HEALTH DATA ANALYTICS INSTITUTE

From Data to Dignity: Using Predictive Analytics to Drive Proactive, Patient Aligned Care

VBCExhibitHall Webinar July 31, 2025

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Educational Webinar Series

Today's Speakers

Agnes Kats, MHL, BSN, RN, CCM
Manager, Value Based Care
Houston Methodist Coordinated Care

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Director of Clinical and Quality Improvement
Health Data Analytics Institute

Learning objectives

1) Review case examples illustrating the core elements of the ACO's palliative care approach, highlighting the integration of early interventions and cross-disciplinary collaboration to enhance patient outcomes.

2) Identify how AI analyzes complex patient data to detect patterns, predict critical stages in chronic conditions, and trigger timely advanced care conversations, surpassing traditional diagnostic models.

3) Describe how AI-based predictive analytics and chart summaries can optimize healthcare resource allocation, prevent unnecessary hospitalizations, and personalize care delivery to better meet the needs of patients with advanced chronic conditions.

Poll Question #1

Does your organization have a dedicated care management team to manage end of life patients?

- Yes
- No

An ACO’s services and approach to palliative care advanced care planning

Houston Methodist Coordinated Care ACO

GROWTH

Largest Medicare ACO in Houston

≈ 54,000 CMS Attributed Medicare Patients

EXCELLENCE

High Performing HMCC ACO Primary Care Network

300+ PCPs in 90+
Primary Care Practices

PATIENT CENTERED

Continuity of Care with PCPs, IP Case Mgmt, Nursing and Providers

HMCC ACO Multi-disciplinary Team Approach

QUALITY

CMS ACO Quality Score 90th Percentile YoY

94% Quality
Quality Score

SUCCESS

Shared Savings Generated Since Program Inception

$32 M
Earned Shared Savings

Overview of outpatient clinical nursing programs

Post Discharge Transitions in Care Program

Goal: Reduce 30-day readmissions

5 RN Care Managers

Complex Care for Chronic Conditions Program

Goal: Reduce unnecessary hospitalizations and ED visits

4.5 RN Care Managers

Advanced Illness Care Program

Goal: Align care with patient values and reduce end-of-life costs

2 RN Care Managers

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2 RN Care Managers

Advanced Care Planning Challenges

Traditional methods for advance care planning are diagnostic-driven and reactive.

Clinicians often avoid goals of care discussions with their patients.

When goals of care conversations do happen, there can be discordance between patient and clinician reports of the conversations (Modes et al., 2019).

EHR inefficiencies; lack of standardized systems for documenting advance care planning efforts in a way that can be accessed by multiple providers across different settings (Kelley et al., 2021)

4% of the Medicare population are responsible for up to 25% of Medicare costs in the last year of life (Duncan et al., 2019).

“Care coordination programs succeed when they select high-risk patients for intervention and often fail when they don’t.”

(Brown et al., 2012)

+

HDAI Predictive Tool

→

*“The **goal** of ACP is to help ensure that people receive medical care that is consistent with their values, goals, and preferences.”*

Poll Question #2

How does your organization currently identify patients with advanced illness?

- Claims-based triggers
- Clinical judgment
- Predictive analytics
- Not consistently identified

Utilizing AI to help solve front line challenges and improve patient care

Collaboration to solve problems and implement innovative solutions: Houston Methodist and HDAI

HM ACO (50,000+ pts)		HM System (8 hospitals)
Identify patients with **advanced illness**	What is the problem?	**30-day post-discharge mortality and readmission** rates higher than desired
Risk stratification is not fine-tuned to find patients	Root cause?	Patients at highest risk **not being seen** within 14 days
Identify **patients at risk** and use AI summary to develop individualized care plans	What is the solution?	Risk predictors identify **high-risk patients before discharge** for scheduled appointments
Identify **Rising Risk, Complex Care, recently discharged** for reducing readmissions, ED visits	Greater impact?	**Target highest readmission risk factors** (e.g. **heart failure, AKI, sepsis)** for proactive optimization post discharge

How can AI transform quality, outcomes, and economics?

