

# Processes, Tools and Tactics for Successful Bundle Payment Implementation

Vanderbilt University Medical Center

June 2017

# Vanderbilt University Medical Center overview

One of the nation's largest, fully integrated university health systems...

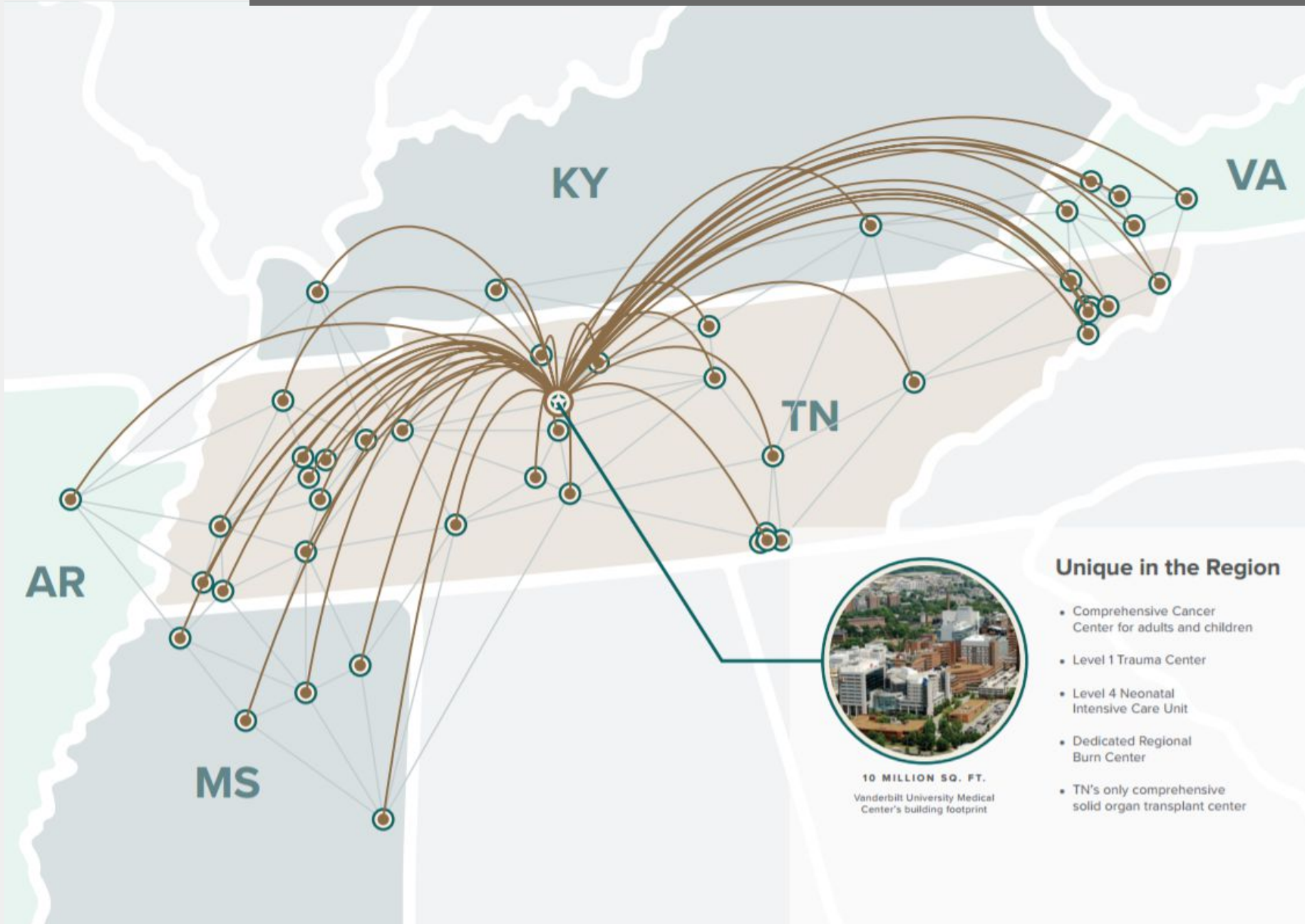
- Annual **operating budget: \$7.5B**
- **3,500 faculty** (MDs, PhDs) across all medical disciplines and sub-sub-sub specialties
- **3 Hospitals** (1,025 beds): Children's, Adult, Psychiatric
  - **57,421** Surgical Procedures
  - **2M ambulatory** visits
  - **123,632** ER visits
- **>20,000 faculty and staff** make it the largest state-based private employer of Tennessee citizens
- NCI-designated **Comprehensive Cancer Center** leading clinical trials center
- **National Centers of Excellence** for Heart, Trauma, Neurosurgery, Diabetes, Children's care, and many others
- **Largest Transplant center** in the Southeast
- **#1 Hospital** in TN- US News & World Report

...with a recognized national stature



- Discovery is core: one of 10 largest U.S. Centers doing **NIH-funded biomedical research at \$500M/year**
- University leader in HIT: **nation's largest Informatics faculty** (70) and over 500 staff
- Lead of **Vanderbilt Health Affiliate Network**: 62 hospitals and >5,200 providers

# Vanderbilt Health Affiliated Network



10 MILLION SQ. FT.  
Vanderbilt University Medical Center's building footprint

## Network Growth

**56** HOSPITAL LOCATIONS

**12** HOSPITALS AND HEALTH SYSTEMS

We collaborate with other hospitals and health systems in our region, providing healthcare and/or research and academic support, including:

- Baptist Memorial Healthcare
- Cookeville Regional Medical Center
- Erlanger Health System
- Jennie Stuart Medical Center
- Maury Regional Medical Center
- Mountain States Health Alliance
- NorthCrest Medical Center
- Saint Thomas (Midtown and Rutherford)
- Sumner Regional Medical Center
- West Tennessee Healthcare
- Williamson Medical Center

## Unique in the Region

- Comprehensive Cancer Center for adults and children
- Level 1 Trauma Center
- Level 4 Neonatal Intensive Care Unit
- Dedicated Regional Burn Center
- TN's only comprehensive solid organ transplant center

## Unique Stats & Facts

Received its largest grant ever — \$71.6 million — for its part in the Precision Medicine Initiative Cohort Program, a landmark study of genetic, environmental and lifestyle factors impacting the health of more than a million people

A credible source of meaningful health information to improve the health of those in the southeast, MySouthernHealth.com has had more than one million page views.

