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# Readmission Reduction: Intelligent Targeting to Timely Intervention

Michigan Value Collaborative

**OCTOBER 25, 2024**

# Today's Objectives

## Participants will…

Understand the series of recovery behaviors that patients **need** to complete **in transition** from inpatient care to baseline health.

Recognize the signals **complex** patients give about **whole-person** needs – clinical + behavioral + social health.

Refine the **predictive analytic structure** used to identify the population who needs to be served.

List the unique interventions possible for patients identified in **real time** with needs to have a **supported transition** from acute care to stable, optimal health.

# Corewell Health: Who We Are

**60,000+**
Team Members

**15,000+**
Nurses

**300+**
Ambulatory/Outpatient Locations

**5,000+**
Licensed Beds

**1.2+ Million**
Health Plan Members

**$100 Million**
Health Equity Funding
(Over 10 years)

**11,500+**
Affiliated, Independent and Employed Physicians and Advanced Practice Providers

**$100 Million**
Venture Capital Fund
(Over 10 years)

**21**
Hospital Facilities

**$14 Billion**
Enterprise

**7,000+**
Employers Contracted by Priority Health

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# Mission: Improve health, instill humanity and inspire hope.

## Guiding Principles



Improve health and **health equity**



Enhance the **consumer experience**



**Improve** health care quality, value and outcomes



Make health care **more affordable** for the communities we serve



Ensure the **voices** of team members and physicians **are heard**

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# The problem to solve

Can we take a realistic, fresh look at the factors leading to patient readmission?

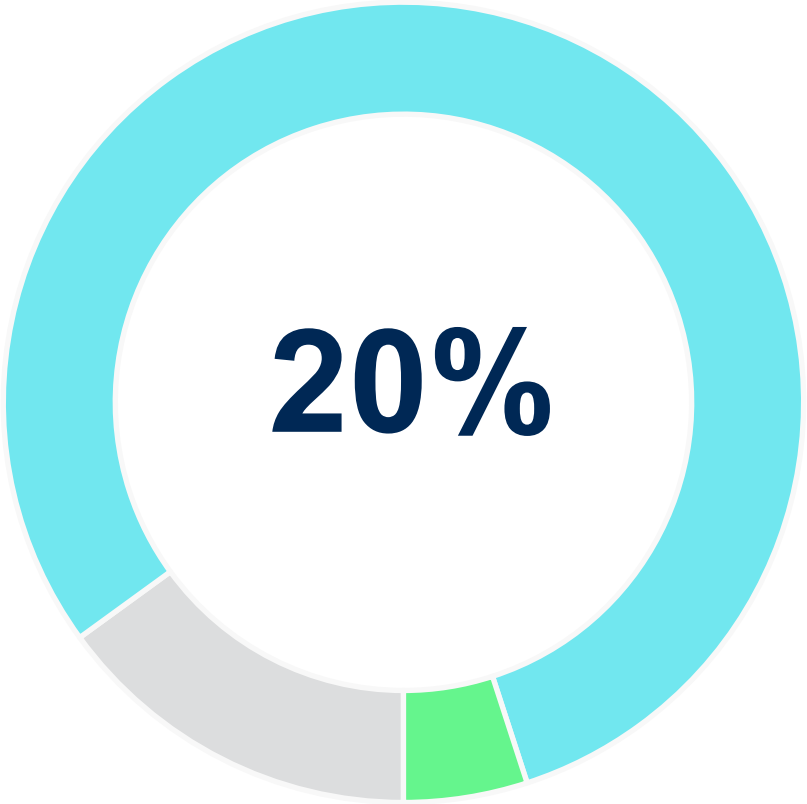
# Agenda

- The Problem to solve
- Focus on Highest Risk
- Transition Plan
- Whole Person Care

# Patient Perspective: All the teams who may call the patient after discharge

| | | | |
|---|---|---|---|
| ED Team (patient satisfaction scores) | Registration Staff (Billing information) | Primary Care Team (follow up visit) | Inpatient Nursing Unit (HCAPS) |
| Specialty Teams (follow up visits) | Hospital Billing (payment arrangements) | Payer Care Management (cost containment) | Office-based Care Management (care coordination) |
| Payer billing (payment of monthly premium, denial of care notices) | Community Based Organizations (Social Determinants of Health issues) | Home Care/Physical Therapy Follow-up | Pharmacy (pick up medications) |

# 30-Day Readmissions




20% of people readmit to the hospital within 30 days.