Proactively find the right patients and enroll them in the right workflows…

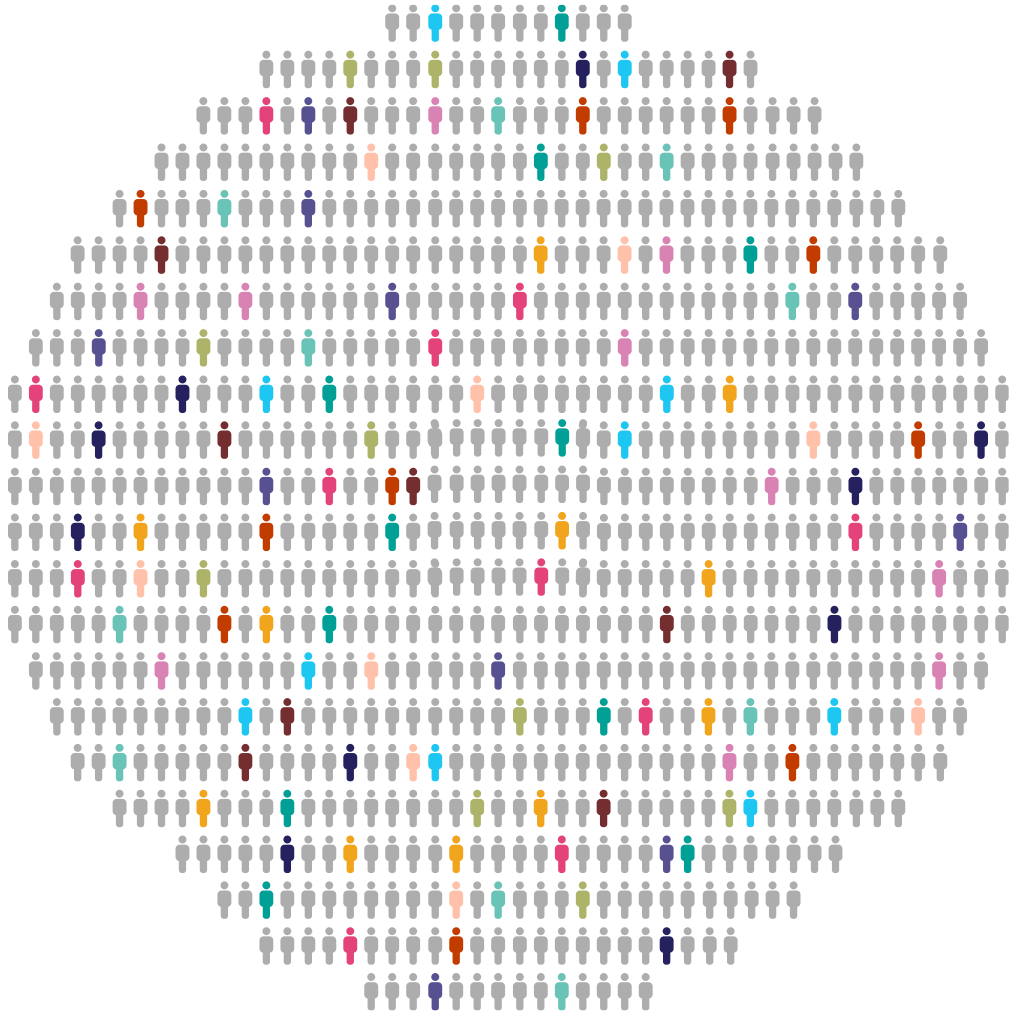
Align resources to needs for more impactful care

…then deliver actionable insights to clinicians & care teams at the point of impact

Reduce the EHR data burden to reclaim clinical time

Real-time stratification at scale to AI-enable existing workflows

Proactive, high-impact targeted care, through alignment of limited resources to highest need patients



HealthVision

- DRG and HCC Gaps
- Care & Quality Gaps
- ED & Unplanned Admissions
- Extended LOS
- Discharge to facility
- Heart failure/ MI/ Stroke
- COPD/ Pulmonary Infections
- Acute Kidney Injury
- Sepsis/ Infection
- DVT/PE
- Falls
- Palliative Care/ Hospice

HealthVision Advanced Illness Summary

Spotlight | Advanced illness care | Transitions in care | Chronic Conditions | Print | Customize

Overview

Patient is living with multiple chronic conditions and has complex care needs. Symptoms include pain, poor mobility, recent falls, and oxygen dependence. Care is focused on maintaining comfort, preventing further injury, and supporting independence where possible.

Highlights

High Fall Risk

Recently fell getting off the toilet and fractured her hip — now at highest risk for serious falls.