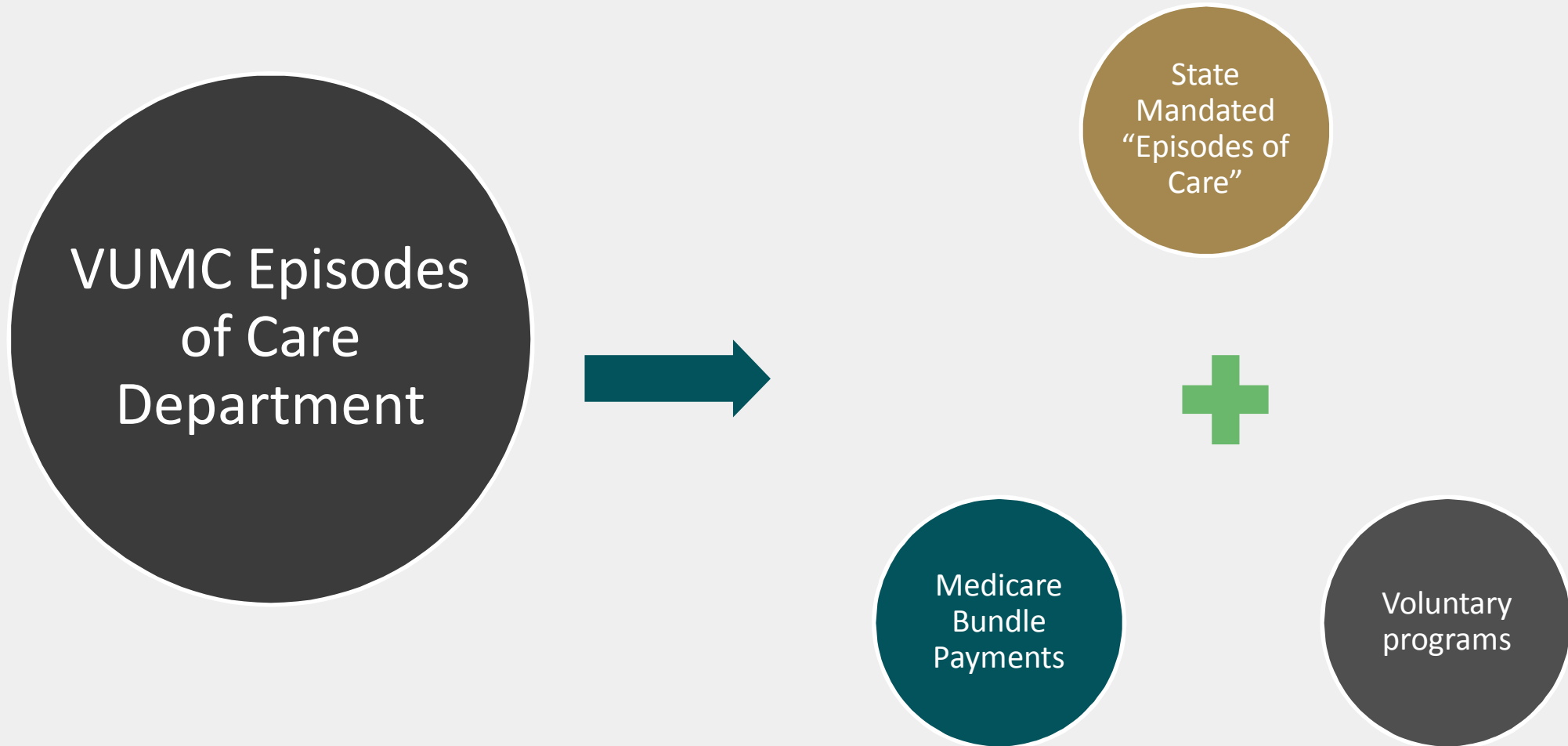
# Population Health Aim

*Design and implement population health management systems which improve the health status and outcomes of served populations at top quartile performance as compared with national benchmarks.*

# Population Health Strategic Drivers

- Execution on VUMC Pay for Performance Contracts – P4P
- Develop and Manage Bundles
- Grow Network
- Grow Lives Under Management
- Grow Employer Based Strategic Contracts
- Establish Capabilities to Excel in Risk Based Insurance Relationships
- Execute on Network Value Creation
  - Quality
  - Total Cost of Care

# Episodes of Care Program



# VUMC Bundle Payment Episodes Landscape

## Mandated- State Medicaid

- Perinatal\*
- Asthma\*
- Total Joint
- Colonoscopy
- Non Acute PCI
- Acute PCI
- Cholecystectomy
- COPD
- EGD
- Respiratory Infection
- Pneumonia\*
- Urinary Tract Infection- Inpt & Outpt
- GI Hemorrhage
- CABG
- CHF acute exacerbation\*
- Valve Repair (Pediatric)\*
- ADHD
- ODD
- Bariatric Surgery

## Mandated- CMS

### CMS

- Total Joint (CJR)
- Coronary Artery Bypass\*
- Acute Myocardial Infarctions\*
- Surgical Hip/Femur Fracture Treatment\*

## Voluntary (at risk with payer)

- **CMS (Bundle Payment Care Initiative- BPCI)**
  - Valve Surgery\*
  - Total Joint\*
  - Stroke\*
- **Oncology Care Model\***
- **Spine Surgery\*/ Total Joint**