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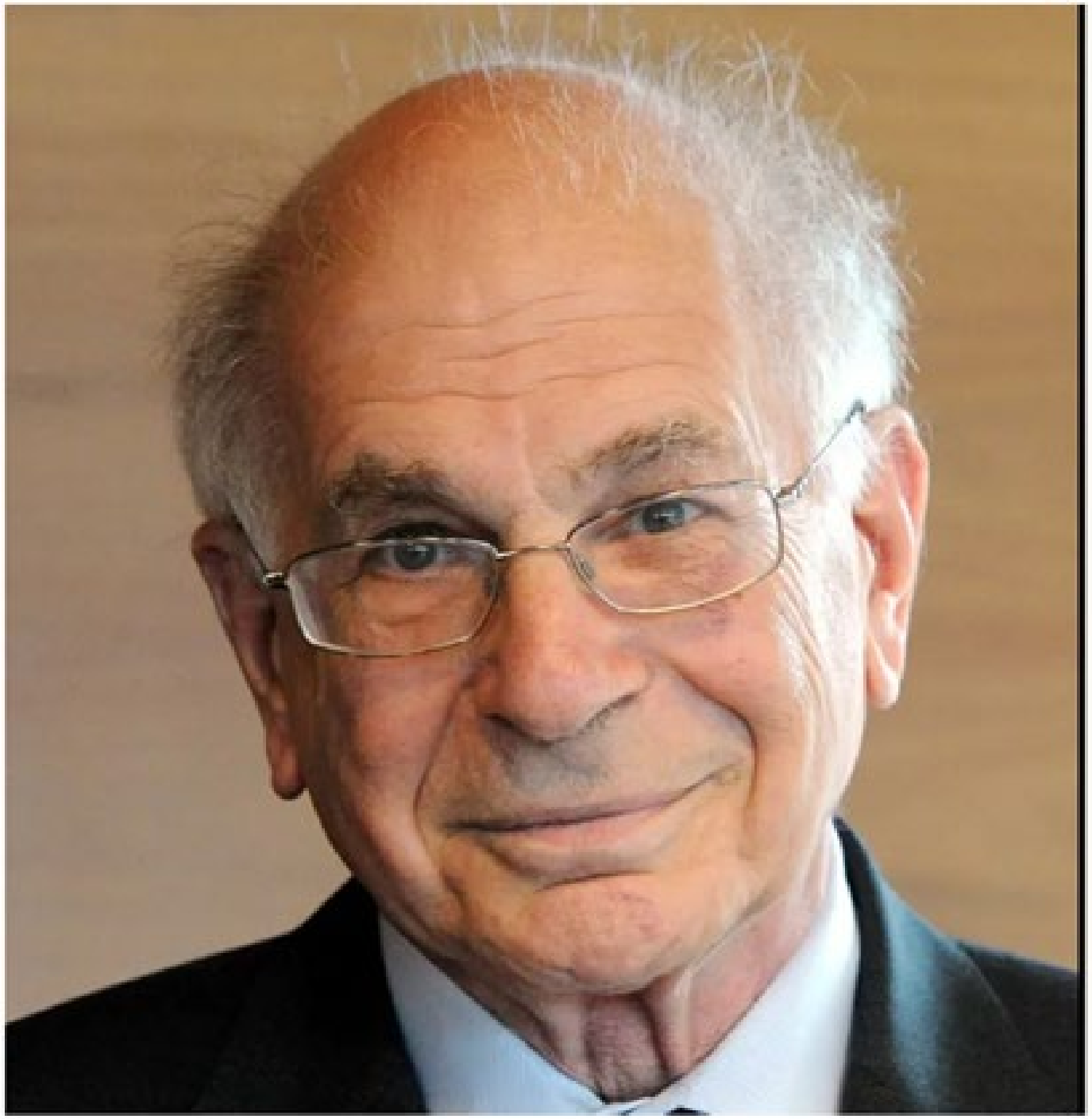
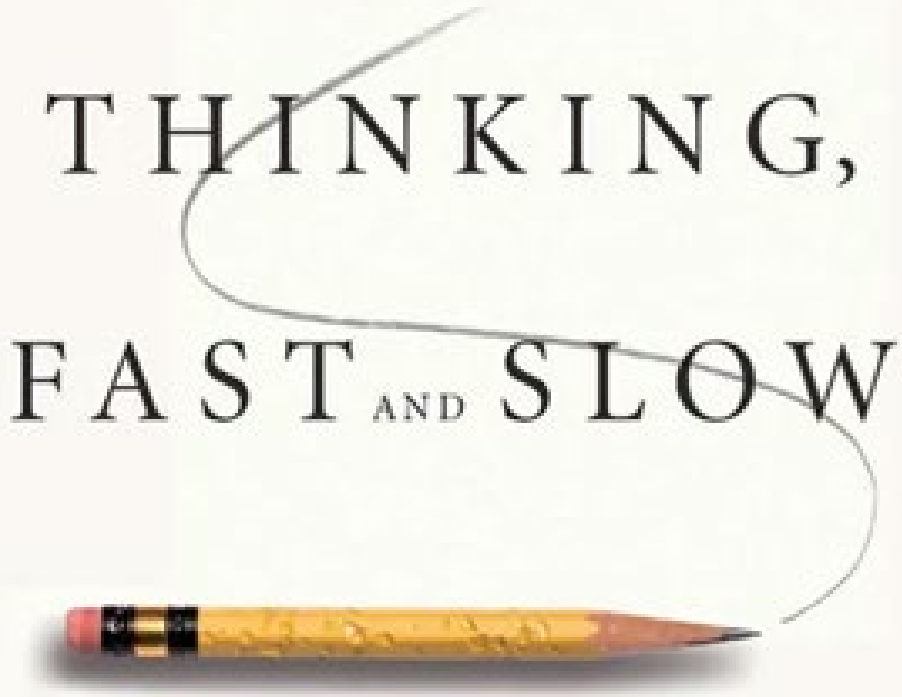
# Underlying philosophy

