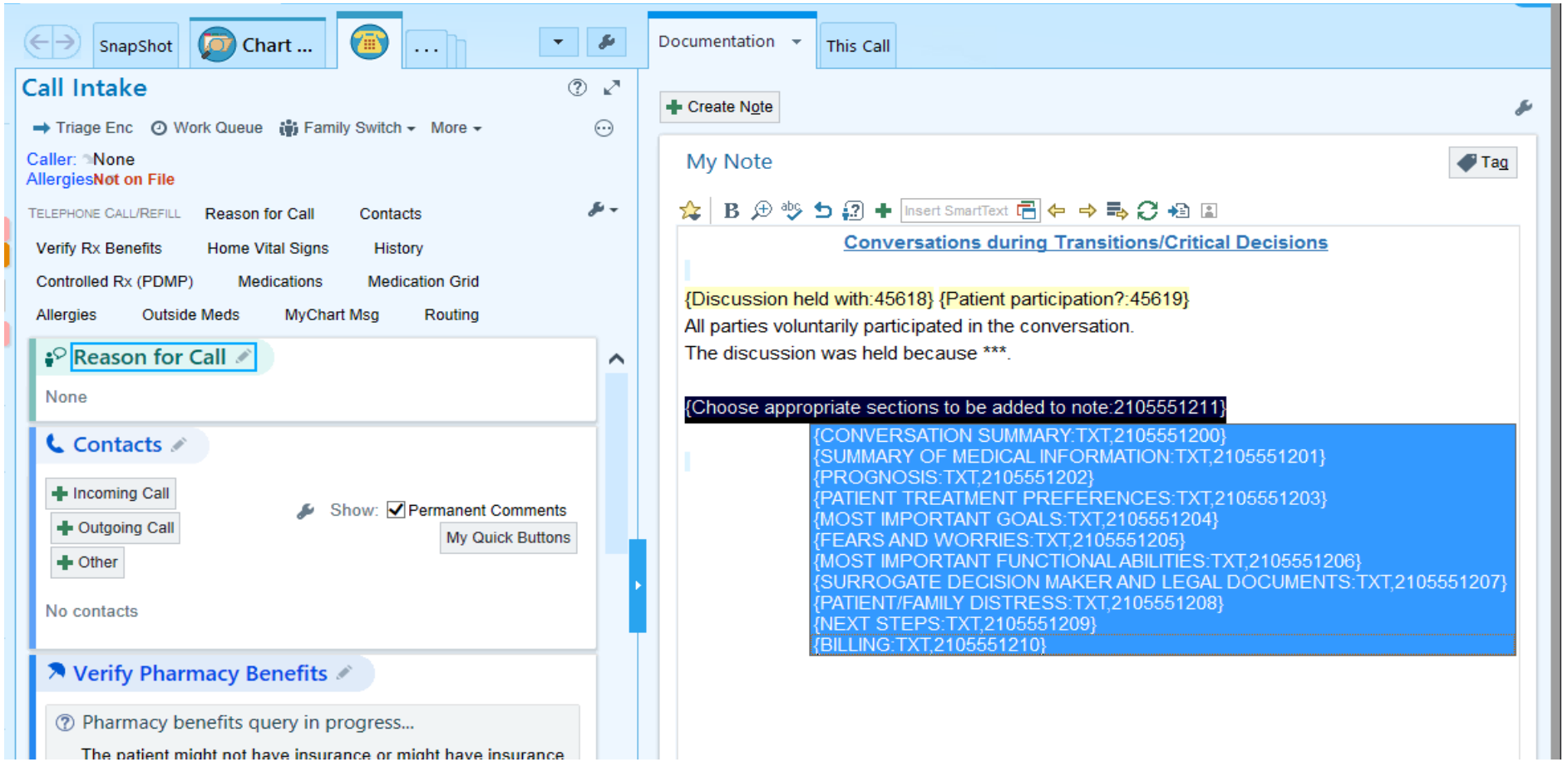
1) We tried to provide real-time training (putting knowledge “in the world”)

Good designs put training “in the world”

TurboTax

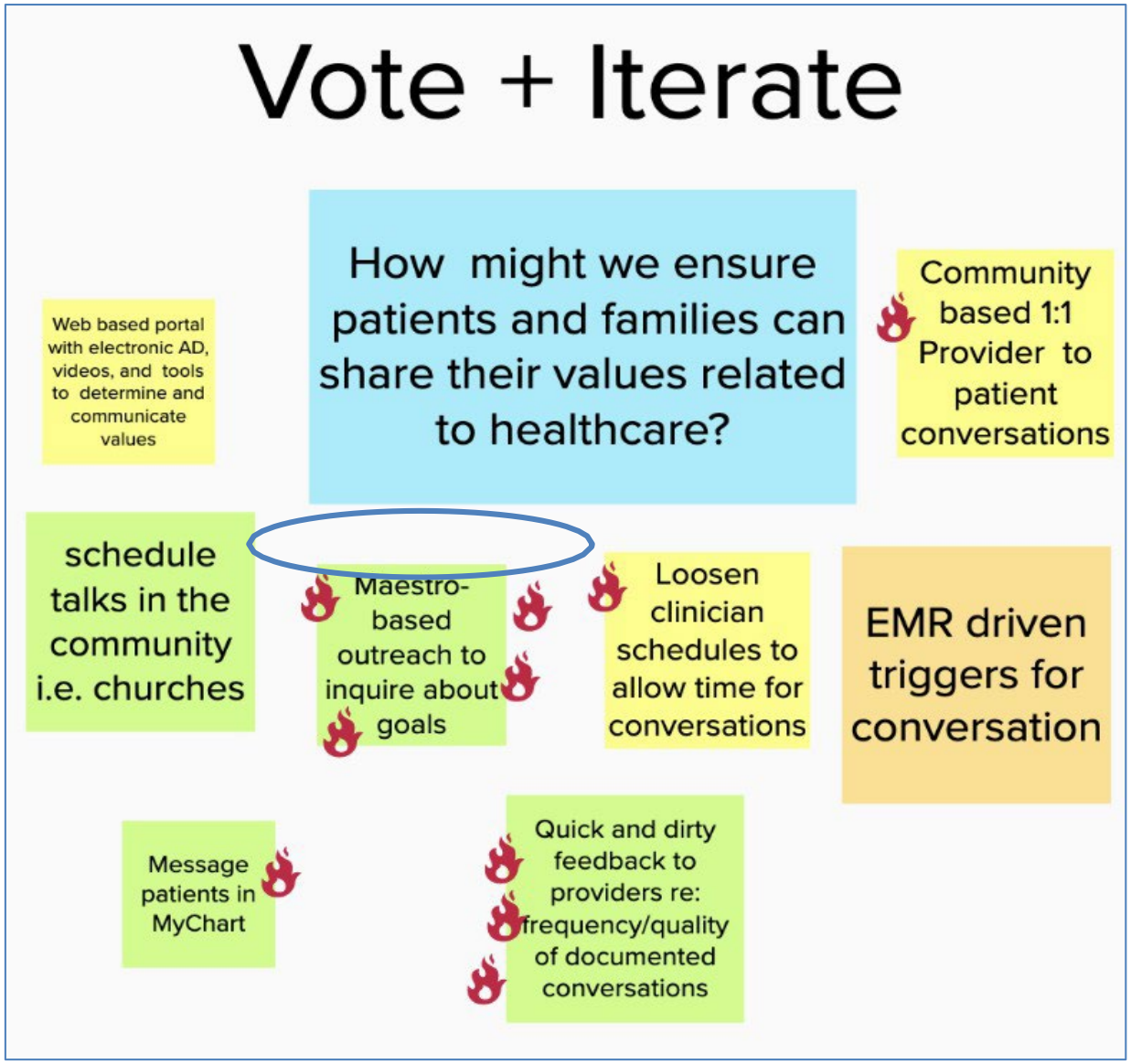
Duke GoC templates

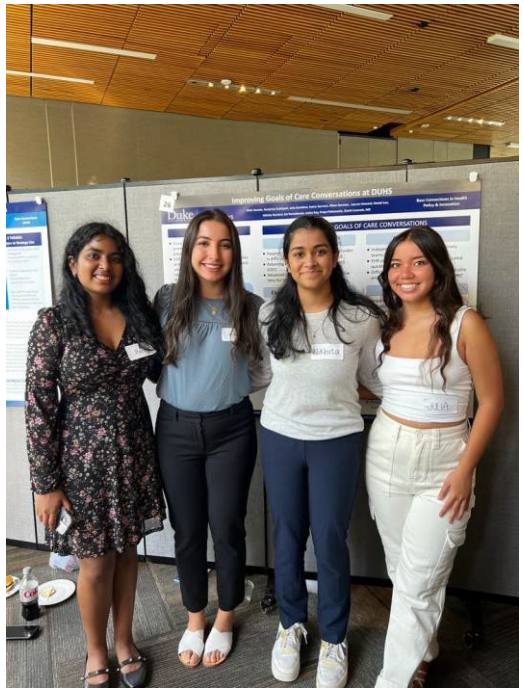
.goalscritical/.goalsuniveral/.goalspediatric



2) We crowdsourced ideas and solutions

Mural listening sessions



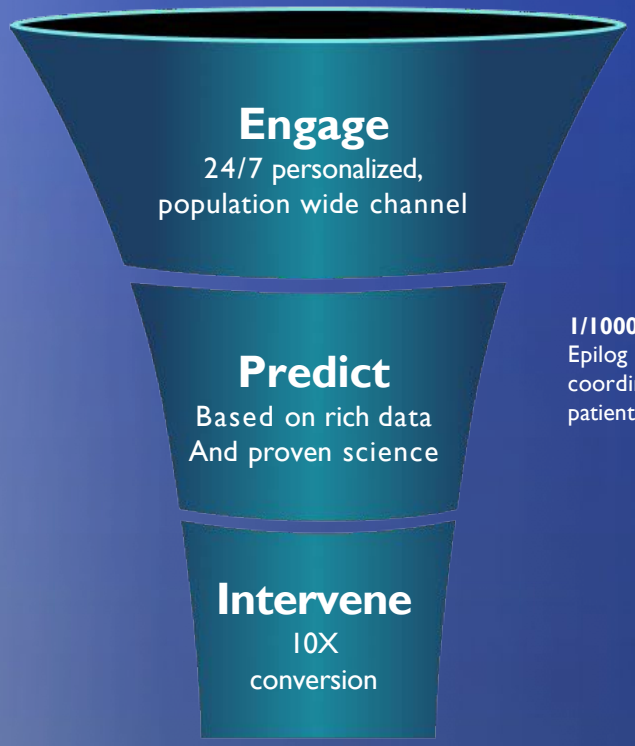


Episodic based care

1/250
Traditional care coordination to patient ratio

VS

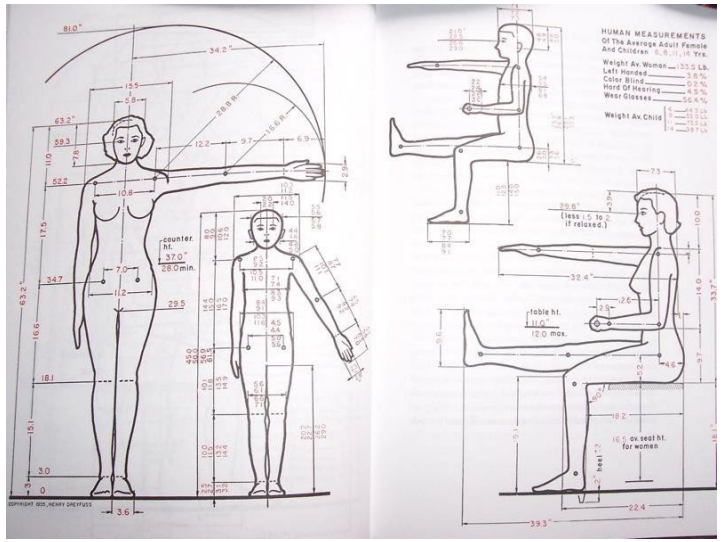
Continuous care



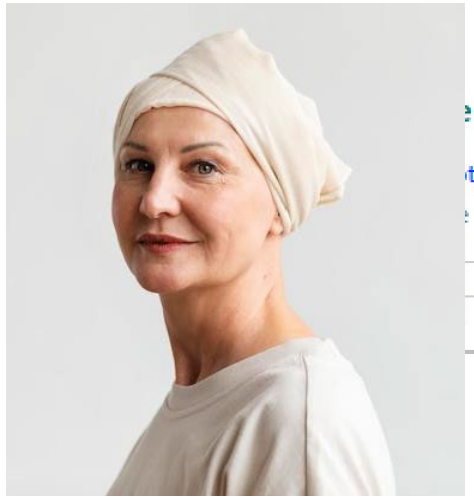
1/1000
Epilog care coordination to patient ratio