# What does it mean to be in a Total Joint Bundle?

## BPCI

## CJR

## State Medicaid

## Private Employer Program

## 1/1/2018: Commercial

Base definition

DRG; hip fractures added

DRGs w/ & w/o Hip fractures

Primary Procedure w/ inclusion and exclusion criteria

DRG based; related care at facility only

Primary Procedure w/ inclusion and exclusion criteria

Timeframe

Admission to 90 days post discharge

Admission to 90 days post discharge

45 days before to 90 days post discharge

Admission to 90 days post discharge at facility only

45 days before to 90 days post discharge

Risk/reconciliation

Two sided risk; retrospective

Two sided risk; retrospective

Two sided risk; retrospective

One sided risk; prospective

One sided risk; retrospective

Quality

Claims driven, not linked

Submission of PROMs can help decrease discount

Claims driven, only linked to gainsharing

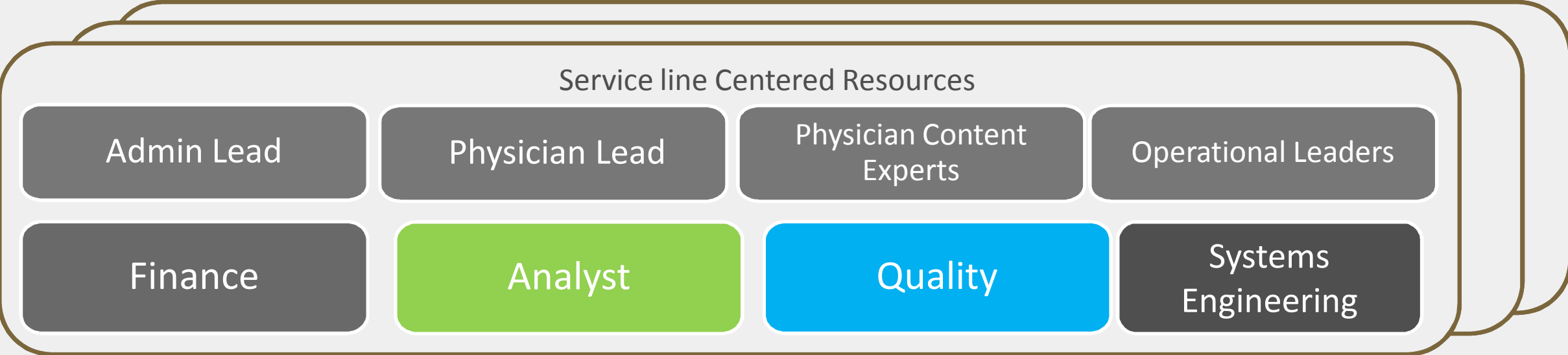
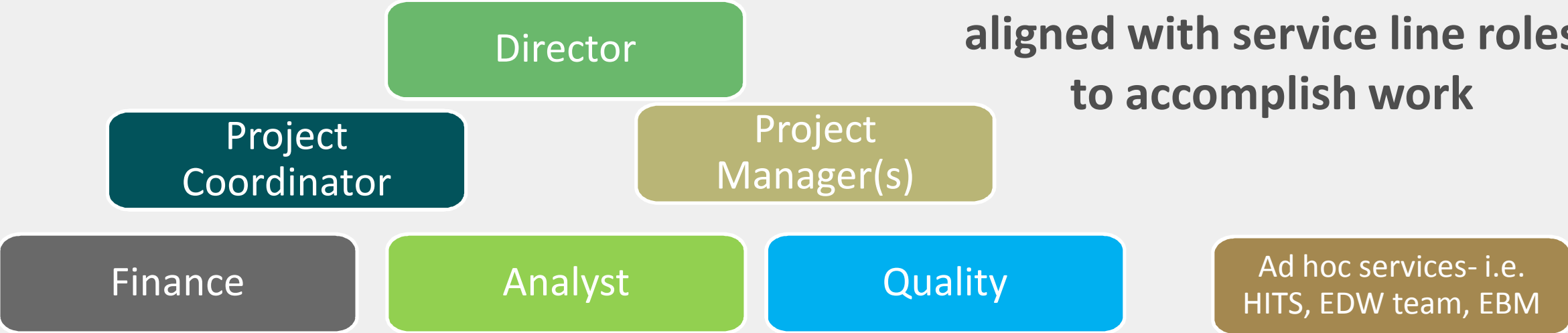
None