- 4 prior falls while in assisted living
- Most recent: 3/5/2024 → ER visit, hip fracture
- 1-year injury risk: 90th percentile

High Flow Oxygen

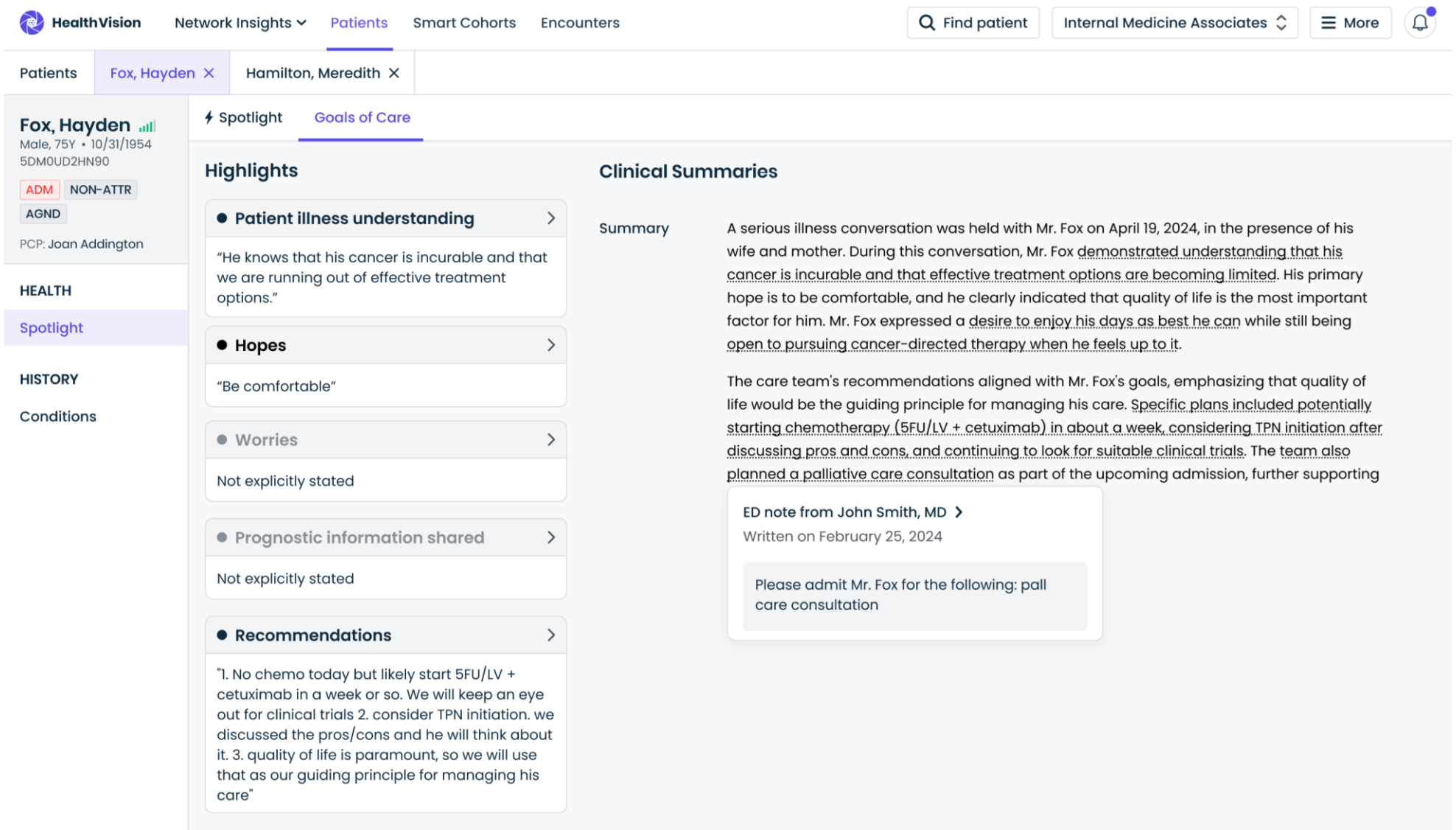
Recently weaned from face mask, now on 3L oxygen — still needs home support.