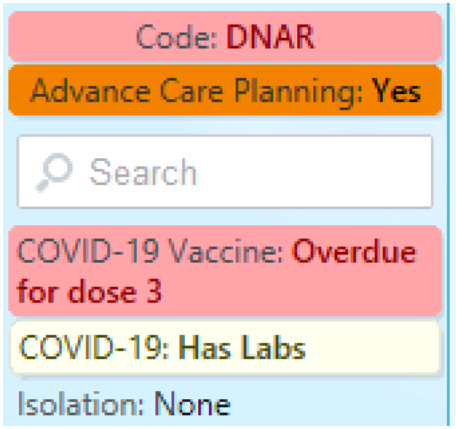
3) We designed our workflow and IT infrastructure for a persona

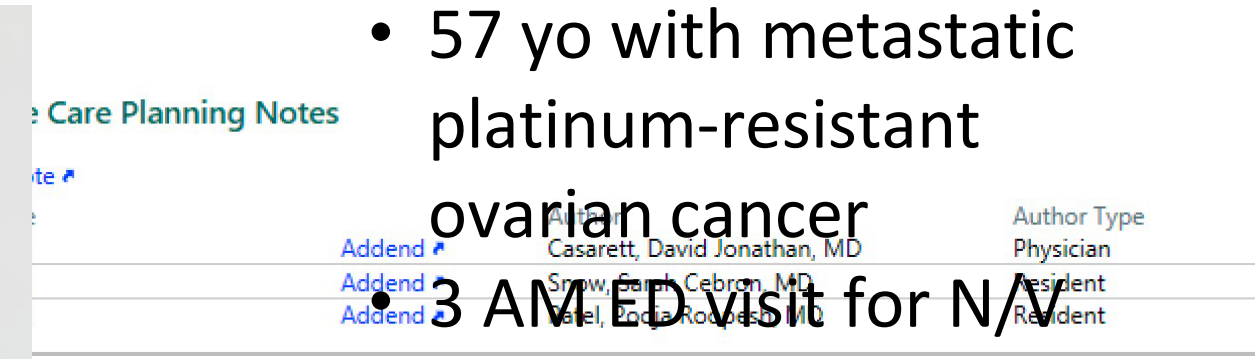
Design for a persona



Our persona: Gina Olivia Carter (GoC)





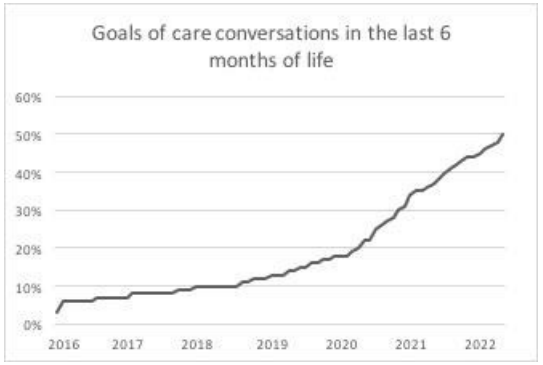


- 57 yo with metastatic platinum-resistant ovarian cancer
- 3 AM ED visit for N/V, abdominal pain
- Febrile, hypotensive, free air on abd XR

How well have we done?

Progress! (A lot of progress)

- Progress:
  - >60% of Duke Health patients have a GoC conversation in the last 6 months of life
  - Similar rates across Black and white patients
  - Robust data/reporting system tracks GoC conversations



NEJM Catalyst | Innovations in Care Delivery

CASE STUDY

Goal-Concordant Care: End-of-Life Planning Conversations for All Seriously Ill Patients

And more thanks

End of Life Spending among MSSP ACOs

Tara Lagu, MD, MPH, RPh
NAACOs Annual Meeting
April 24, 2026

Disclosures and Acknowledgements

- **Disclosures:** Dr. Tara Lagu is a full-time employee of Alliant Insurance Service's Value-Based Healthcare Solutions Team (2024-present)
- Previously, Dr. Lagu was a recipient of awards from the National Institutes of Health (National Institutes of Health under Award R01 HL139985-01A1 and 1R01HL146884-01
- Dr. Lagu would like to acknowledge her collaborators in this work, :Siyuan Huang, Victoria Yang, Dr. Jun Wang and Vince Micucci

Agenda

1. End of life: Opportunity and Controversy
2. Methods
3. State-level variation in EOL hospitalization, skilled nursing days (SNF), inpatient rehab (IRF)
4. ACO “Scorecards:” Improve EOL care and increase shared savings
5. Limitations
6. Takeaways

EOL Spending in US: Opportunity and Controversy

End of Life Spending

Debate Around End-of-Life (EOL) Spending

- For years, it has been argued that there is “wasteful spending” in the last 12-36 months of life in the US
  - 12 percent of overall health care costs in the last 12 months of life
  - 25% overall cost spent on last three years of life
- Reducing EOL spend is of particular interest to MSSP ACOs

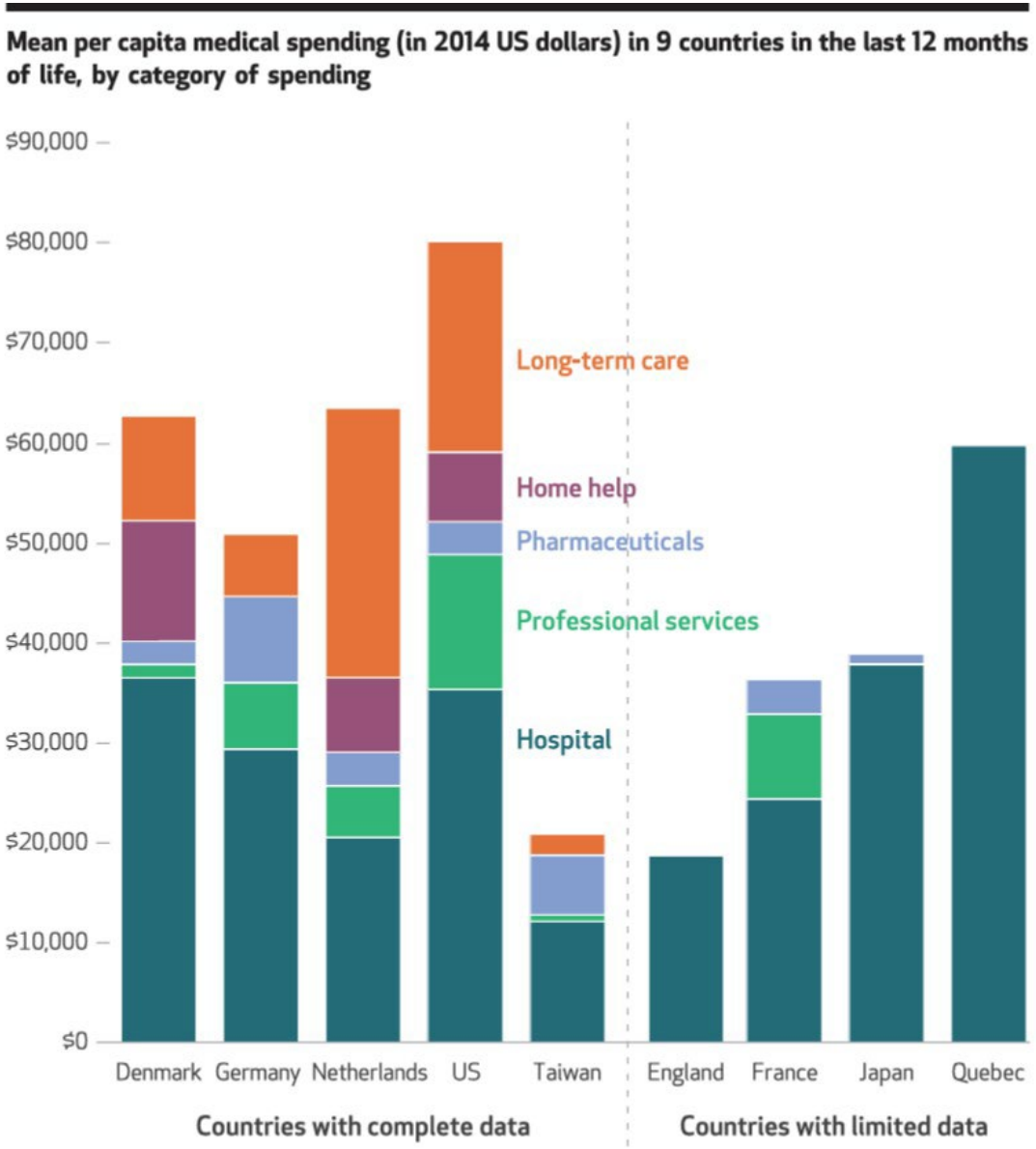
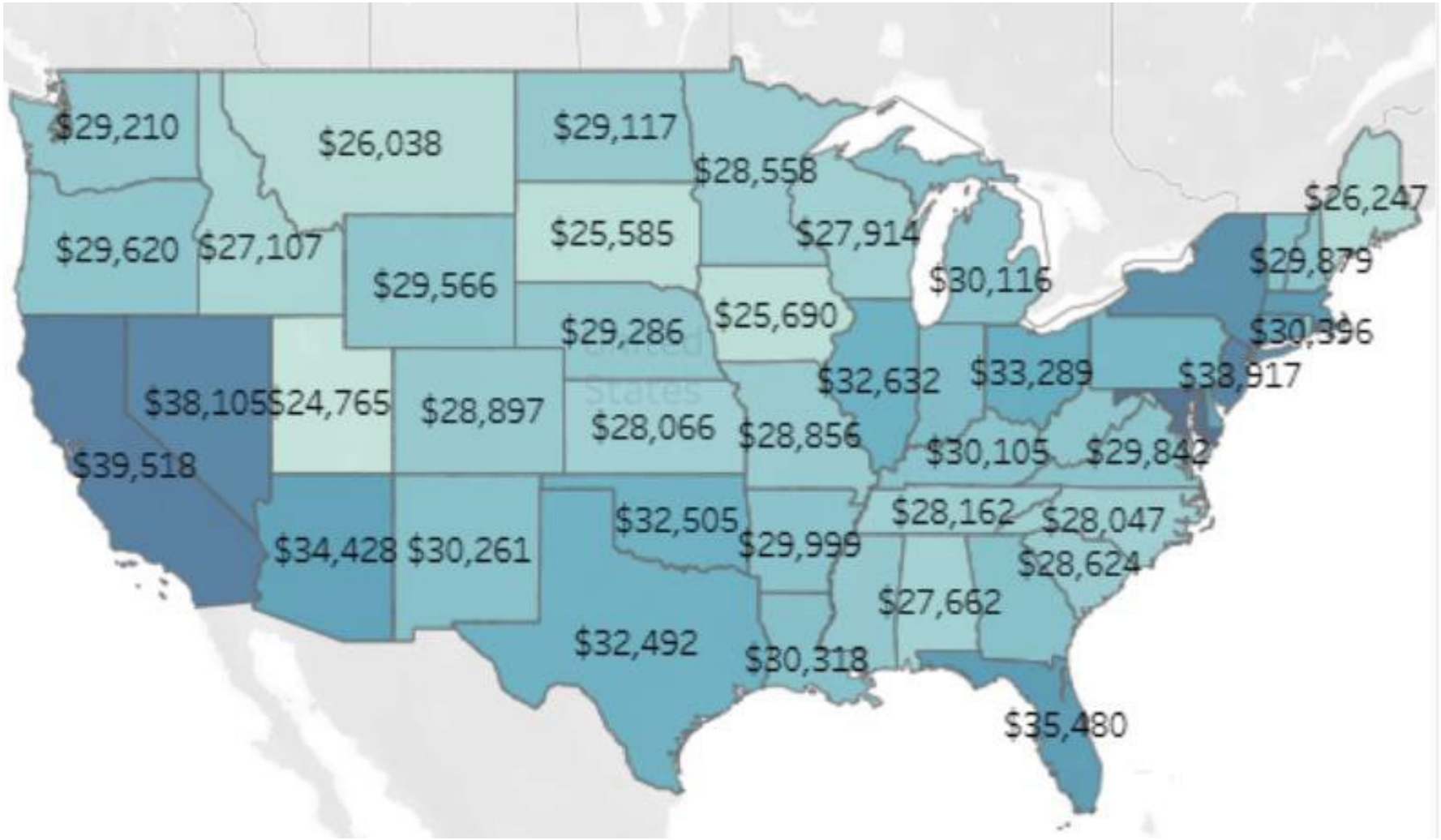


Figure French EB, McCauley J, Aragon M, et al. End-of-life medical spending in last twelve months of life is lower than previously reported. Health Aff. 2017;36(7):1211-1217.