Claims driven, only linked to gainsharing

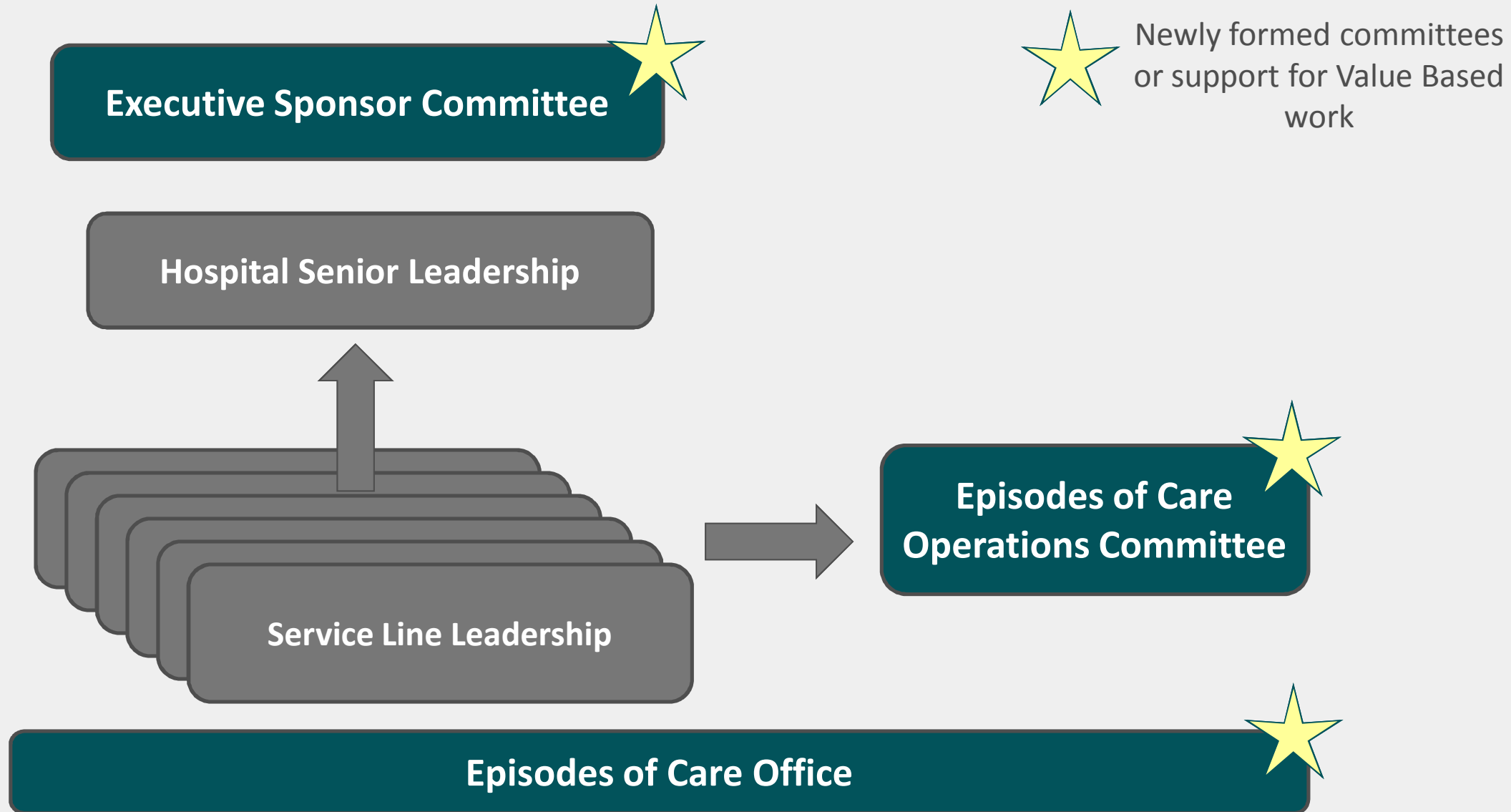


# CENTRALIZED SUPPORT

# Office of Episodes of Care aligned with service line roles to accomplish work



# Episode of Care Governance Structure



# 2017 PILLAR GOALS

VANDERBILT UNIVERSITY MEDICAL CENTER

## PEOPLE

We nurture a caring, culturally sensitive, and professional atmosphere as we continuously invest in the individual and collective aspirations of our people

### IMPROVE EMPLOYEE ENGAGEMENT

- to 3.99

### ACHIEVE AN EXISTING EMPLOYEE RETENTION RATE

- of 83%

## SERVICE

Collegiality is a central characteristic of our culture and defines how we serve our patients, those we teach, and the local and worldwide community

### IMPROVE PATIENT SATISFACTION

- Percentile ranking of Top Box Performance measured against national benchmark:
- to 42.3 (out of 100)

### INCREASE NEW PATIENTS SEEN ACROSS ALL SERVICES

- Within 14 days to 55.3%
- Within 5 days to 39.4%

## QUALITY

We relentlessly pursue and measure ourselves against the highest quality performance in all areas, from patient care to scholarship

### IMPROVE PATIENT HARM INDEX: REDUCE ASSOCIATED INFECTIONS AND ACQUIRED CONDITIONS

- to 791

### REDUCE O/E MORTALITY (UHC)

- to 0.95

### ACHIEVE CLINICAL EFFECTIVENESS TARGETS

- in 4 of 8 population health measures

### ACHIEVE READMISSION RATE TARGETS

- in 5 of 8 hospital services

## GROWTH & FINANCE

We invest our resources in a manner that supports our long-term obligation to society; to achieve local, national and worldwide impact in improving health

### MEET OR EXCEED VOLUMES

- 59,834 Hospital Discharges
- 63,427 Surgical operations
- 175,259 Key outpatient procedures

### REDUCE CMI ADJUSTED RESOURCE LENGTH OF STAY WHILE MAINTAINING QUALITY OF CARE

- to 2.77 days

### ACHIEVE FINANCIAL TARGETS

- In results of operations
- In net revenue per FTE
- In days of cash on hand

## INNOVATION

We seek excellence and leadership as we advance our systems of care, educational practices and our commitment to discovery

### DEMONSTRATE THE IMPACT OF VALUE BASED CARE ACROSS THE NETWORK

### ACHIEVE ACADEMIC PERFORMANCE TARGETS

- In grants and contracts expenditures: \$337 million
- In participation in research: 27,145 participants, 900 active studies
- In award recognition: 317