- SpO_2 stable at 95%
- 3L via nasal cannula, started 2 days ago
- Home O_2 at 2L ordered with DME referral

Clinical Summaries

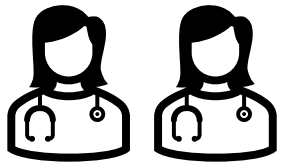
Recent Hospitalization & Discharge	Admitted for	CHF exacerbation and shortness of breath
	Length of stay	6 days
	Discharge disposition	SNF, returned home 7 days ago
	Specialist consults	Palliative care and cardiology consulted
	DME/Home care	Referred for home oxygen and wound care
Care Coordination & Planning	Plan of care	Palliative consult pending; no follow-up visits scheduled.
	Team involved	PCP, home health nurse, case manager
	Social work	Initial needs assessment completed at SNF
	Follow-up	No appointments currently scheduled
Medications & Treatment	Current medications	Carvedilol, furosemide, morphine, duloxetine
	Changes	Dose increase of diuretics; morphine added last week
	Issues	Nonadherence noted; refill delays reported
Mobility & ADLs	Mobility	Uses walker indoors; mostly seated during day
	Support	Needs help with dressing, bathing, and meals
	Equipment	Hospital bed, shower chair in use

HealthVision Goals of Care Summary



Impacting outcomes: Real-world results

Key components of AI-enhanced advanced illness care program



2 Certified RNs with extensive hospice background

58 Years of combined nursing experience

Trained in MI

Review high risk patients identified by HDAI

Collaborate with PCP and care team

Conduct initial assessment

Educate and assist with Advanced Directives

Educate on plan of care and goals of care discussion

Refer to palliative care program or hospice as appropriate

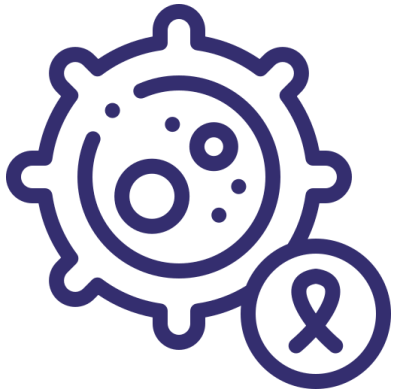
Key components of AI-enhanced advanced illness care program

Bed confinement status

Need for continuous supervision

Unspecified dementia with behavioral disturbance

Dependence on renal dialysis + age



Secondary malignant neoplasm of (xxx)

End stage heart failure

Case examples

Patient name and/or other identifying information has been changed to ensure patient privacy during this presentation.

Patient quote

“Papa went to be with Jesus today. Thank you for all you have done to comfort me during this time and to help us and fight for us. I’m so grateful for your sweet, kind and compassionate self. Thank you so much.”

- Daughter of patient

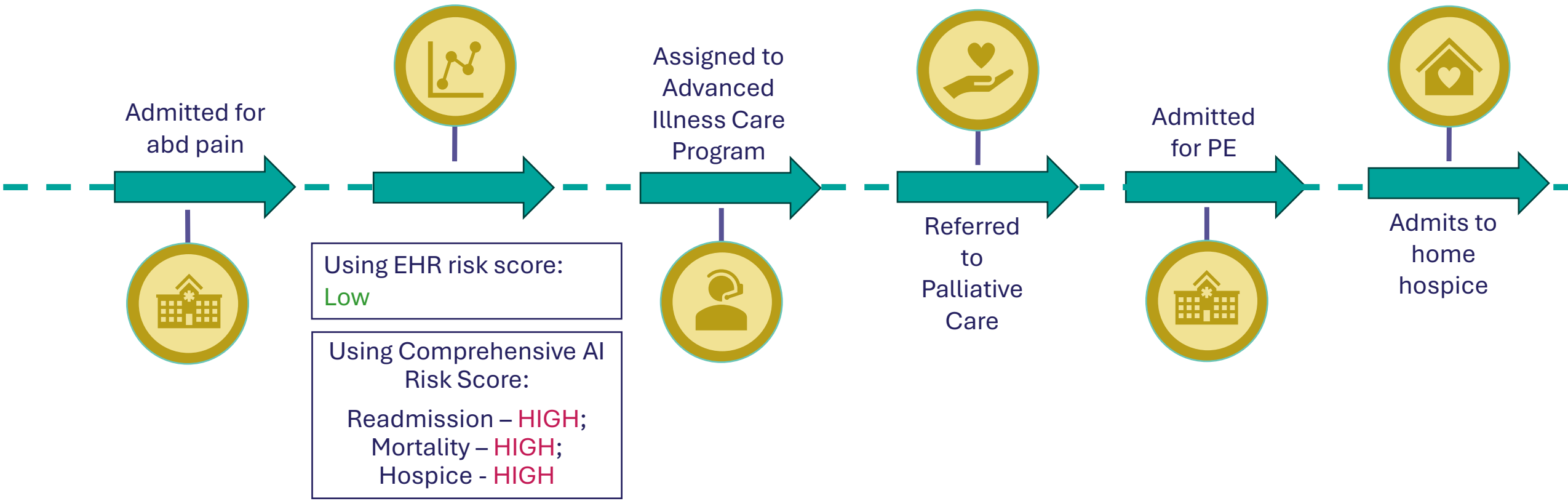
Patient name and/or other identifying information has been changed to ensure patient privacy during this presentation.