State Average MSSP EOL Medicare Cost

Report Period 2024-2025



- EOL spending variation between states, regions, ACOs, physicians
- **Standardized EOL costs by state:** Higher spending are CA and NV; among the lowest, next door, Utah

Methods

1. Using the **Virtual Data Resource Center (VRDC) FFS dataset**, we limited our sample to:
   - Beneficiaries assigned to MSSP ACOs (VRDC) roster between January 1, 2024-end of Q3 2025
   - Beneficiaries who were decedents Q2 2024-Q3 2025 (to allow for 90-day lookback)

2. **Calculated State-level standardized costs:**
   - State average spending in the last 90 days x (National Average PMPM / Average County PMPM)

3. **Calculated ACO Standardized costs:**
   - ACO average spending in the last 90 days x (National Average PMPM /Average county PMPM)

4. County PMPM drawn from the MA rate book

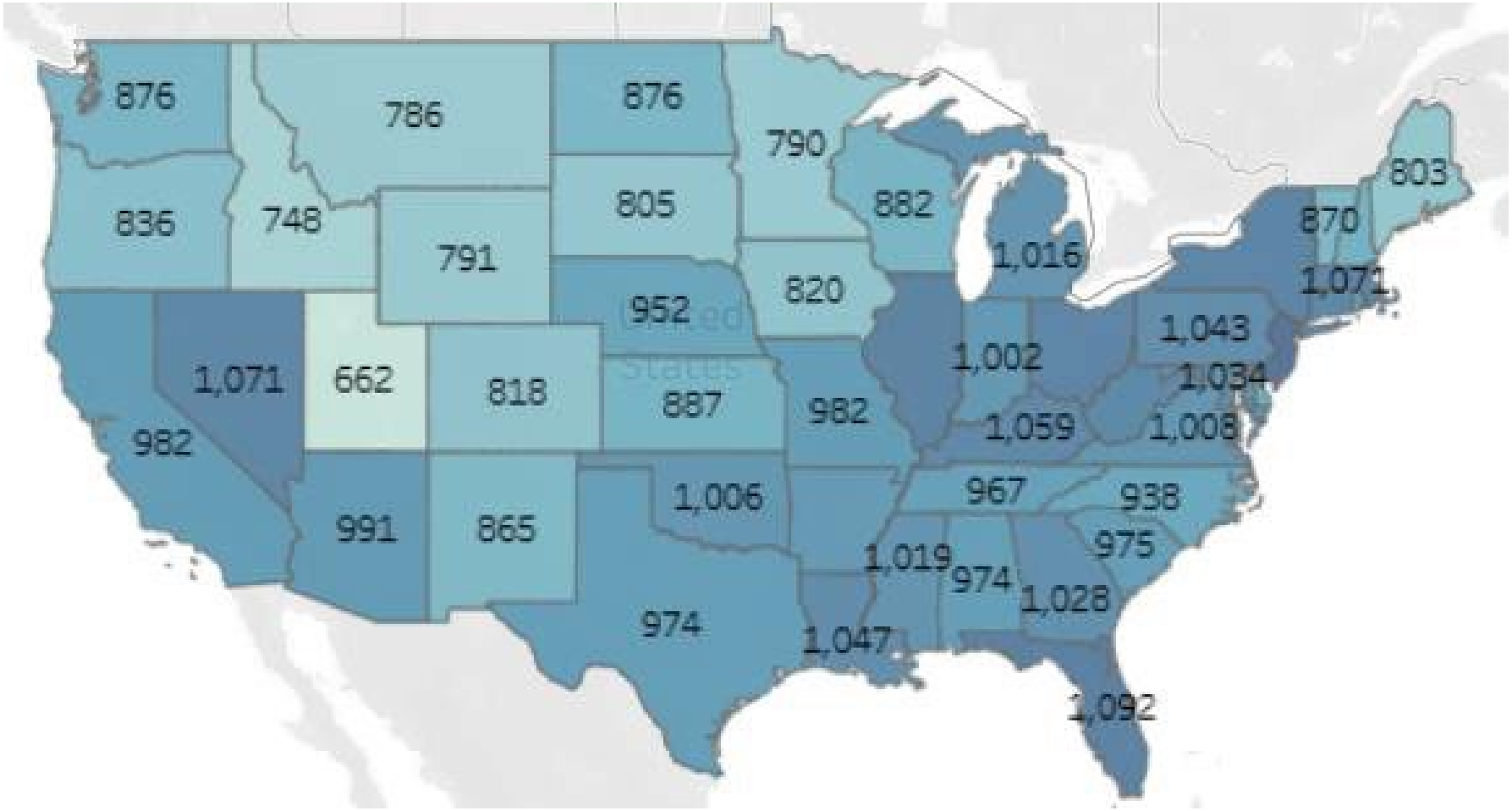
5. Cell sizes less than 11 replaced with the number “5” or, when annualized, “3”

6. Did not attempt further risk adjustment (e.g. risk score) as beneficiaries were all in the last 90 days

State-Level and ACO Variation in EOL Spending

Acute Hospitalizations/1000 EOL Episodes

(Last 90 Days of Life) I Report Period 2024-2025

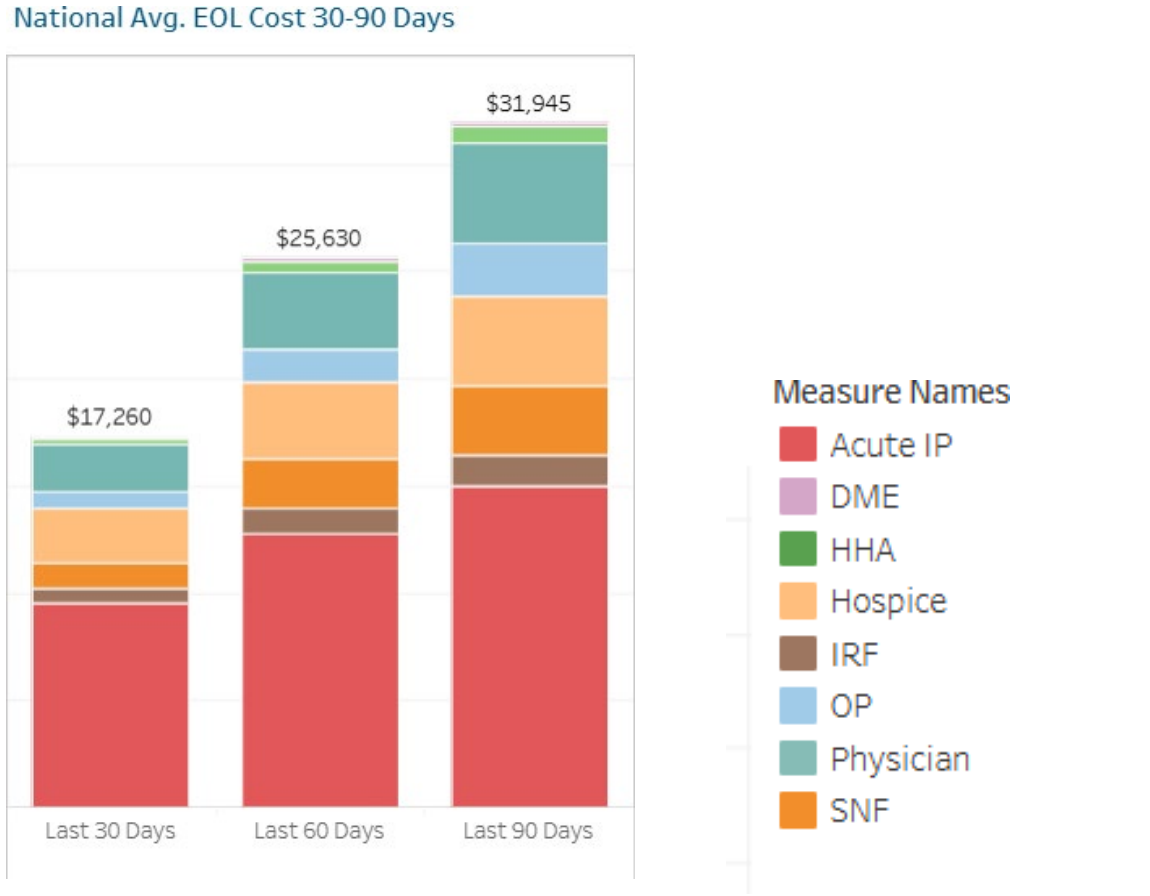


- Hospitalizations are known to be a primary driver of cost
- In general, **the Northeast and Midwest are higher in Hosp/1 K** (possibly lower threshold for admission/different practice pattern)

MSSP Spending in the Last 90 Days of Life

Report Period 2024-2025

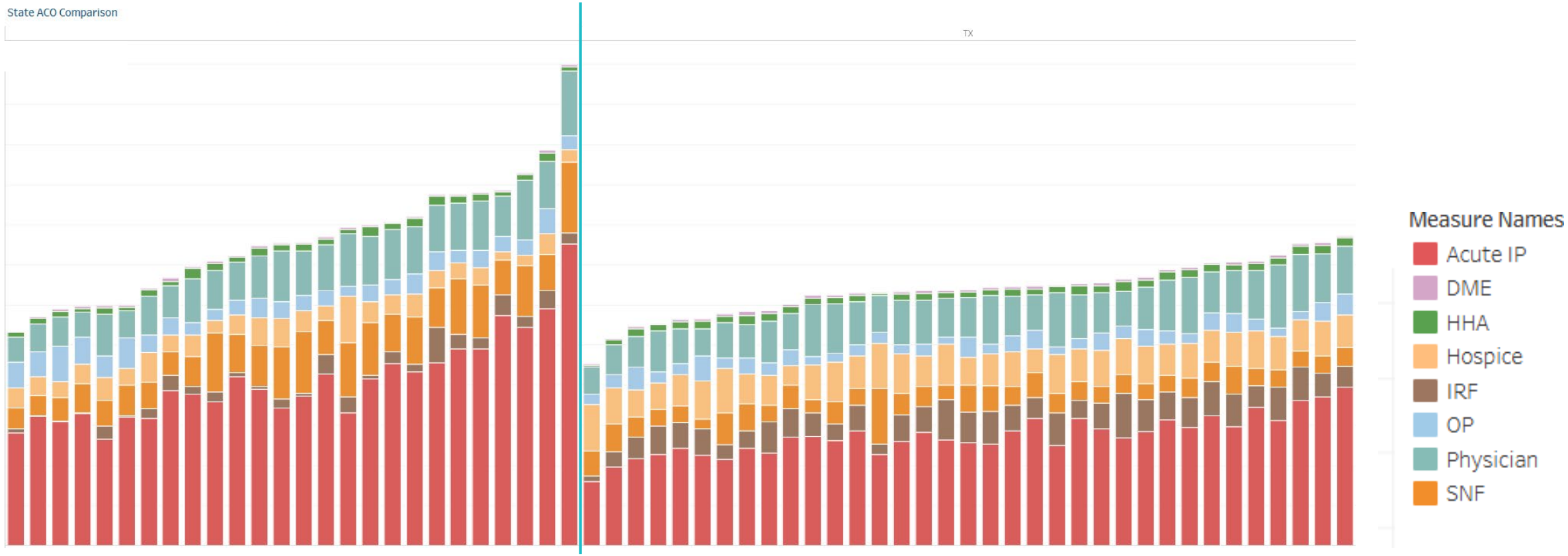
- Acute inpatient hospitalizations a primary driver of cost
- When examined by ACO (each dot = ACO), variation in IP average, from <$10,000 to >$30,000