### INCREASE NUMBER OF TELEHEALTH VISITS

- to 6,368

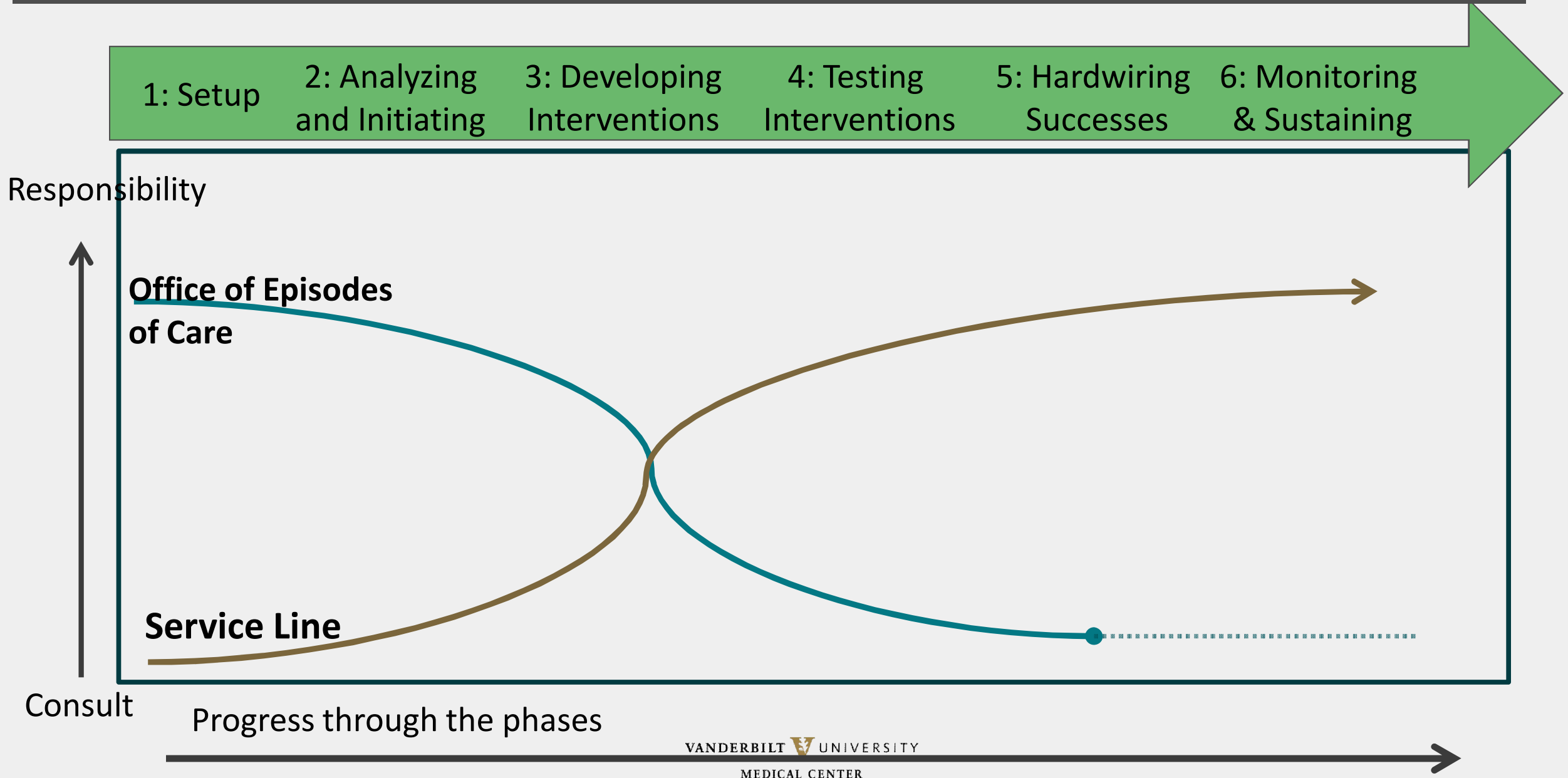
EPICLEAP IMPLEMENTATION

On time. On budget. 100% functional

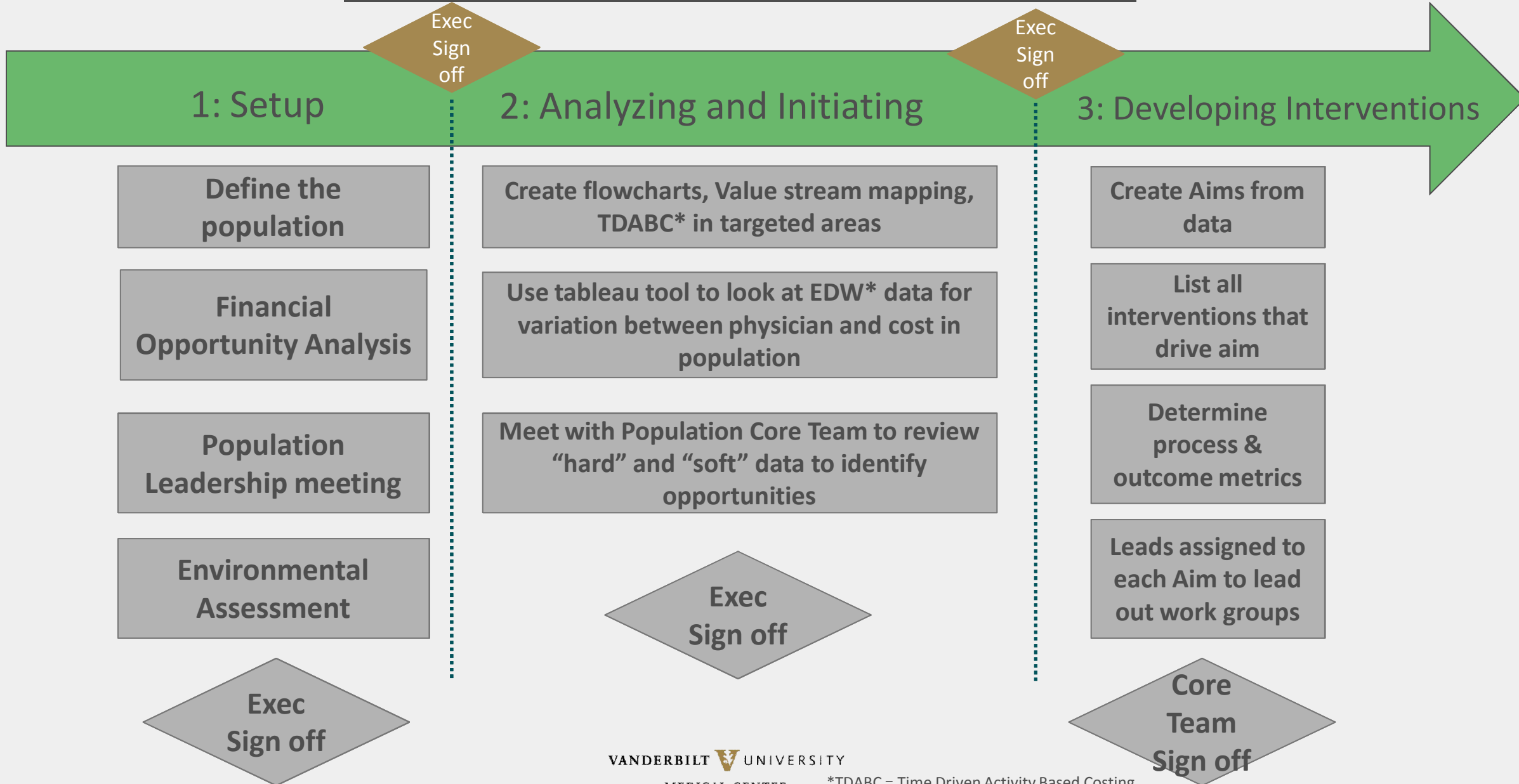
Values above reflect threshold for each goal. Goals approved by VUMC Board on August 31, 2016.

# STRUCTURED PROCESSES

# Shifting Responsibilities through the Phases of the Playbook



# Episodes of Care Playbook



# Episodes of Care Playbook

## 4: Testing Interventions

Identify intervention to test in PDSA iterative cycle

Measure identified process metrics for desired effect

Report out progress/changes; recognize success

## 5: Hardwiring Success

Spread Interventions that give desired effect based on data

Continue measuring process measures; add outcome measures

Create electronic tools for clinical support

Publish data on an ongoing reporting tool

## 6: Monitoring and Sustaining

Identify owners of process in each phase to review data

Determine “alerts” for review

Set up regular meetings for key members for report out on “hard” and “soft” data

Cycle back to phase 4 or 5 if issues are identified



# STANDARDIZED TOOLS

# Process Improvement tools

- Driver diagrams
- A3
- Process Flowcharts
- Lean events

Project Name: SHFFT Subcommittee: Frailty Scores

Revision Date: 3/1/17

Project Owner: Julianne Williams

Team Members: Teresa Hobt-Bingham, Jeremy Whitaker, Phebe Bloomingburg, Mitchell Sexton, Cathy Maxwell, Mary Duvanich

**PROBLEM STATEMENT:**

**The problem of:**

Standardized assessment and intervention for evidenced based predictability of outcomes related to frailty does not exist for this patient population.

**Affects** (users and/or stakeholders):

Patients and families lack information that could guide care and decision making in this vulnerable population.

**The impact of which is** (issues, costs, etc):

Quality of Life, Care continuum, Cost, Comfort, LOS and care decisions can be negatively impacted.