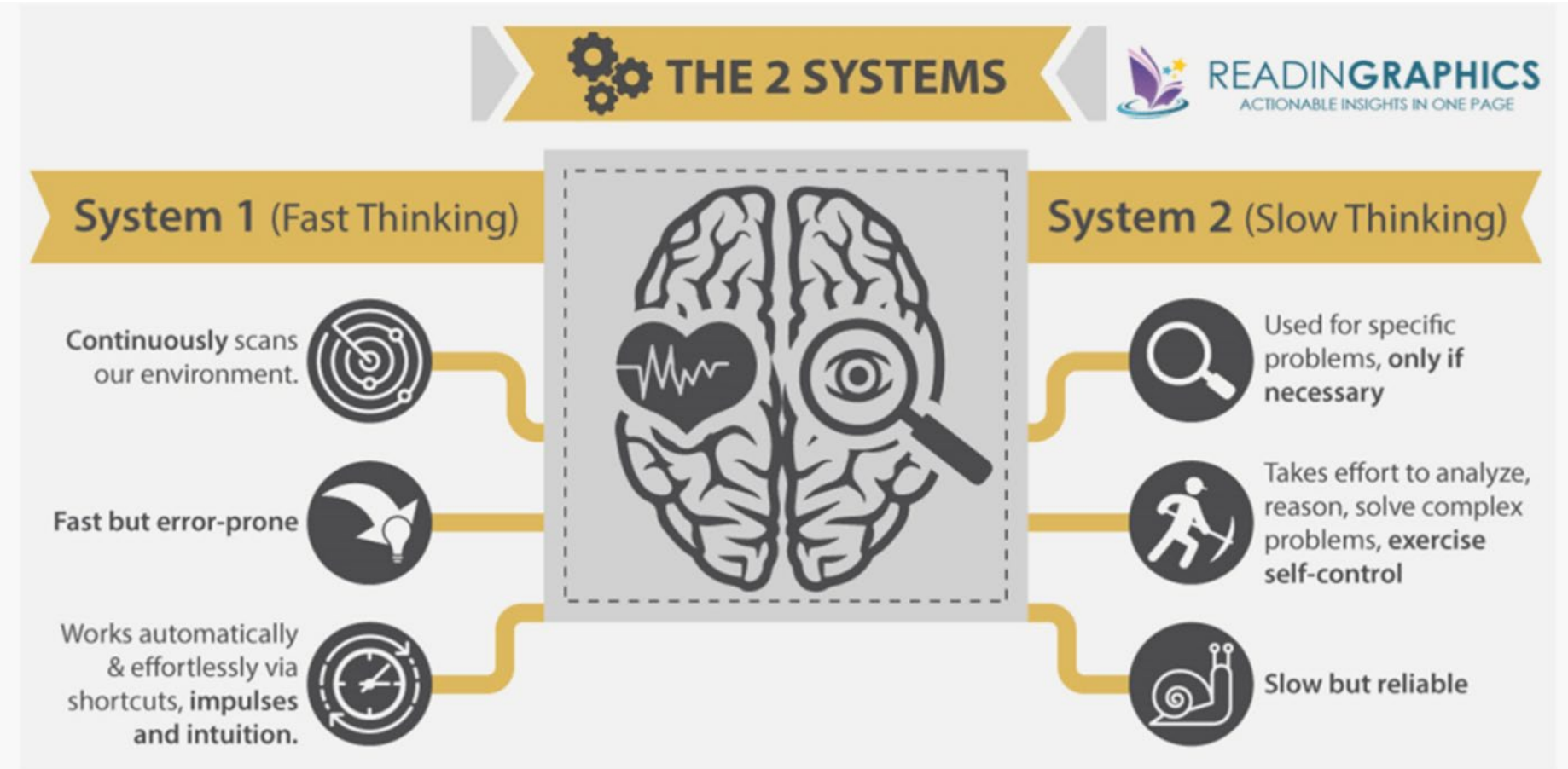
What were we thinking?