ACO Spending in Two States

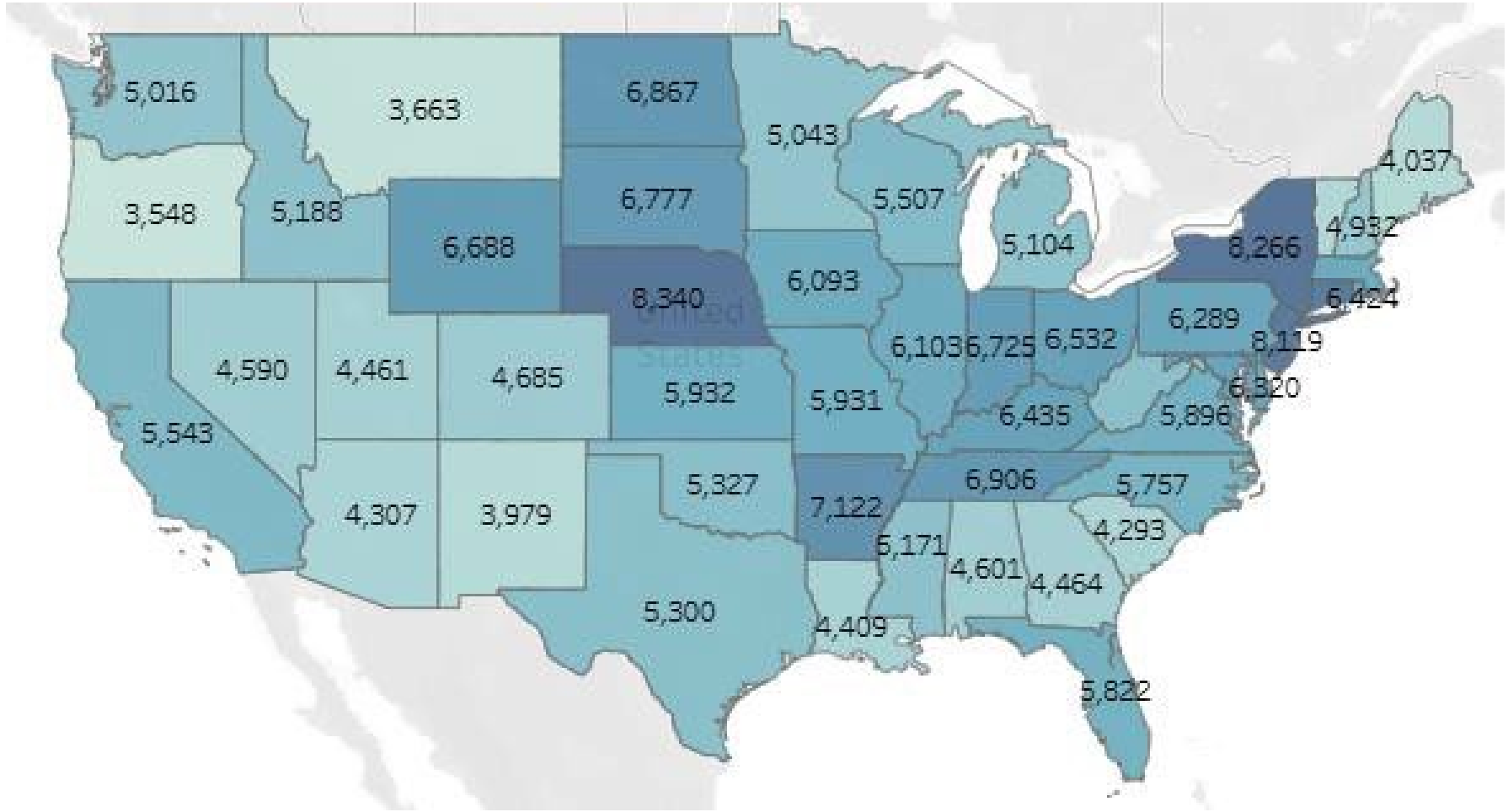
Report Period 2024-2025

- Two states divided by red line; every bar is an MSSP ACO
- Left is a higher spending state with greater inpatient use, right is a state with greater IRF (brown)
- The highest spending ACO on the right would be average on the left



SNF Days/1 K EOL Episodes

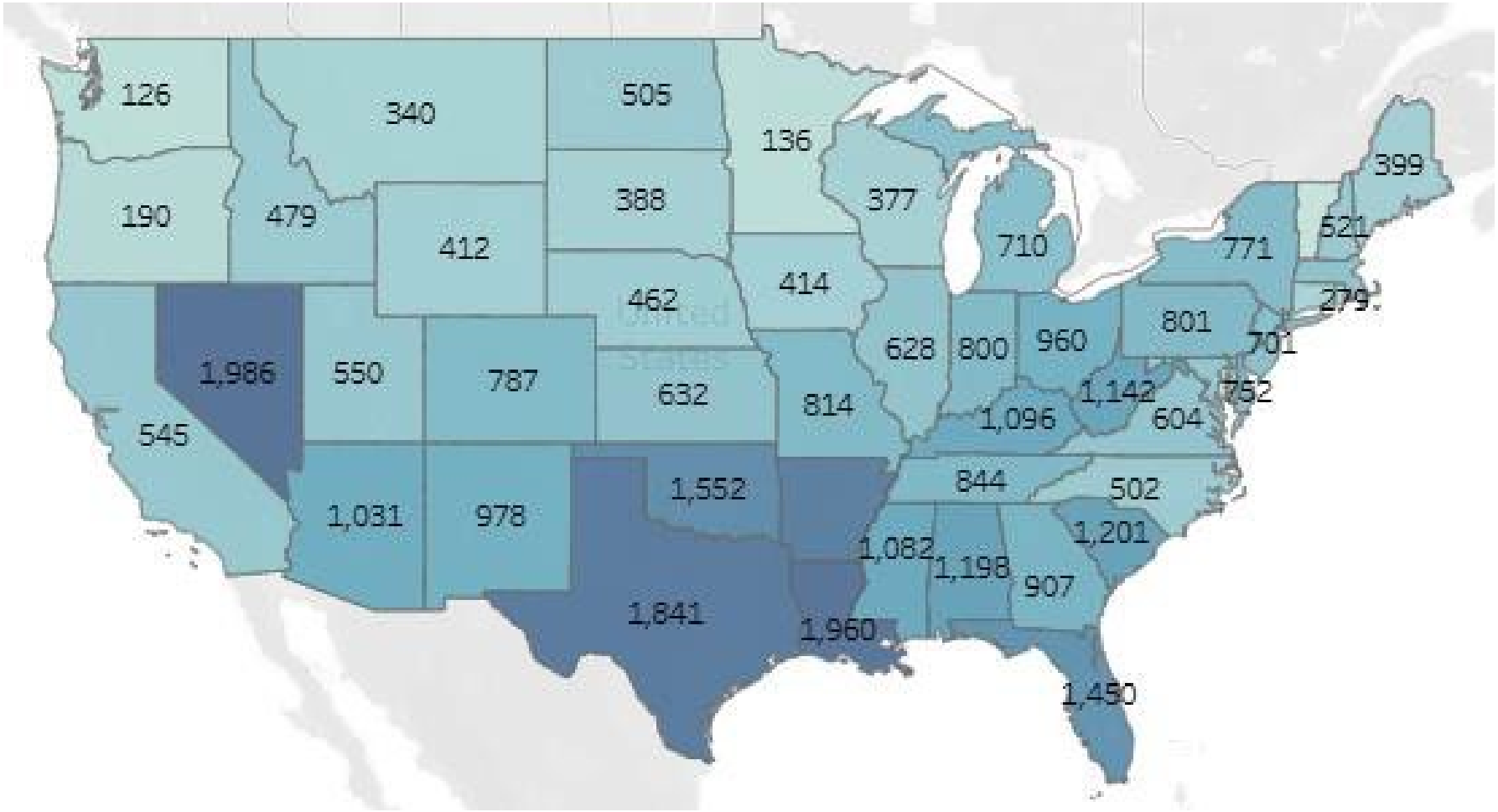
Report Period 2024-2025



- Highest for SNF/1K at EOL is **Nebraska** (8,340/1K) despite lower cost ($29,286), average hosp/1k and ICU (952/246)
- **Not among highest for SNF:** TX, NV, CA, FL; LA is among lower SNF utilizing states

IRF Days/1 K EOL Episodes

Report Period 2024-2025



- Highest for IRF/1K at EOL are **LA, TX, NV, AK, OK +/- FL**
- Likely a “supply-side” issue

TAKEAWAYS

State and ACO-Level Variation

1. Practice patterns, state laws, local regulations, social determinants of health, access to care, and other factors are likely affecting ACO's ability to impact EOL spend

2. There are state and regional utilization patterns that create EOL "headwinds"

3. ACO-specific strategies must be tailored to the region, state, situation, and population

EOL “Report Cards:” Improve EOL Care, Increase Shared Savings

ACO EOL Example #1

"Scorecards:" Comprehensive look at overall EOL spend, targeted clinical areas and local opportunity

- **Example #1:** This ACO is a model of good EOL stewardship, with below average spend, low IP/ICU/ED visits/IRN/SNF and high use of hospice
- Highly successful with shared savings as well

Other examples to follow

ACO EOL Example #2

Report Period 2024-2025

Annual 90-Day Total Cost

	Count	You	State	You vs. State	Nation	You vs. Nati..
AD	869	$35,392,163	$28,346,538	$7,045,625	$27,810,190	$7,581,973
ESRD	20	$1,256,359	$1,269,004	($12,646)	$1,245,970	$10,388
Total	889	$36,648,521	$29,615,542	$7,032,979	$29,056,160	$7,592,361

Avg. Cost Breakdown

	You	State	You vs. State	Nation	You vs. Nation
Total	$40,743	$32,632		$32,015	
Acute IP	$20,869	$15,422	$5,447	$15,021	$5,848
IRF	$1,315	$1,192	$122	$1,486	($171)
SNF	$2,932	$3,352	($420)	$3,186	($254)
Hospice	$3,846	$3,777	$69	$4,225	($380)
OP	$2,861	$2,500	$361	$2,444	$417
Physician	$7,506	$5,396	$2,110	$4,667	$2,839
HHA	$1,071	$738	$333	$766	$305
DME	$344	$254		$220	