**CURRENT STATE:** What is the story?

(Use graphs/metrics/process map so anyone can understand)

- Evidenced based preinjury frailty assessments single most important predictive indicator of outcomes in the geriatric SHFFT patient population.
- Current state: Available tools to assess and intervene have not been implemented in this population.
- Trauma population in general have implemented strategies for assessment and early palliative care consultation for all patients >65 years of age.
- There were 2019 unique encounters from 9/1/16-2/28/17 (past 6 months) for units 10S, 6RW, and 7RW. Of these, 989 encounters were of patients over 65 years old, **49% of encounters.**

**ROOT CAUSE ANALYSIS:** Why is this problem occurring?

(Study the issue to determine & ask why)

- Lack of tools to identify vulnerable populations.
- Lack of standardized approach for decision making in identify vulnerable populations.
- Physician focus to fix vs function.
- Multiple services involved in care of patients.
- Lack of understanding of palliative terminology and patient support potential

**FUTURE STATE:**

What is the desired outcome? What are the metrics?

- Implement frailty assement in 100% of defined vulnerable population. Early Palliative Care Consultation will increase for the appropriate patients.
- Identify Frailty Pathway for these patiens

**SOLUTION:**

What specific changes will be made to address the root cause?

- Assess current state (# of patients >65 within the defined units).
- Design a RedCap to capture assessment and data electronically.
- Understand and estimate palliative care impact.

**ACTION PLAN:** What are the steps to implement the solution?

Task	Owner	Due Date	Status Not Started, In Process, Complete
Share valididty, tools, & frailty background w/team	C. Maxwell	2/6/17	Complete
Send SHFFT background data to C. Maxwell	J. Whitaker	2/6/17	Complete
A3 Review & Checkin	J. Williams J. Whitaker K. Reich	2/27/17	Completed
Data Collection: # patients >65 for 10s/6RW/7RW	J. Whitaker J. Charlson	3/2/17	Complete see current state data
Identify a RN Champion & Mentor	P. Bloominburg T. Hobt-Bingham - Maggie	3/2/17	Complete
Add/engage key stakeholders: Resident Champion, Medicine (J. Williams) Palliative Care, Faculty (M. Duvanich) Medine (P. Raymond, J. Spicer, J. Hicks, cc Dr. Rice) -All invited to attend Frailty Mtg. Part 2 on 3/2/17	J. Williams M. Duvanich	3/2/17	Complete
Determine start date for 10s/6RW for data collection: We will do the frailty assessment on all patients on 6RW/10S over the age of 65	Phebe Bloomingburg	3/15/17	complete
Redcap for data	C. Maxwell	3/15/2017	Complete



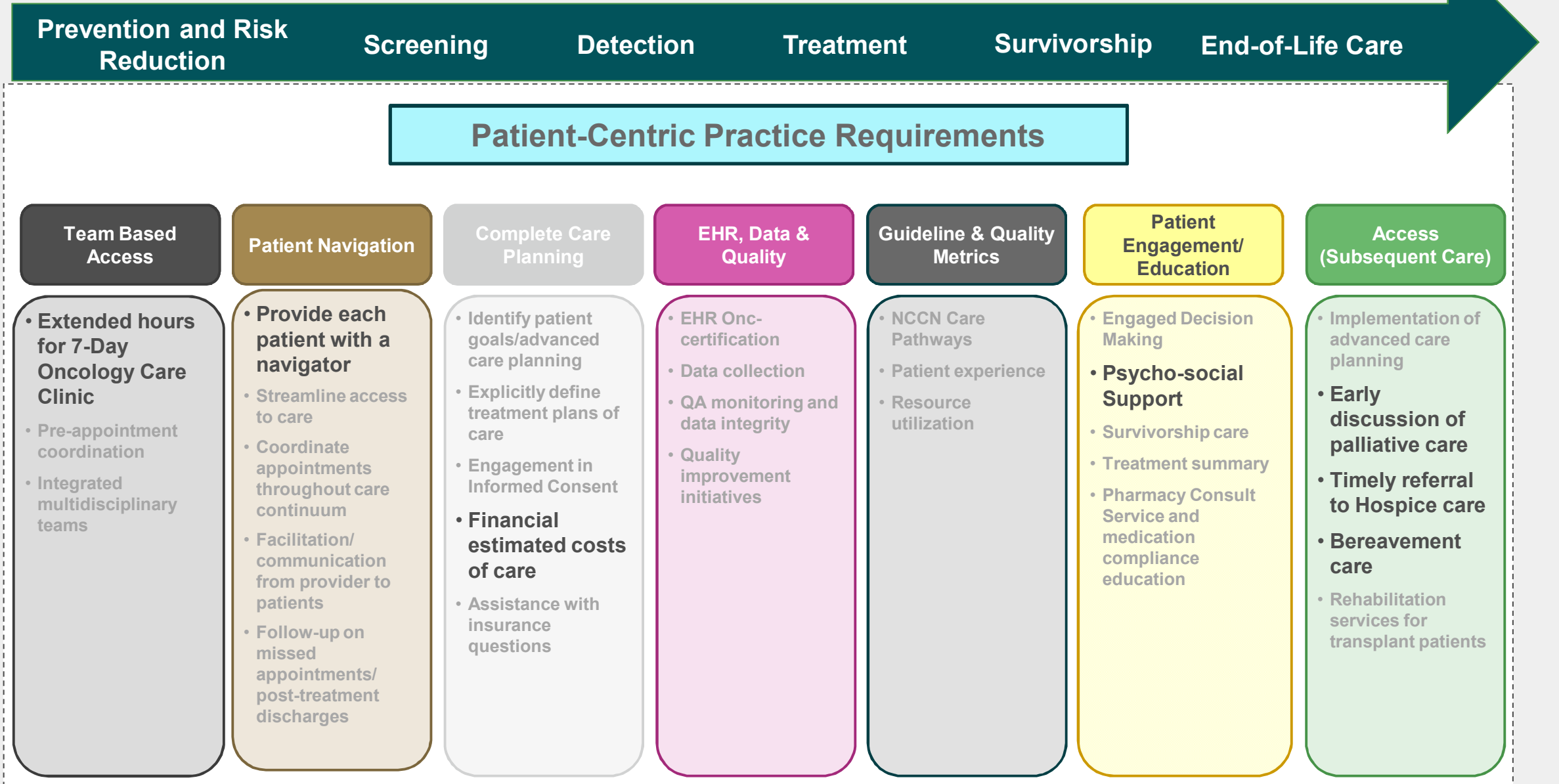
# Reporting Tools

- Quality Workbook
- Cost Workbook
- Integrated Workbook
- Area specific tableau

# Key Tactics of Successful Implementation

1. Care Coordination across the Continuum
2. Multidisciplinary Team including Physician leaders
3. Physician Engagement driving Evidence Based Medicine
4. Reporting for Hardwiring and Monitoring
5. Outside Partnerships