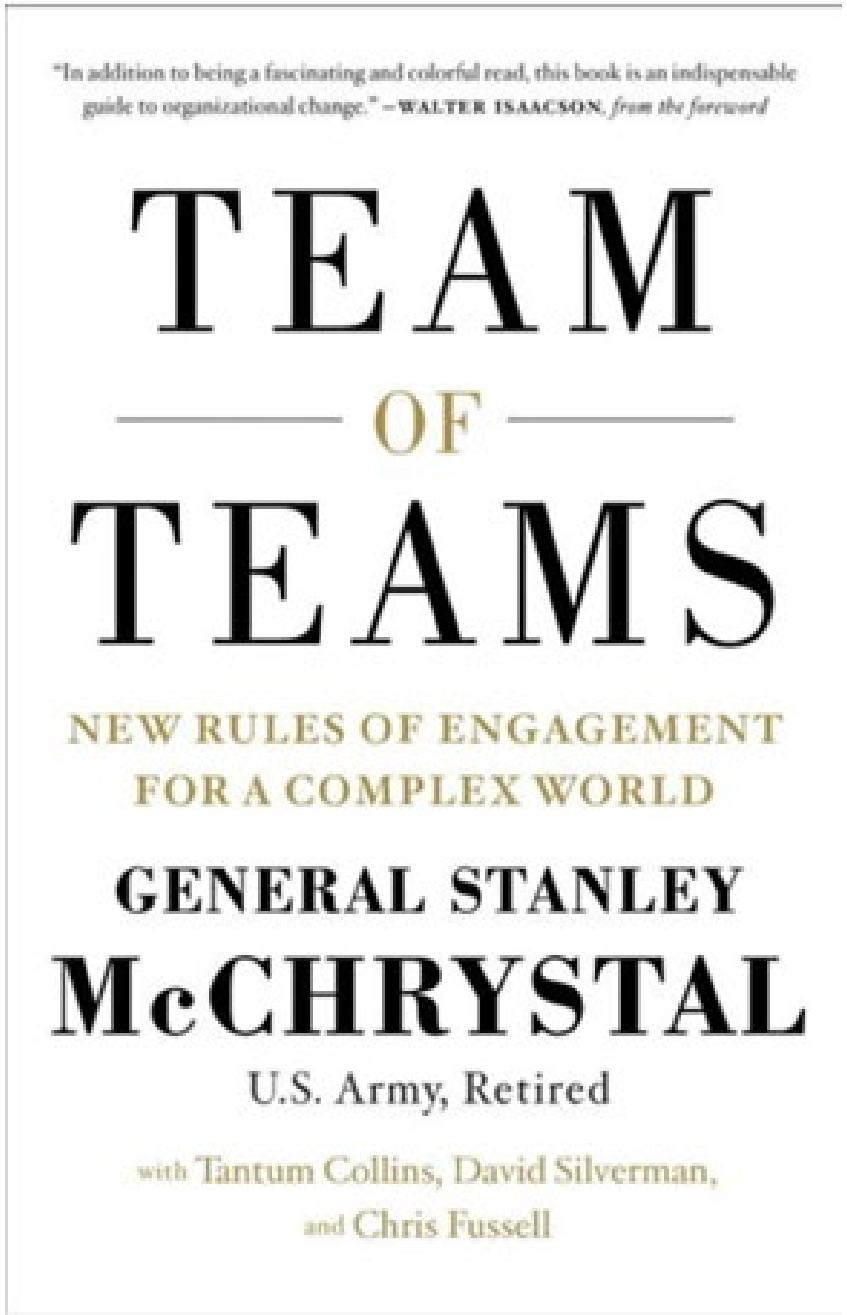


# THINKING, FAST AND SLOW



DANIEL KAHNEMAN


THE 2 SYSTEMS
READINGRAPHICS
ACTIONABLE INSIGHTS IN ONE PAGE
System 1 (Fast Thinking)
System 2 (Slow Thinking)
Continuously scans our environment.
Fast but error-prone
Works automatically & effortlessly via shortcuts, impulses and intuition.
Used for specific problems, only if necessary
Takes effort to analyze, reason, solve complex problems, exercise self-control
Slow but reliable

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## Complicated

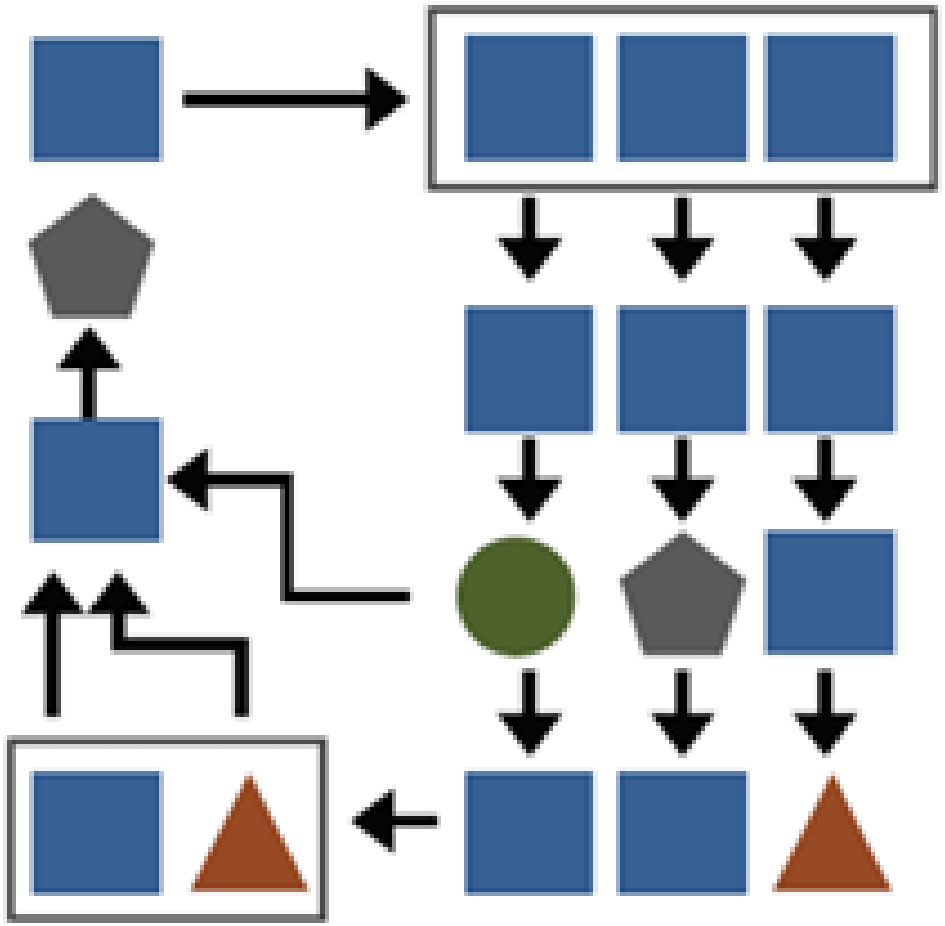
- Many steps, but **predictable** and orderly
- If a newly diagnosed patient met another family in middle/end of journey, the experienced family could explain "what to expect"
- Like alphabetical order