Case example #1

83-year-old male  with history of pancreatic cancer receiving chemo, CHF, DM

Patient name and/or other identifying information has been changed to ensure patient privacy during this presentation.

Case example #1



Case example #2

71-year-old male with history of hypertension, diabetes, CHF, kidney transplant

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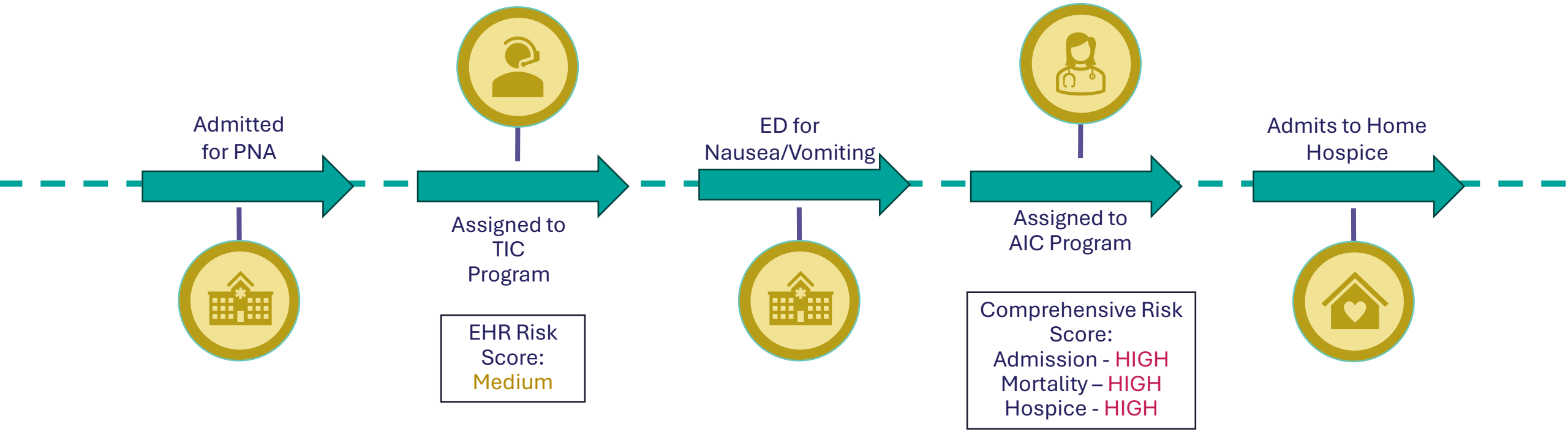
Case example #2