# Care Coordination Across the Continuum



\* **Bolded** items indicate current areas of VICC focus across continuum

# Multidisciplinary Teams Move Mountains

- Admitting
- Cancer Center Staff and Administration
- Care Connections
- Cancer Patient Navigators (ENT/Breast)
- Cancer Registry
- Coding & Charge Entry
- Decision Support
- DOM/Division of Hematology/Oncology
- DOM/Division of Internal Medicine
- Department of Bioinformatics
- Department of Emergency Medicine
- Department of Neurology
- Department of OB/GYN
- Department of Psychiatry & Behavioral Sciences
- Department of Radiation Oncology
- Department of Urologic Surgery
- Emergency Department
- Enterprise Dashboard Team
- Enterprise Program Management Office
- Episodes of Care
- Financial Counseling
- Health IT
- Laboratory
- Managed Care Contracting
- Compliance
- Nursing Education
- Patient Education
- Patient Flow Center
- Pharmacy
- Quality, Safety and Risk Prevention
- Radiology
- Reimbursement
- Revenue Cycle
- School of Nursing
- Strategic & Operational Analytics
- Strategy & Innovation
- Transition Management Office
- Vanderbilt-Ingram Service for Timely Access
- VUMC Executive Leadership
- VICC Community Engagement, Education & Affiliations