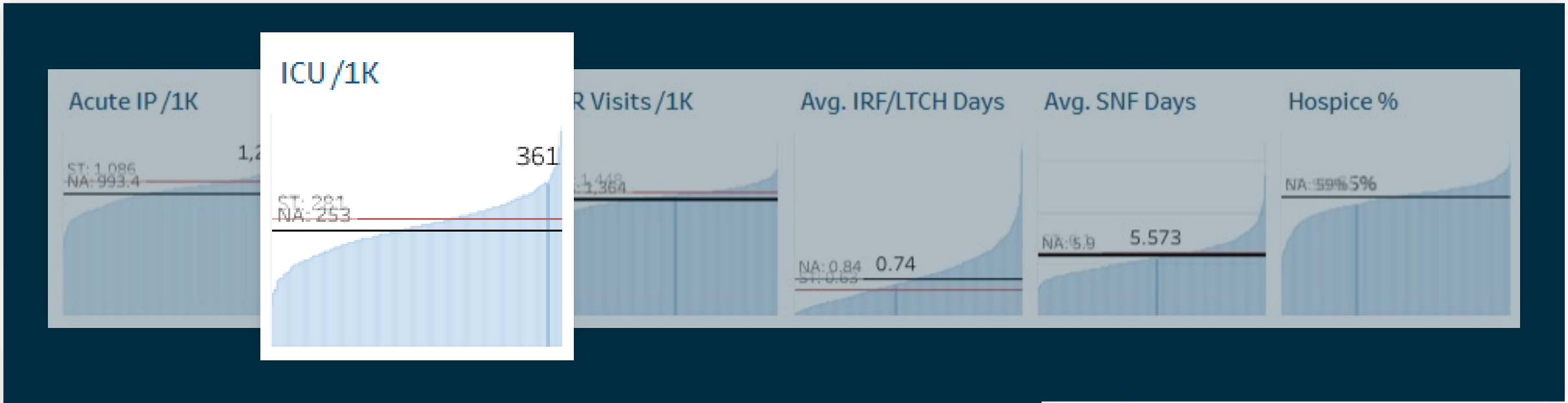
COST TYPE: Standardiz... AD/ESRD: AD

30-90 Day Costs

Example #2: This ACO has high inpatient, part B, and overall costs

ACO EOL Example #2 Continued

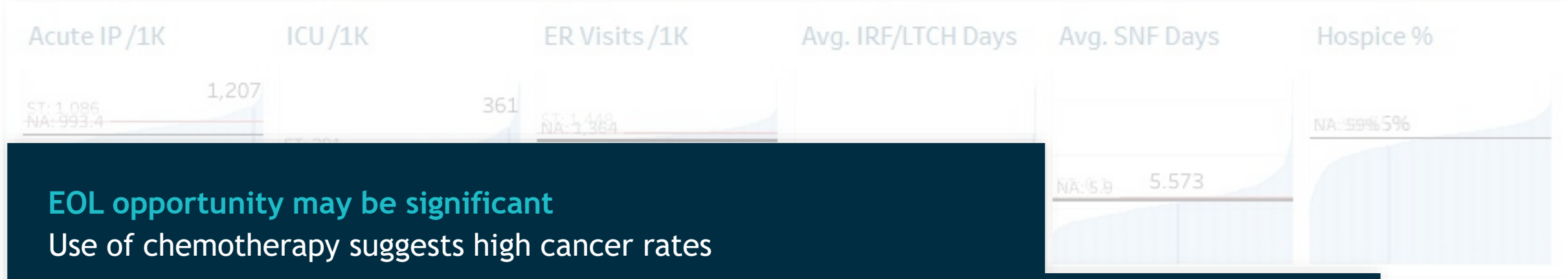
Report Period 2024-2025



1,207 inpatient admissions/1 K, 361 ICU visits/1 K and low use of hospice suggest a preference for aggressive care

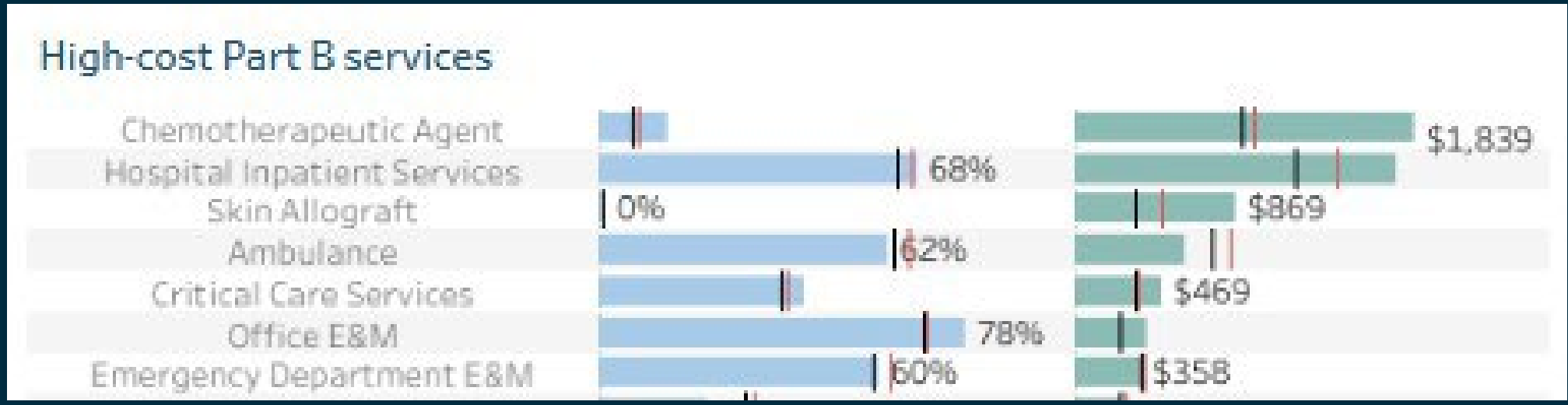
ACO EOL Example #2 Continued

Report Period 2024-2025



EOL opportunity may be significant

Use of chemotherapy suggests high cancer rates

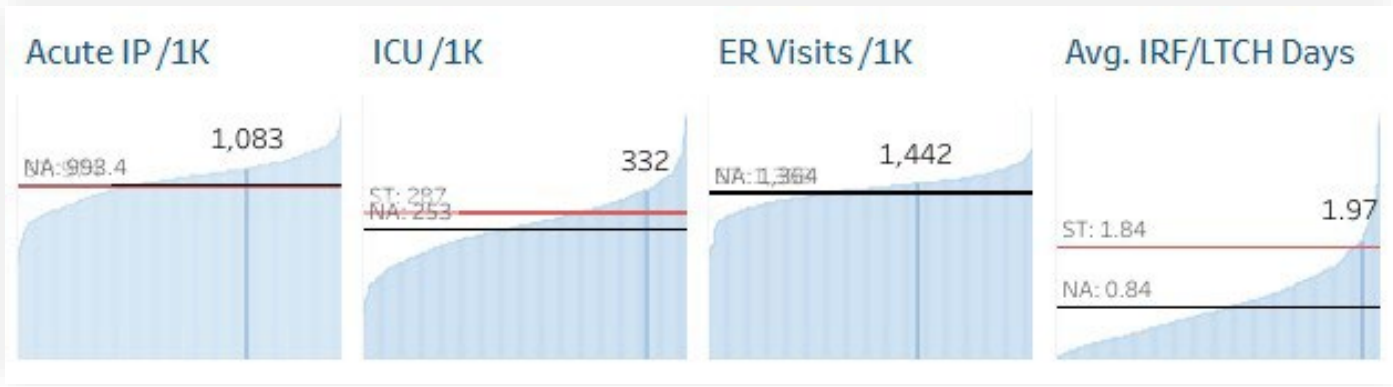


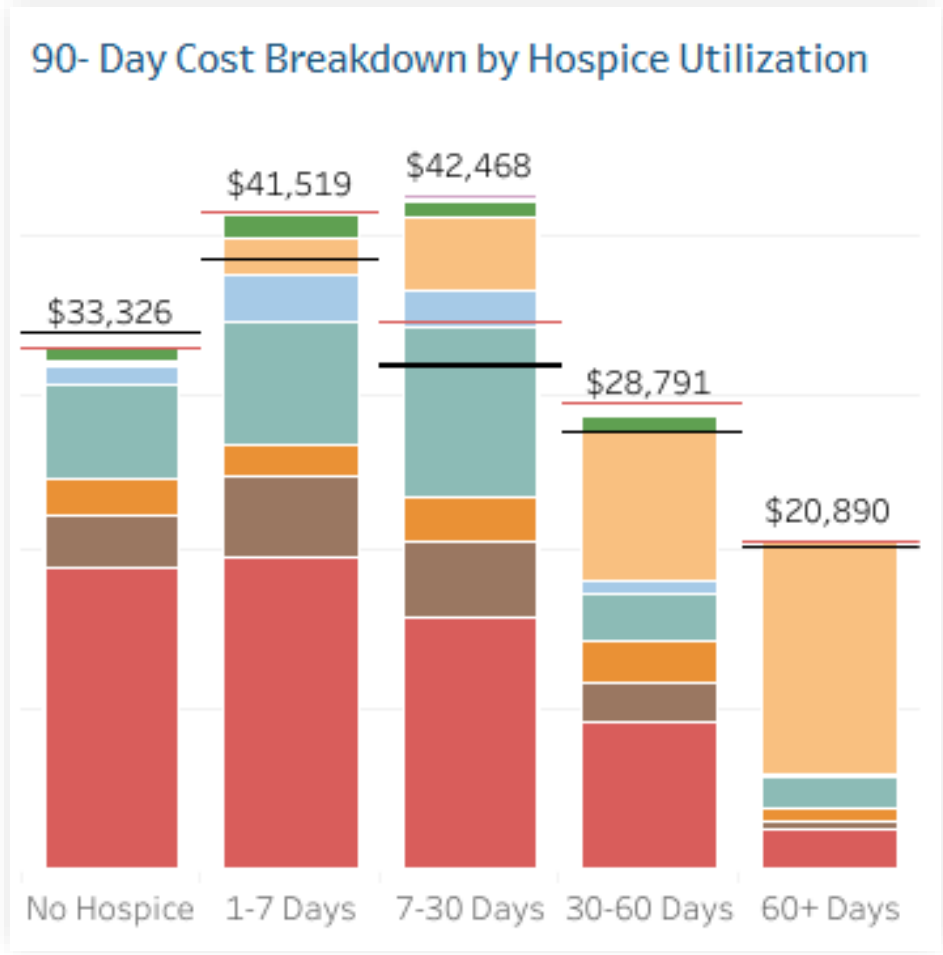
ACO EOL Example #3

Report Period 2024-2025

Avg. Cost Breakdown

	You	State	You vs. State	Nation	You vs. Nation
Total	$34,347	$32,492		$32,015	$2,332
Acute IP	$15,680	$13,681	$1,999	$15,021	
IRF	$3,482	$3,157	$324	$1,486	$1,996
SNF	$2,034	$2,722	($687)	$3,186	($1,152)
Hospice	$3,903	$4,630	($727)	$4,225	($322)
OP	$1,678	$1,851	($173)	$2,444	($766)
Physician	$6,304	$5,363	$940	$4,667	$1,637
HHA	$1,044	$847	$197	$766	$278
DME	$222	$241	($19)	$220	

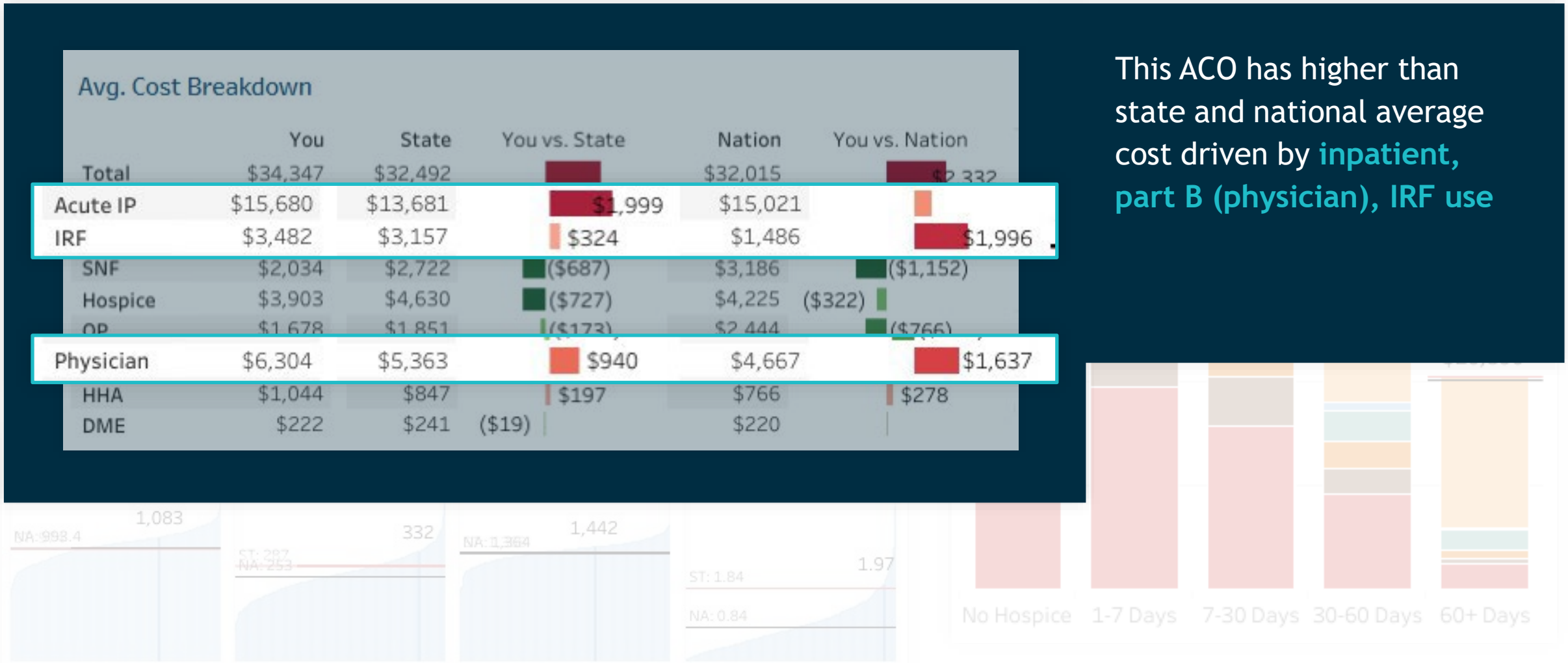




Example #2: This ACO has higher than national EOL costs driven by IP, Part B, and IRF