## Complex

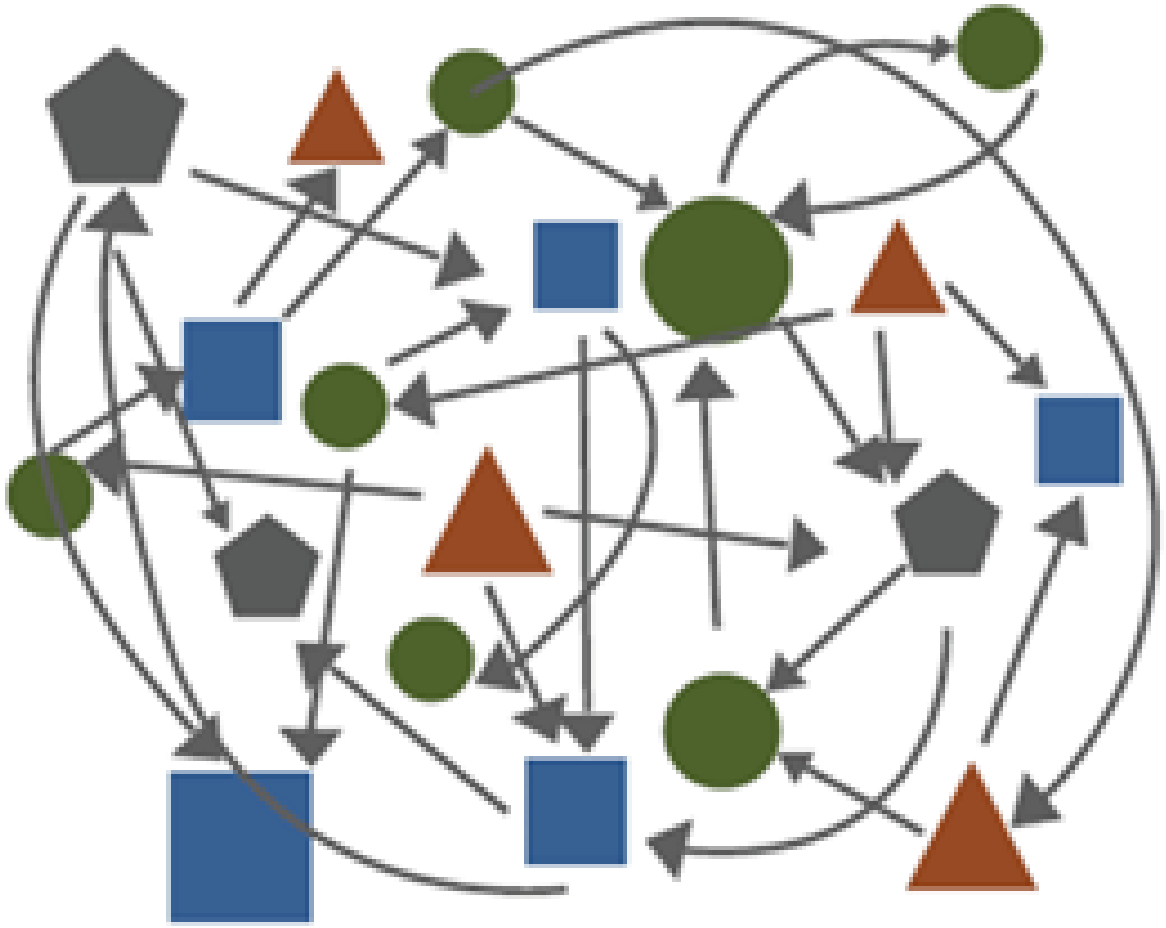
- Many options, no clear correct choice in the moment
- Expect the unexpected
  - Barriers will occur, in different times with different forms
  - The **problem will change as solution is in flight**
  - All the answers lie in different teams and will appear at unexpected times
- Events happen out of order…E, F, G, X, S, E, L, M, O, P, B, Z…are we done yet?

# Complicated vs Complex Systems

READINGRAPHICS
Ideas Come Alive



Complicated



Complex

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# Finding complex patients in real time

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# Hospital Readmission Risk Tools

## LACE+

- 8 Score Factors Considered
- Calculated across all ED/Obs patient statuses
- C-Stat Score: 0.63 – 0.69

## Epic Readmission Predictive Analytics

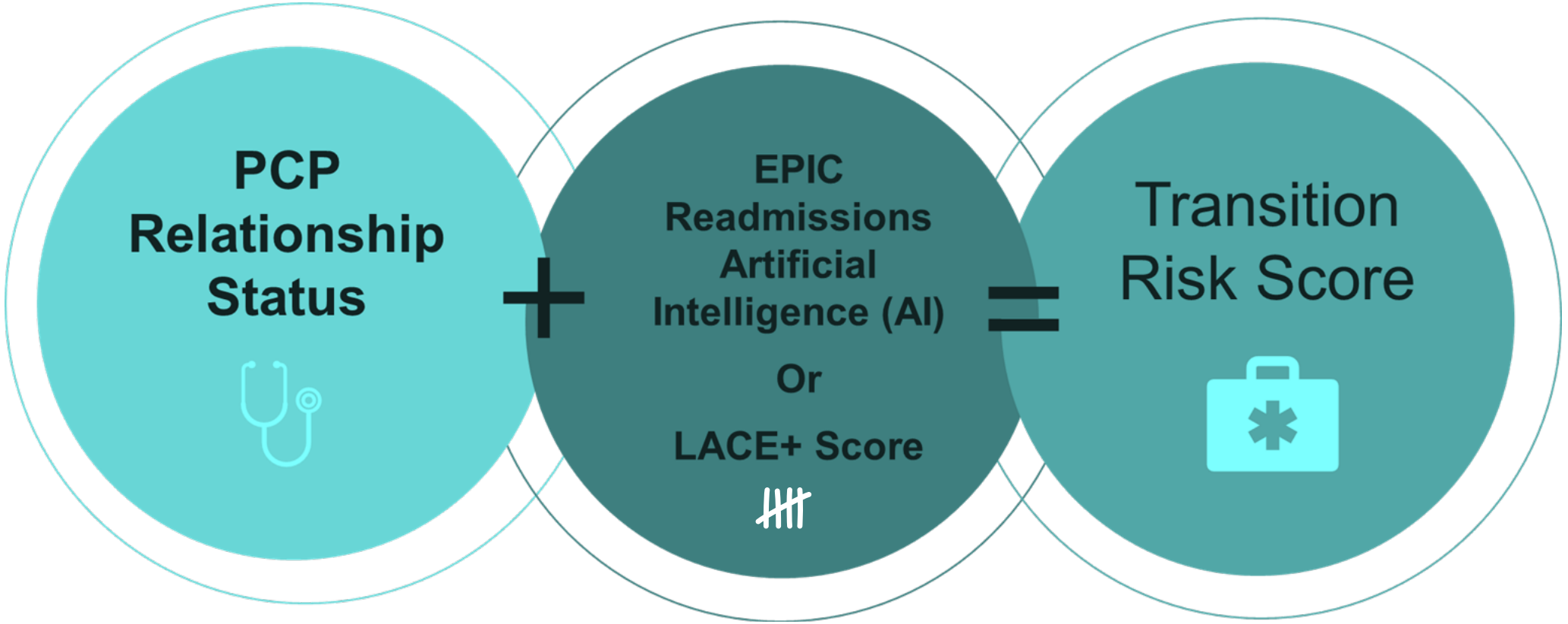
•26 Score Factors Considered
•Calculated across ONLY inpatient statuses
•C-Stat Score: 0.69 – 0.74