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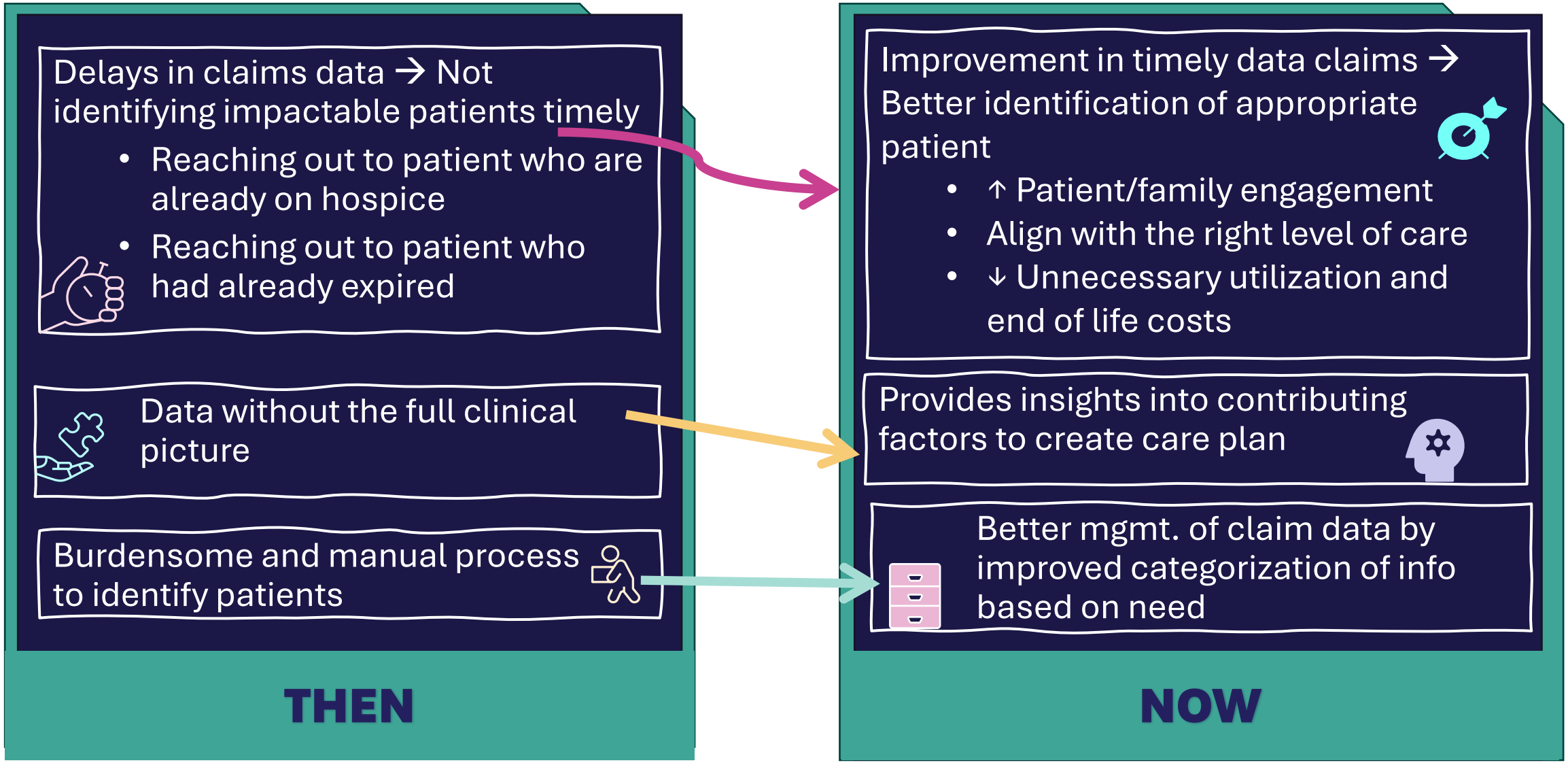
Then and Now



HMCC ACO MSSP patients completing Advanced Illness Care Program have lower costs

	MSSP Patient Status	Inpatient Cost	Outpatient Cost	Home Health	Office Visits (Part B)	SNF	Hospice	Total Cost
2024	Patients Completed AIC Program	$4,853	$3,541	$1,570	$3,566	$256	$2,175	$16,757
	Expected from Comparison Group*	$7,788	$3,651	$1,261	$3,508	$1,234	$597	$18,592
	Difference	**-$2,935**	-$109	**$309**	$57	**-$979**	**$1,578**	**-$1,836**

Based on 2024 CMS Claims Data, evaluating 3 months outcomes upon program completion, as compared to Twin Group

* 38% reduction in inpatient costs

* 10% reduction in total costs per patient

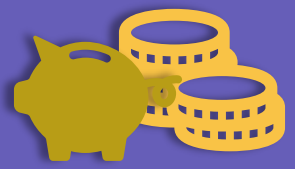
* Getting patients to the right level of care!

Conclusion

Key takeaways

AI-Driven Advanced Care Planning transforms value for health systems, ACOs, patients and payers

1. Reducing avoidable healthcare costs
2. Enhancing resource efficiency
3. Driving value-based care outcomes
4. Empowering population health management teams
5. Supporting member satisfaction and retention



Lower Costs
Smarter, timely interventions reduce unnecessary spend

Better Quality
Higher patient satisfaction and improved outcomes

Stronger Networks
Seamless collaboration with ACOs for shared savings

We welcome your input!

Contact Us

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THANK
YOU!

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