ACO EOL Example #3 Continued

Report Period 2024-2025



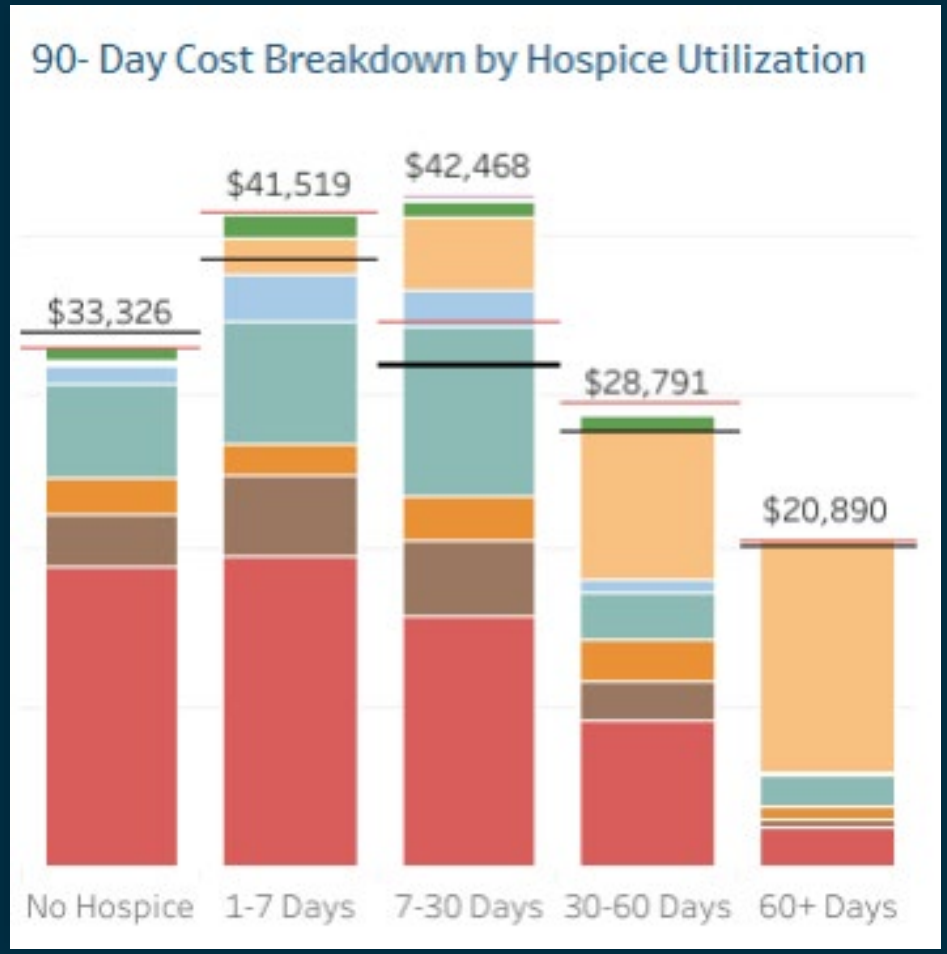
This ACO has higher than state and national average cost driven by **inpatient, part B (physician), IRF use**

Example #2: Breakdown of physician costs revealed significant wound care spending

ACO EOL Example #3

Report Period 2024-2025

A significant portion of EOL dollars spent on IRF **even in those spending 1-30 days in hospice**



Limitations

1. Although we standardized costs, we **may not have fully accounted for regional variation** in cost, making it challenging to draw conclusions across states or ACOs

2. We **chose not to risk-adjust** because all beneficiaries were in last 90 days of life

3. We **chose high-cost expenditures (e.g., Hospitalizations, IRF)**, but could be argued that some are more discretionary than others

4. An argument has been made that **examining spending in last days of life is flawed**
   - Finkelstein, et al reported that only 10% of those with a 50% probability of death in a year pass away that year
   - Perhaps we spend a lot on sick people, but cannot distinguish those who are dying from those who are not

Conclusions

TAKEAWAYS

Using Report Cards to Target EOL Costs

1. There is not “one recommendation” for every ACO, but report cards allow us to make specific recommendations for any ACO

2. Regional patterns are related to where ACO dollars are spent, or care is administered

3. Every high-spending state has low-cost ACOs for EOL (and vice versa)

4. An approach that is tailored to the ACO and the state or region is the most likely to achieve success

TAKEAWAYS

Lowering EOL Costs Starts with Evidence-Based Care

The basics of good EOL care start with conversations with patients about goals of care; implementing those goals at the time of illness and in the setting of clinical infrastructure designed to drive utilization is more challenging

- If IRF is part of regional infrastructure, can IRF utilization at EOL be repurposed to meet patient goals?
- If hospitalization (or another round of chemotherapy) is the default for a region or ACO even when patients are very sick, how can we change this path during routine chronic disease care or acute episodes?
- When patients have high utilization and poor prognosis, who is helping the patient, family, and physicians/clinicians see the whole picture?

Bringing It Back to the Patient (Or Family Member)

References

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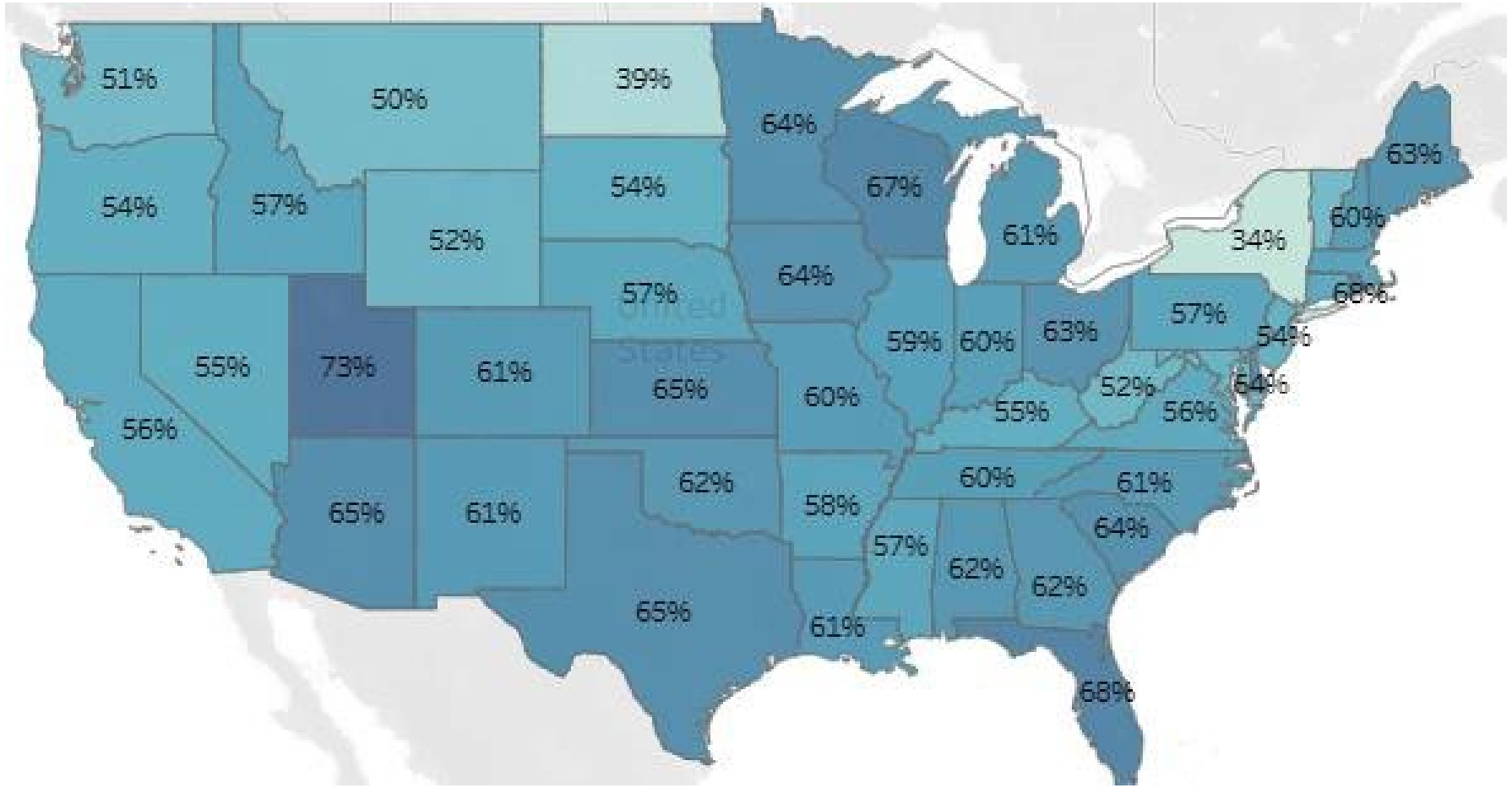
Additional Slides

ICU/1 K EOL Episodes

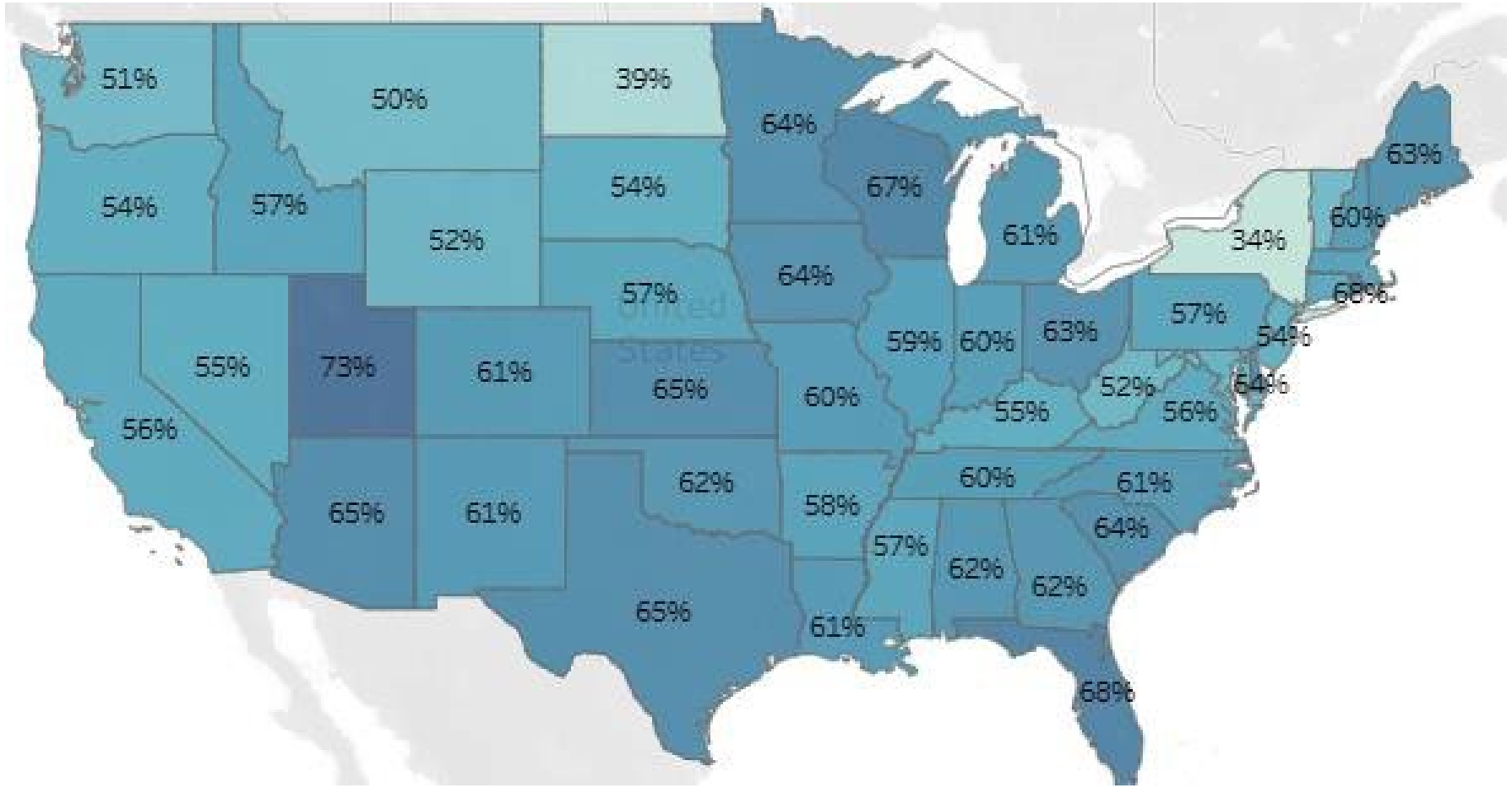
Report Period 2024-2025



- Reducing ICU at EOL is often discussed as an **opportunity to reduce costs and improve patient experience**
- Surprisingly, **MS is a low-cost EOL state** ($29,217 avg) but has 1,019/1 K hosp and **the highest rate of ICU/1K (347/1K)**
- **Very similar is WV** ($29,649; 1,060/hospitalizations; 323/1K ICU)