# Primary Care Provider Support

- Patients who follow-up early after discharge:
  - 12% to 24% Fewer Unplanned Readmissions
  - Fewer Complications
  - Fewer Emergency Department Visits
  - Lower Healthcare Expenses
  - Higher Quality of Life

**SOURCE** (Barr et al., 2021; Flaks-Manov et al., 2020, p. 1484; Glans et al., 2020, p. 2; Nguyen et al., 2021, p. 2; Wang et al., 2021, p. 1; Weber et al., 2020)

# PCP Relationship as a Risk Factor




**TOC Score = PCP Relationship Score + AI/Lace+ Score**

0 or 1 – Low Risk for Readmission within 30 days
2 – Rising Risk for Readmission within 30 days
3+ – High Risk for Readmission within 30 days

# Predictive Scores: C-Stat Comparison

LACE+: 0.63 – 0.69

EHR Readmission Model: 0.69 – 0.74

Corewell TOC Risk Preliminary Score

Hospital Inpatient Utilization:

0.86 - 0.91

Hospital Emergency Department Utilization:

0.87 - 0.92

# Results

How do we know this change is improvement?

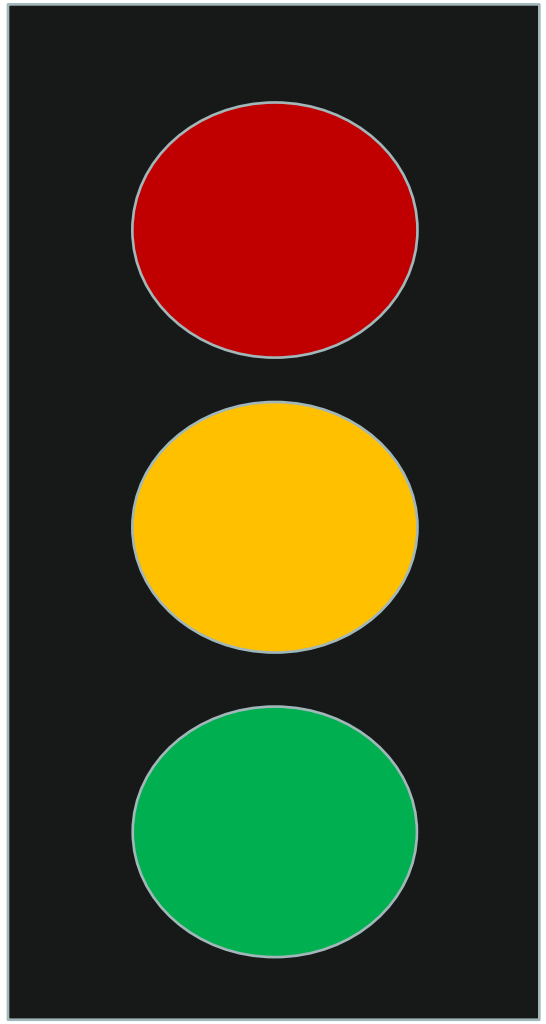
# Discharge Risk Prediction

## Transition Risk Predictive Analytics

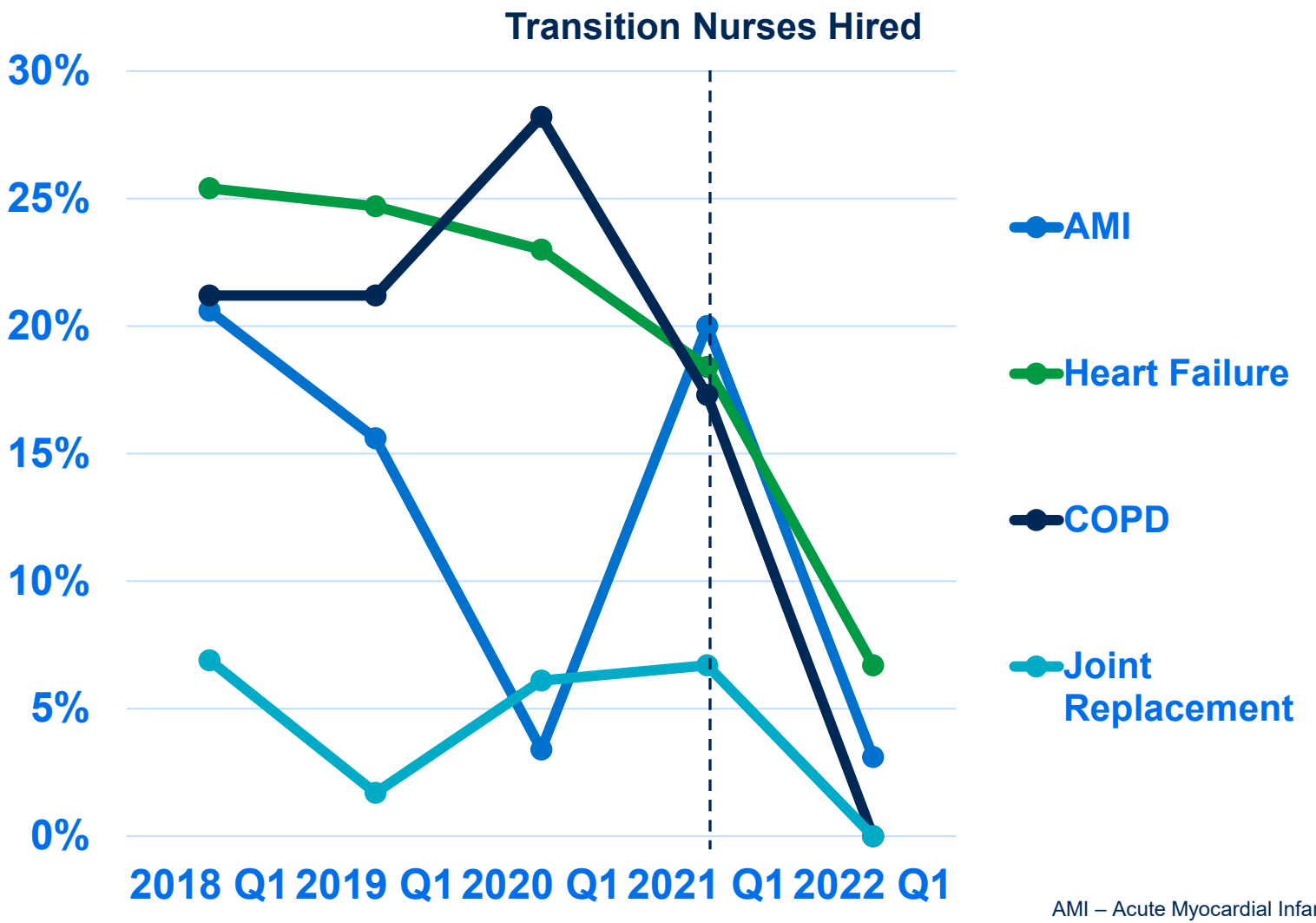
**High Risk Inpatients – 18% of all discharges**