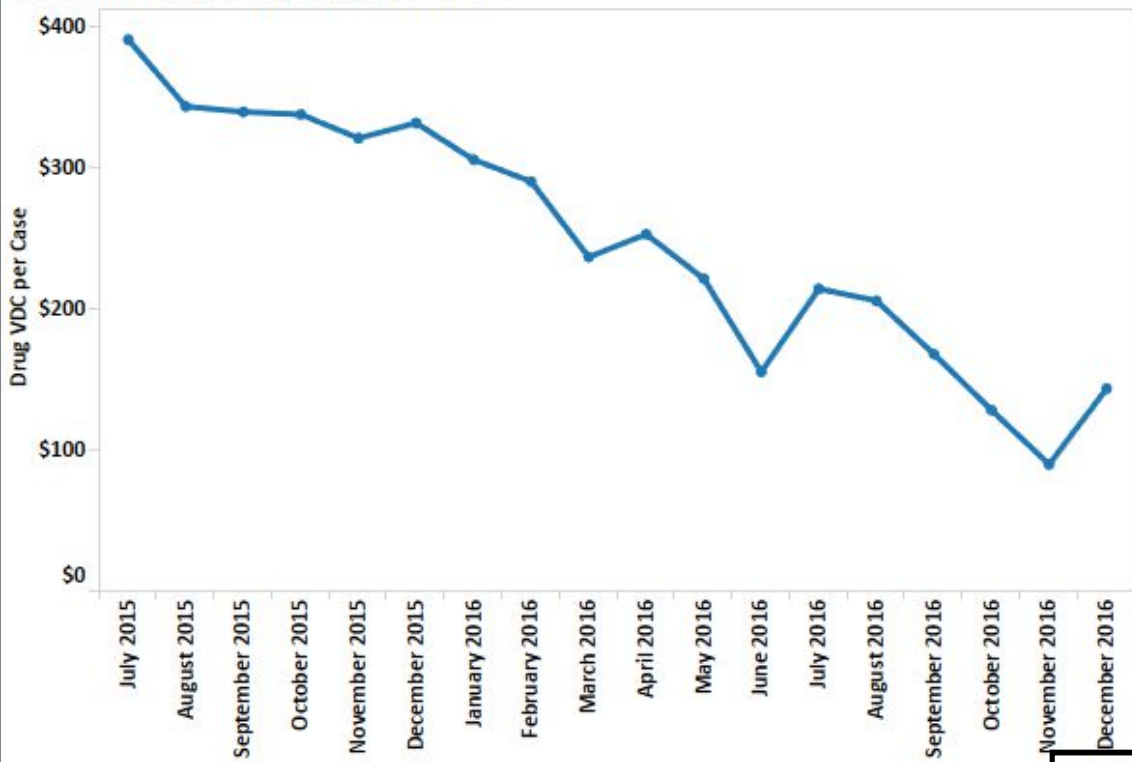


\*OCM workgroup members and leads

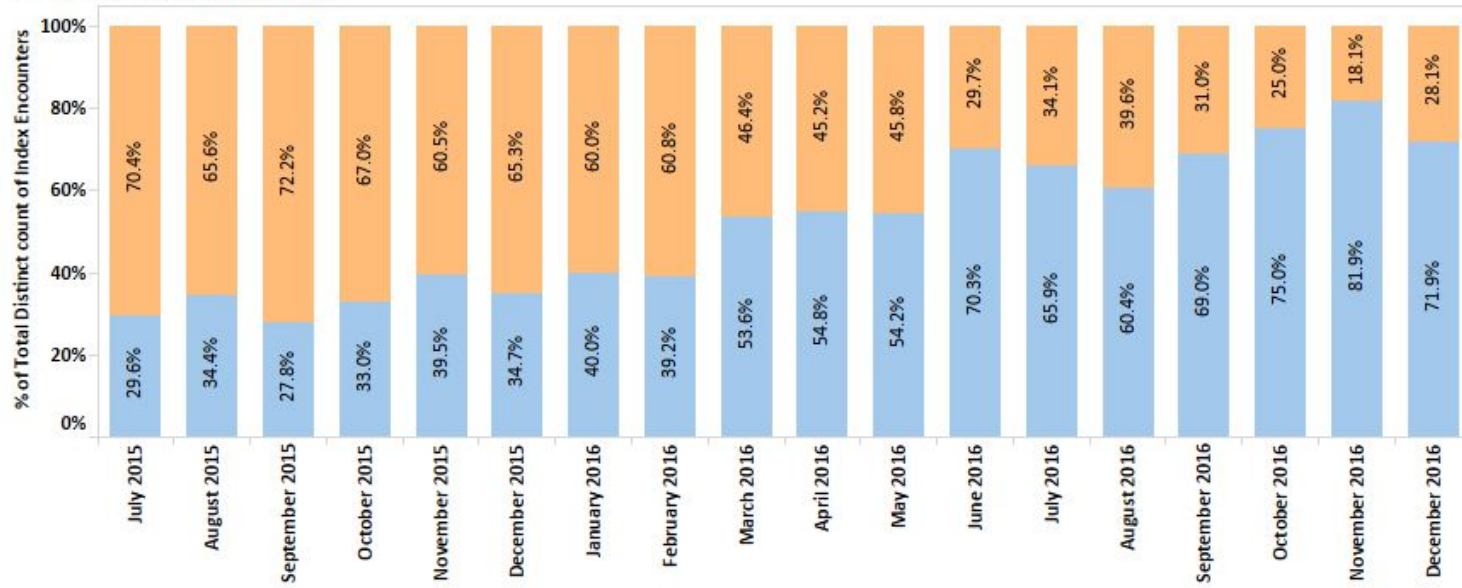


# Physician Engagement driving Evidence Based practice











Combined drug cost per case over time



Medication usage over time

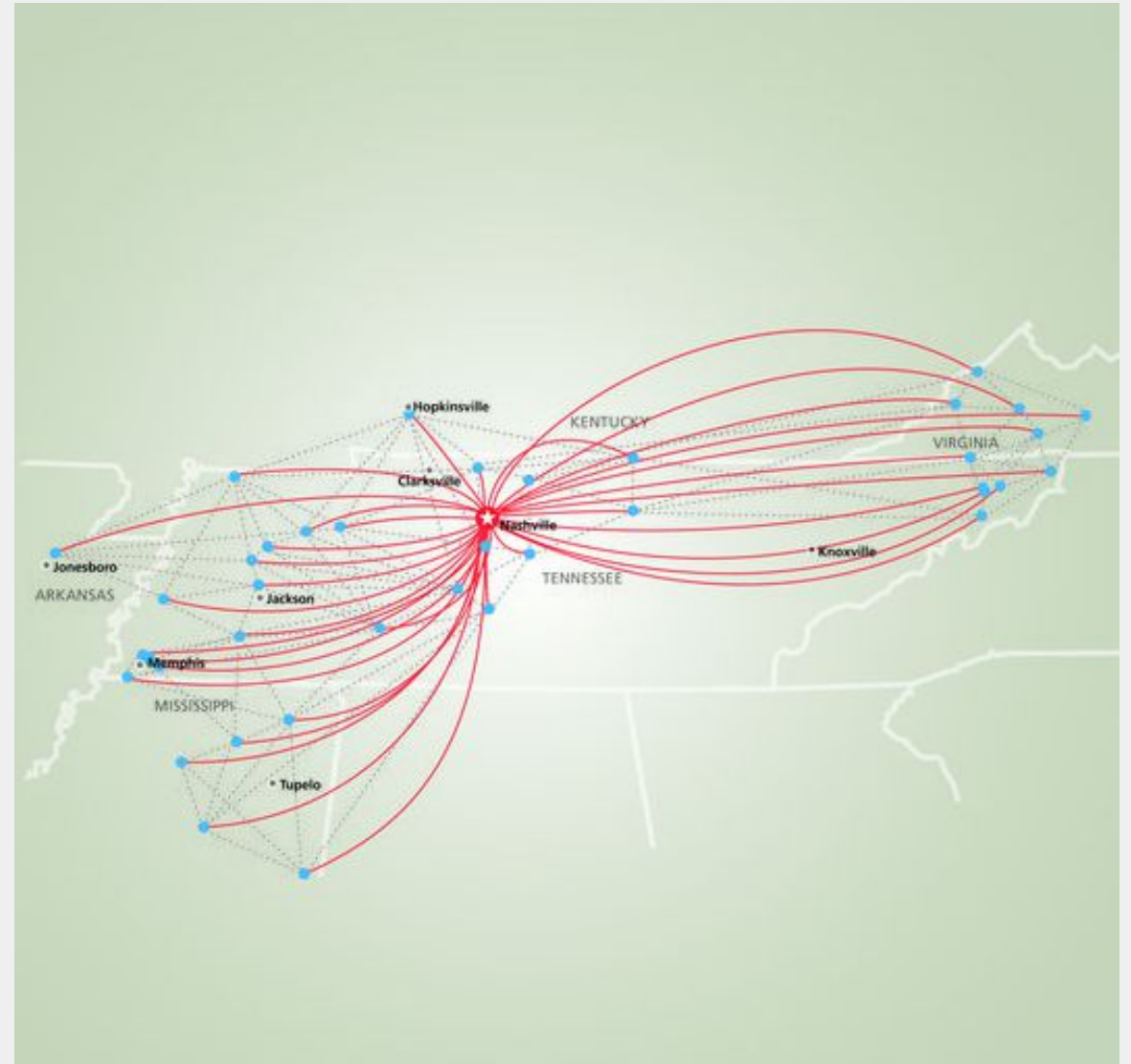


# Dashboards for Hardwiring and Monitoring

Episodes of Care - Quality Metrics Report Card							
Fiscal Year		Episode Name	Measure Type	Measure Name	Target	Performance	
(Multiple values) <input type="text"/>		ASTHMA	LAG	Asthma Follow Up Appt	43%	24.0%	
(Multiple values) <input type="text"/>		COPD	LAG	COPD - 30 Day Readmission	21%	14.1%	
LAG <input type="text"/>		PNEU	LAG	Pneumonia - 30 Day Readmission	17%	15.2%	
(All) <input type="text"/>		SPINE	LAG	Spine - Readmission	10%	5.5%	
Performance Status  Target Met  Target Not Met		STROKE	LAG	Stroke - Modified Rankin	90%	5.7%	
				Stroke- 30 Day Readmission	11.3%	7.7%	
				Stroke- 90 Day Readmission	30%	13.6%	
		TJR	LAG	Total Joint - 90 Day Readmission	20%	9.7%	

# Partnerships strengthen care

- Affiliated Network
  - 56 hospitals
  - 3,500 physicians
  - 12 hospital systems
  - HIE
- Post acute Care partners for clinical care
  - Skilled Nursing Facility
  - Inpatient Rehab
  - Home Health
  - Long Term Acute Care



# Outcomes and next steps

- 28 Episodes at risk with Payers
- Clinical re-design complete on 12 episodes
- Reduced Variable Direct Cost by 6M
- Internal tools to measure cost and quality
- Analytics tool to measure CMS data
- Engaging with 4 new episodes this coming year

**QUESTIONS-**

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