EOL Episodes Hospice Percentage

Report Period 2024-2025

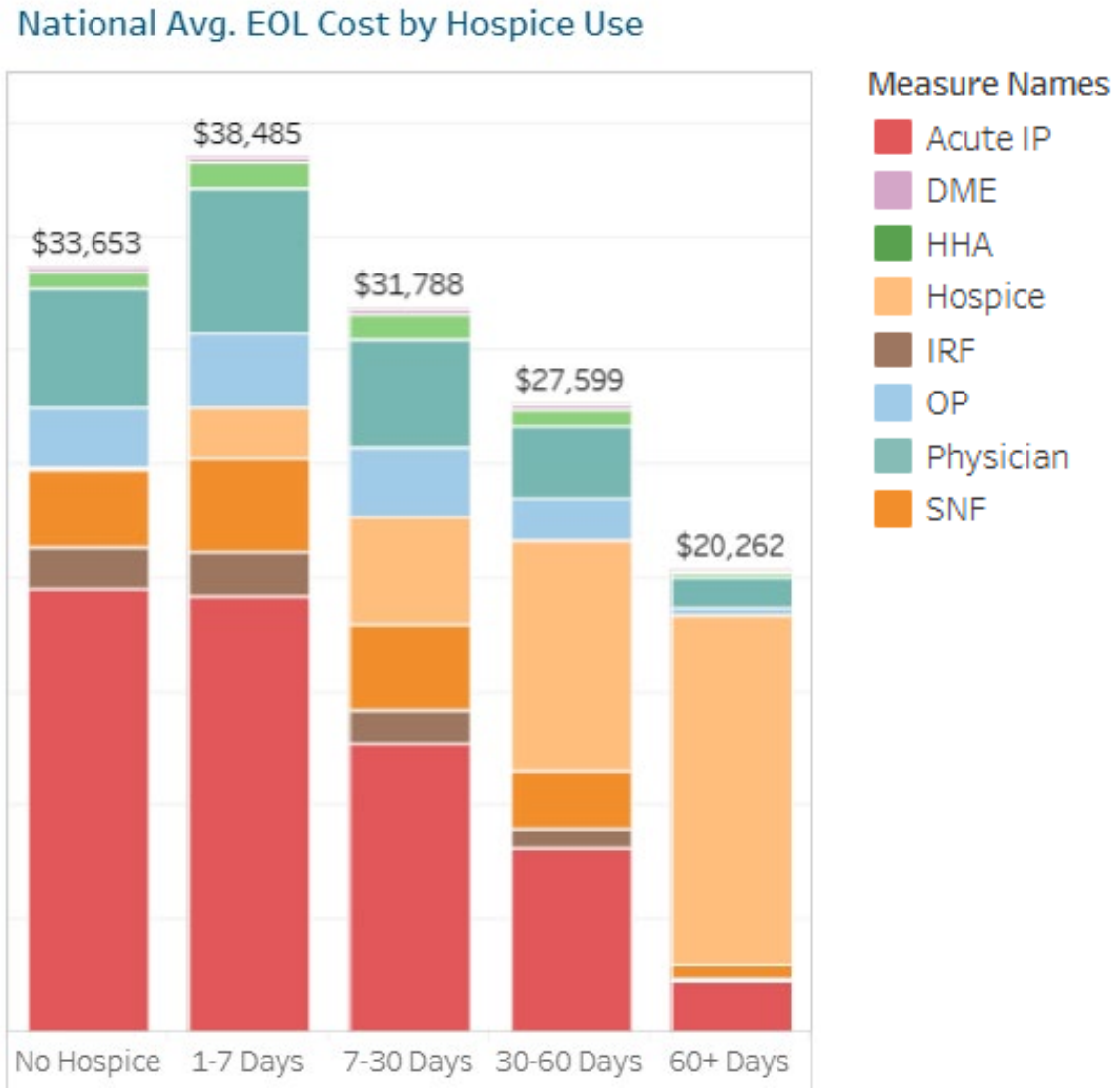


- **Highest for hospice use is lowest-cost Utah** lowest is high-cost New York
- Even high-cost states have **over 50% with some hospice use**
- **Days in hospice make a difference** and percentage with any hospice may be less informative

EOL Episodes Cost by Days in Hospice

Report Period 2024-2025

- We hypothesized that there is an “optimal days in hospice” in terms of cost
- No cutoff when longer hospice LOS led to higher EOL spending
- Inpatient costs were less as hospice LOS increased
- There is a likely a “clinically optimal” LOS, but not a clear financial tipping point



NAACOS: End of Life in a Value Based World

Presented by Magen Calland ANP, Sr Mgr. A+ Solutions Engmt.

April, 2026

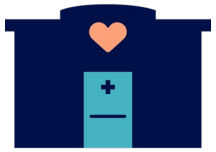
Aledade

Do More Good - For Patients, Practices and Society.

We work with unrelenting integrity to improve public health.

FOR PATIENTS

Improved health outcomes, personalized care, and better quality of life through proactive health management.