**Rising Risk Inpatients – 22% of all discharges**

**Low Risk Inpatients – 60% of all discharges**



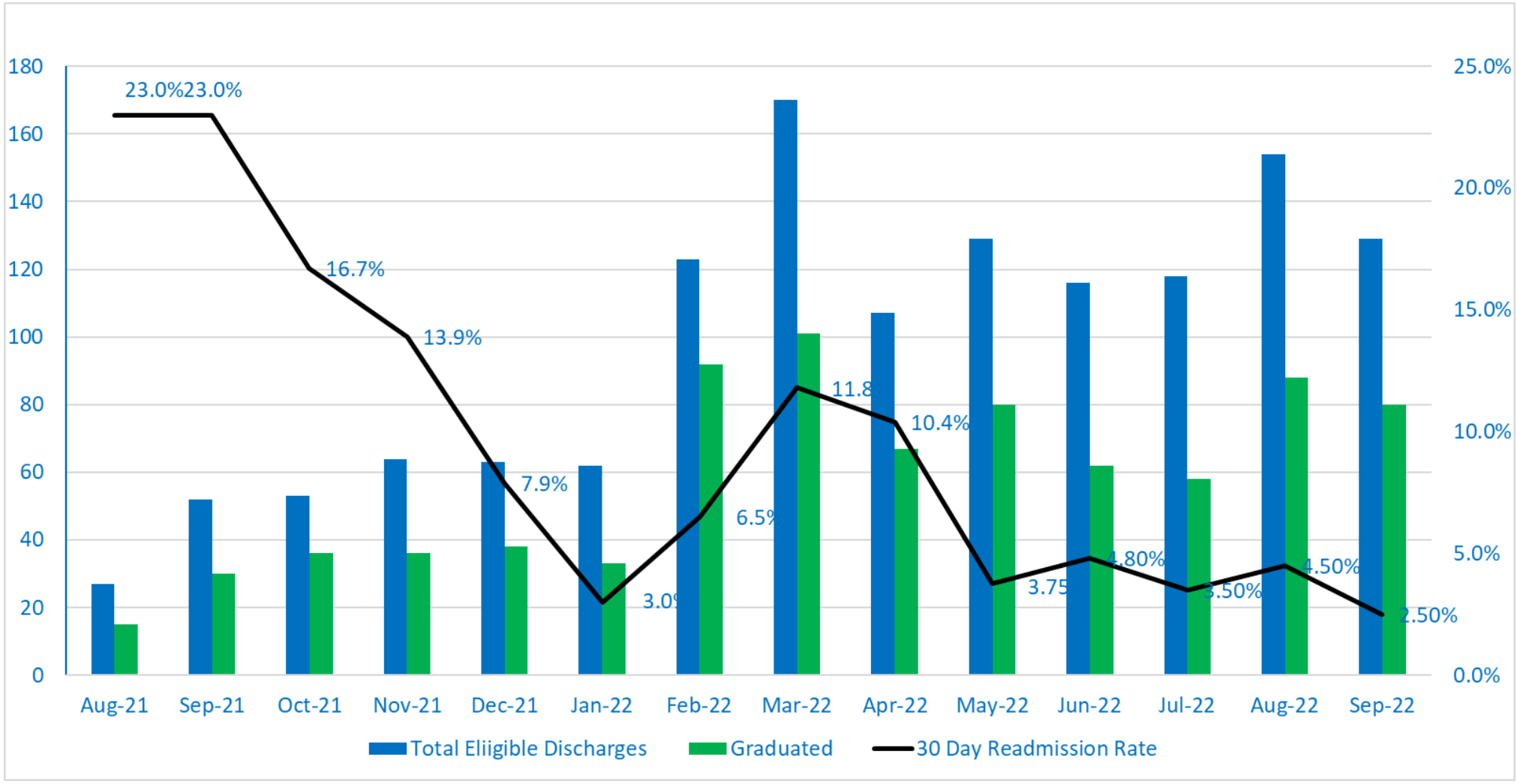
# Transitions of Care:
# Hospital Readmission Reduction Program




- The Transition Care team supports patient recovery in the month after discharge.
- Since February 2021, over 1,750 patients have graduated the program.
- Support team includes nurse care manager, social worker, and community health worker.
- CABG has always been a strong performer and pneumonia is currently suppressed (COVID).

AMI – Acute Myocardial Infarction
COPD – Chronic Obstructive Pulmonary Disease

# High Risk Transition Readmission Reduction



# Discharge Risk Prediction

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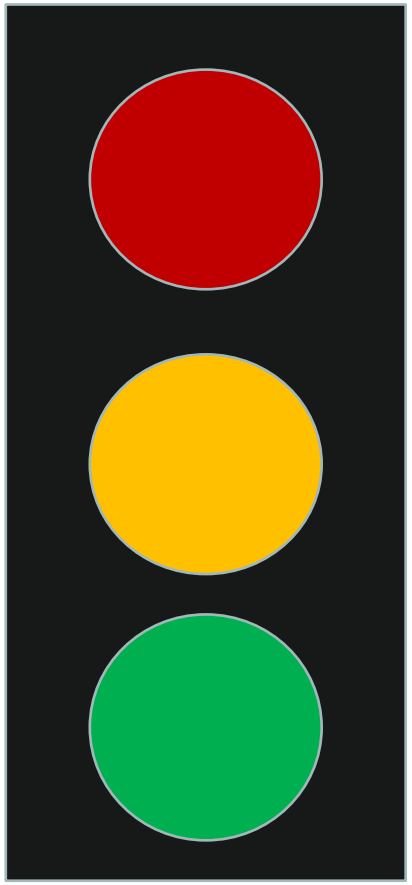

## Readmission Rates

**23%**

**17%**

**7%**

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# Next Steps

What interventions could help patients, if the right people were identified in real time?

# Whole Person Care: the differentiation in high-risk support

# Multidisciplinary Team

## Multidisciplinary team that consist of RN Care Managers, MSW, and Community Health Workers

### Care Manager

- Medication Reconciliation
- Review discharge instructions
- Follow up appointment reminders
- Symptom monitoring / education

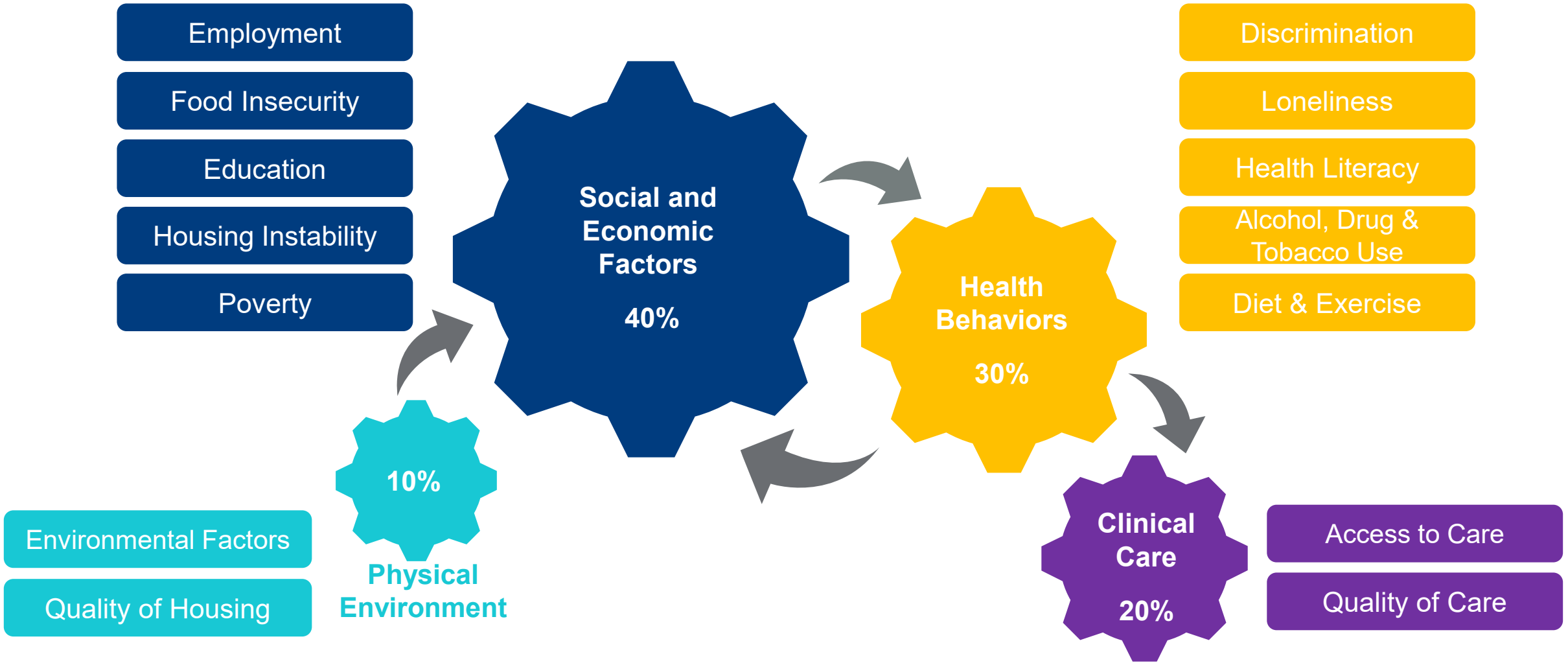
### Social Worker

- PHQ9 / GAD7
- Behavioral health concerns (linkage and referral)
- Brief crisis response

### Community Health Worker

- Transportation
- Utility Assistance
- Eldercare
- Medication Assistance

# Social Determinants of Health: The Extra Credit Question in Transitions



# Top Transition Needs

- Transportation
- Medication
- Food
- Utilities
- Housing
- Supports for Older Adults / Independent Living

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# Transition of Care: Readmission Prevention in Value-Based Risk

## 30-Day Transition Support for Patients at High Risk to Readmit

**TARGET POPULATION:**
**High/Very High-Risk patients in a value-based contract**

**15 Primary Care Offices Participating**

Graduates = **933**

**23%**
Baseline high risk readmission rate

**6.5%**
of program graduates had a readmission

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# Questions?