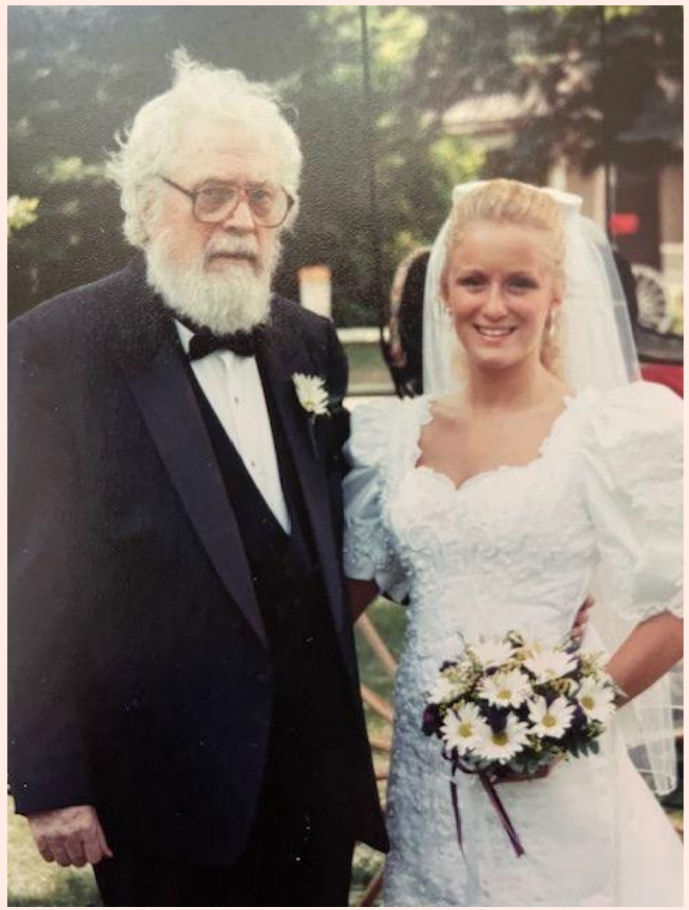


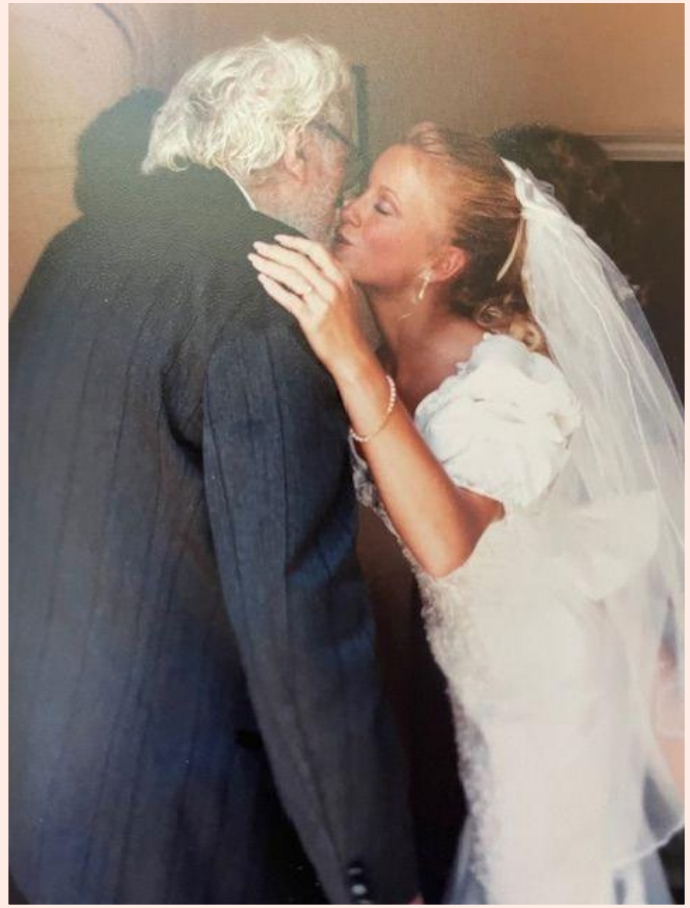
FOR PRACTICES

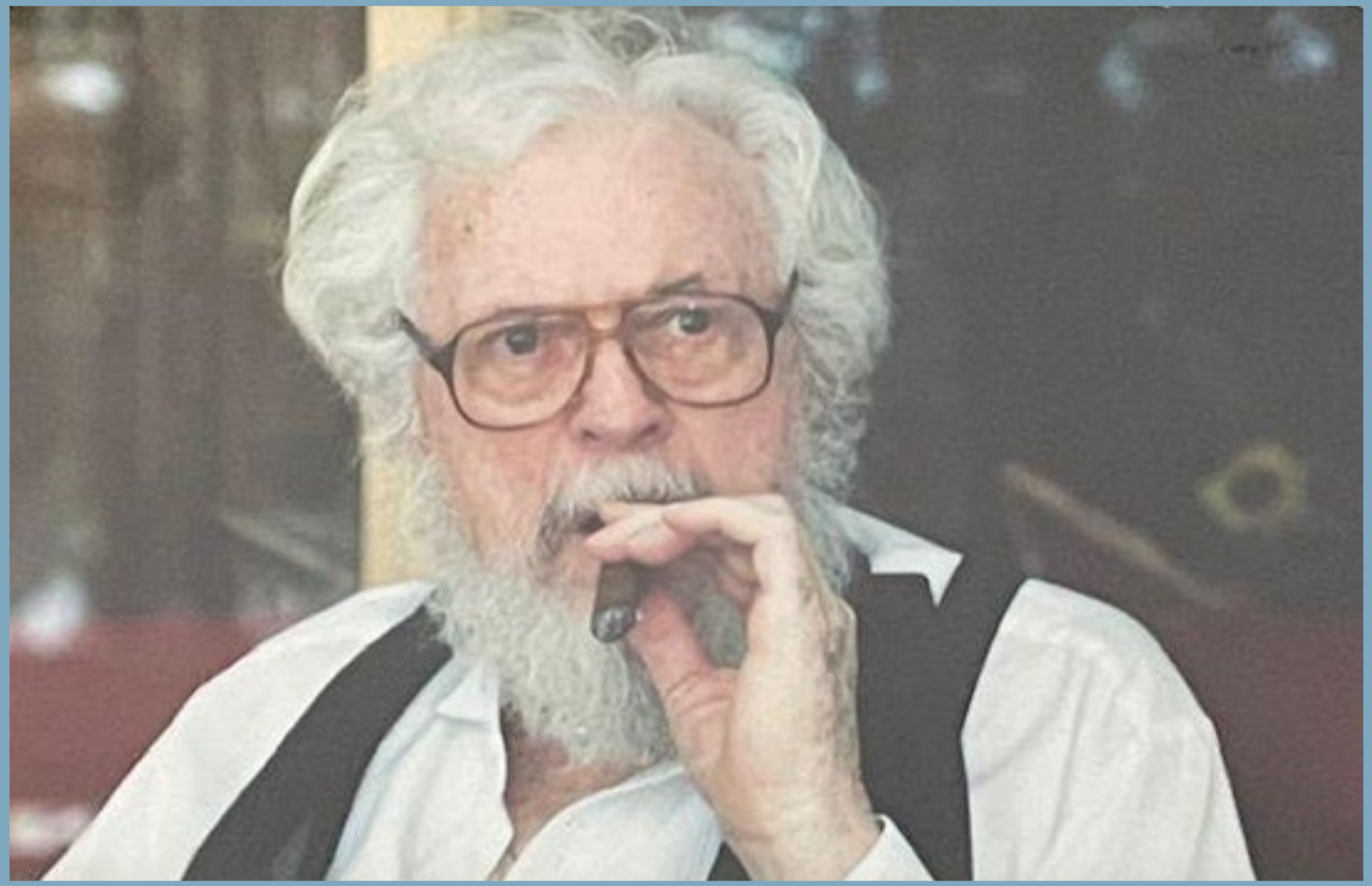
Thriving primary care offices, financial stability, and the tools to deliver high-quality, value-based care.

FOR SOCIETY

A sustainable health care system, reduced costs, and access to care for all communities.

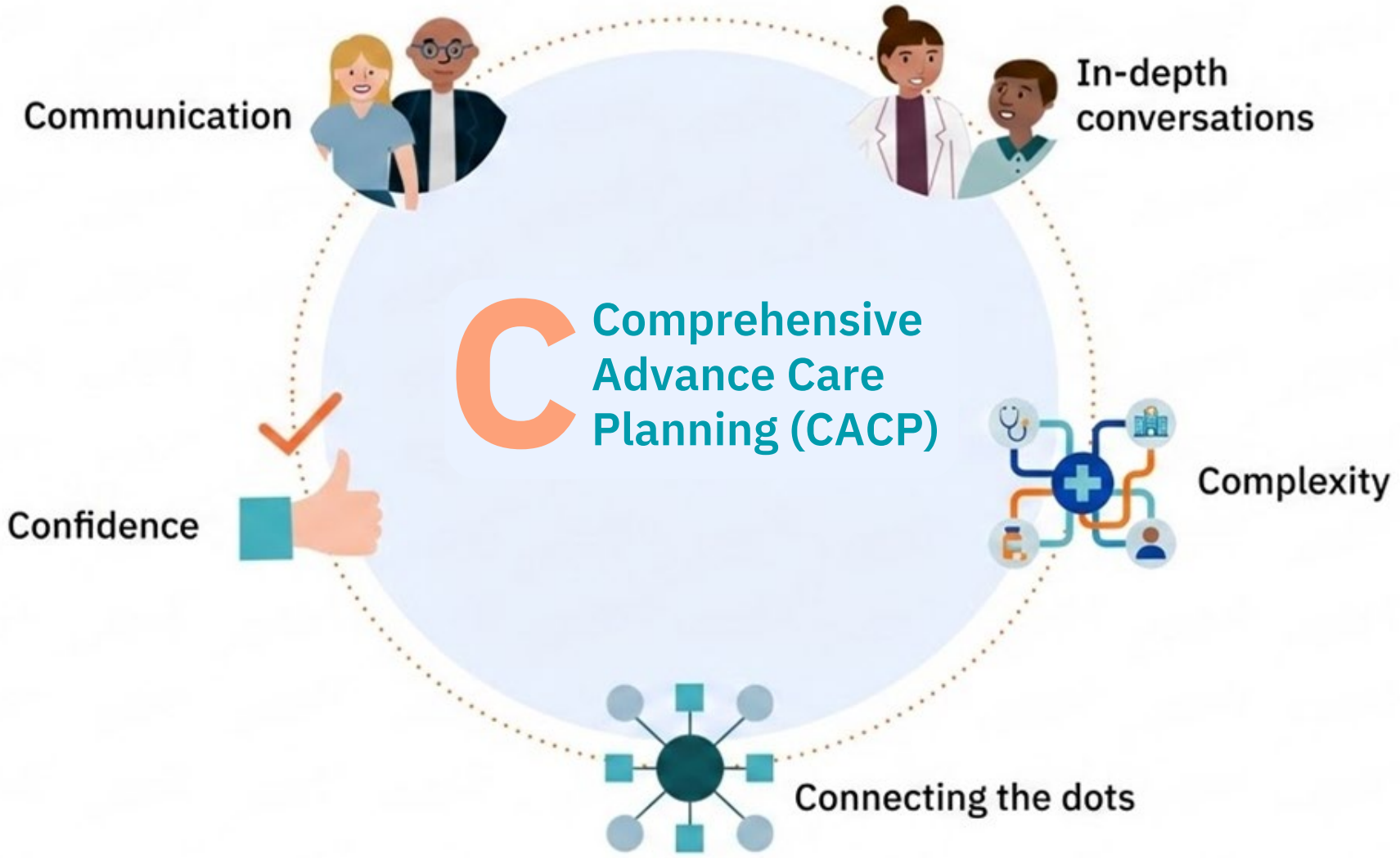






Comprehensive Advance Care Planning (CACP)

CACP drives care decisions that reflect patient and family wishes in end-of-life

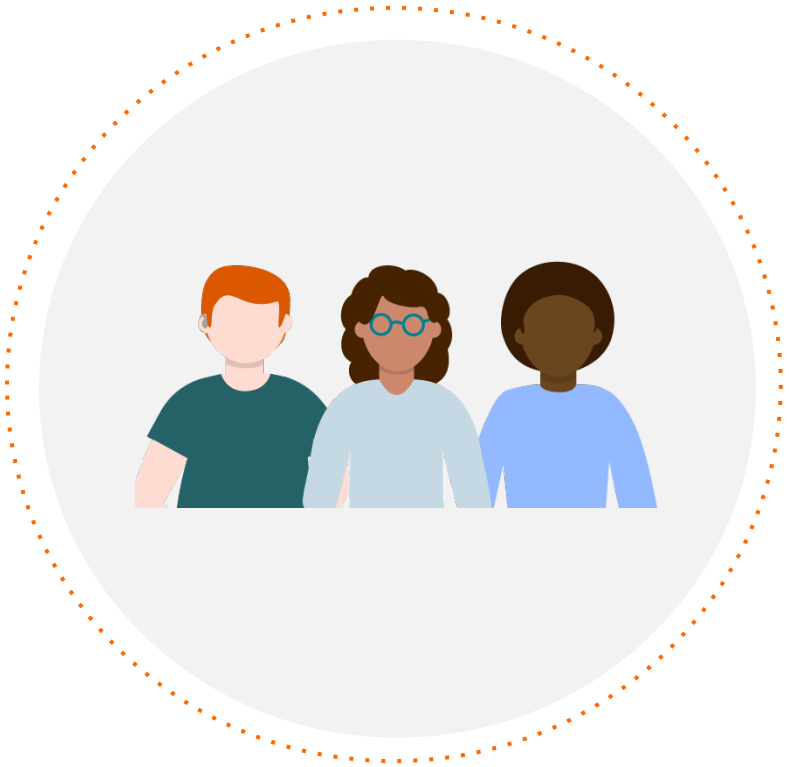


Not Just Facilitators. Seasoned Clinicians.

Our team is comprised of experienced Registered Nurses (RNs) and Social Workers (SWs) with strong clinical backgrounds in areas such as ICU and Hospice care

Why it matters

- → **Clinical Expertise:** Ability to explain complex disease progression (COPD, CHF, Dementia).
- → **Emotional Intelligence:** Trained to navigate complex family dynamics and medical emotions.
- → **Core Values:** Service, Evidence, Curosity and Inclusion is the core of what we do.



**Facilitators are not providing clinical services and CACP services are not clinical services by nature. Any clinical questions that arise will be escalated to the patient's provider.*

The Silent Gap Between Preference and Reality

89%

Believe doctors should discuss end-of-life care preferences with patients.

70%

US adults express preference for less aggressive treatments at end of life.

17%

Have actually had the conversation with a health care provider.

CACP supports deeper, time-intensive conversations than a typical office visit can accommodate.

 Source: https://www.ajmc.com/view/end-of-life-values and value-based-care

The Legacy Model

A Primary Care Physician (PCP) knew generations of one family, held the history, and personally conveyed patient values.

The Modern Reality

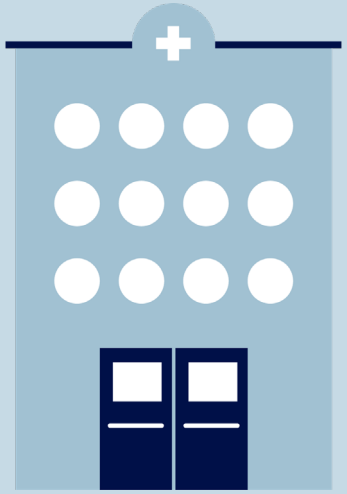
Care is technically superior but framented among Specialists and Hospitalists. The personal connection is often lost in the chaos of complex care.

The Medical Power of Attorney often advocates alone—unless those wishes are clearly documented.

Images generated by Google Gemini

Aligning Care with Patient Wishes: Significant Cost Savings

Reduce Unwanted Hospitalizations



- CACP helps avoid aggressive treatments that do not align with patient values.
- Leads to fewer avoidable and unwanted hospital admissions.
- Directly reduces costly intensive care unit (ICU) days.

Lower Health Care Spending at End-of-Life

- Studies show total healthcare costs in the final months are significantly reduced when care is aligned.
- Focuses resources on comfort and quality of life rather than high-cost interventions.
- Demonstrates clear financial value alongside improved patient experience.

 Source: *Making the Case for Talking to Patients about the Costs of End-of-Life Care - PMC*

The Engine of Savings: Empathy

When we take the time to deeply understand a patient's goals and "shift points," we not only honor their wishes, but we simultaneously reduce unnecessary spending on care they don't want.

Barriers to CACP & How We Overcome Them

Building Trust

- Multi-modal approach to patient-outreach.
  - Call masking, customized cards, text alerts and reminders.
- Strong practice relationships forming foundational support.
- Deploy top-performing Care Program Navigators to ensure easy, streamlined patient referrals.

Demonstrating Value

- Guiding patients past the barrier of “they don’t know what they don’t know.”
- Exploring deep quality-of-life aspects and defining “shift points.”
- Showcasing the importance of a “warm introduction” from a clinician.
- Tracking success directly in-app to monitor outcomes.

Care Program Navigators (CPN)

Experts in Breaking Down Barriers

Strong Practice Relationships

Foundational support via top CPNs.

Easy Patient Referrals

Streamlined clinician process.

Track Success in App

Monitor outcomes directly.

Empowering Your Patients' Voice

CACP ensures that a patient's voice is still heard even when they are too sick to speak for themselves and empowers their appointed representative(s) (MPOA) to confidently advocate and ensure their health care wishes are honored.