![Duke University Hospital entrance at night]

Duke University Hospital

Clinical Care | Education | Research

Driving Organizational Performance

Kevin W. Sowers, MSN, RN, FAAN
President, Duke University Hospital

Agenda

- **Introduction to Duke University Hospital**

- **Structure**
  - Governance
  - Clinical Service Units
  - Facilities

- **Process**
  - Performance Measurement

- **Outcome: Driving Performance Improvement**
  - Emergency Department High Utilizers
  - Same Day Access Heart Failure Clinic
  - Comprehensive Sickle Cell Center

Duke University Hospital
Mission, Vision, Values / Core Competencies
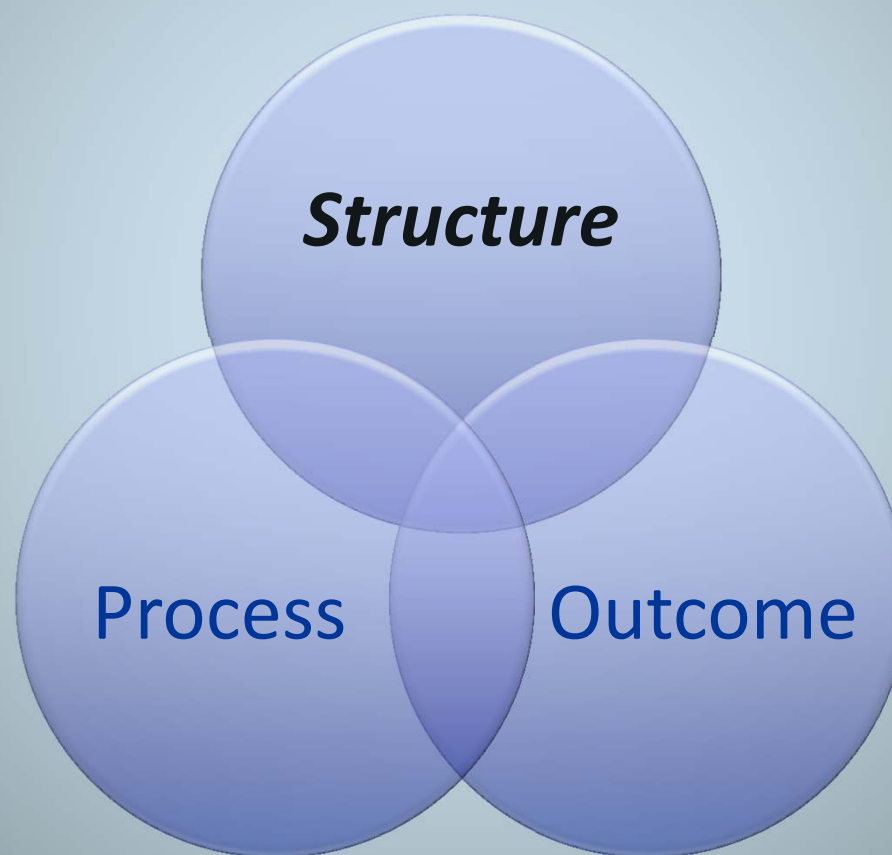
Duke University Hospital

How do we achieve excellence?

In order to achieve excellence, each individual must understand what it means to be successful and make a commitment to strive for excellence.
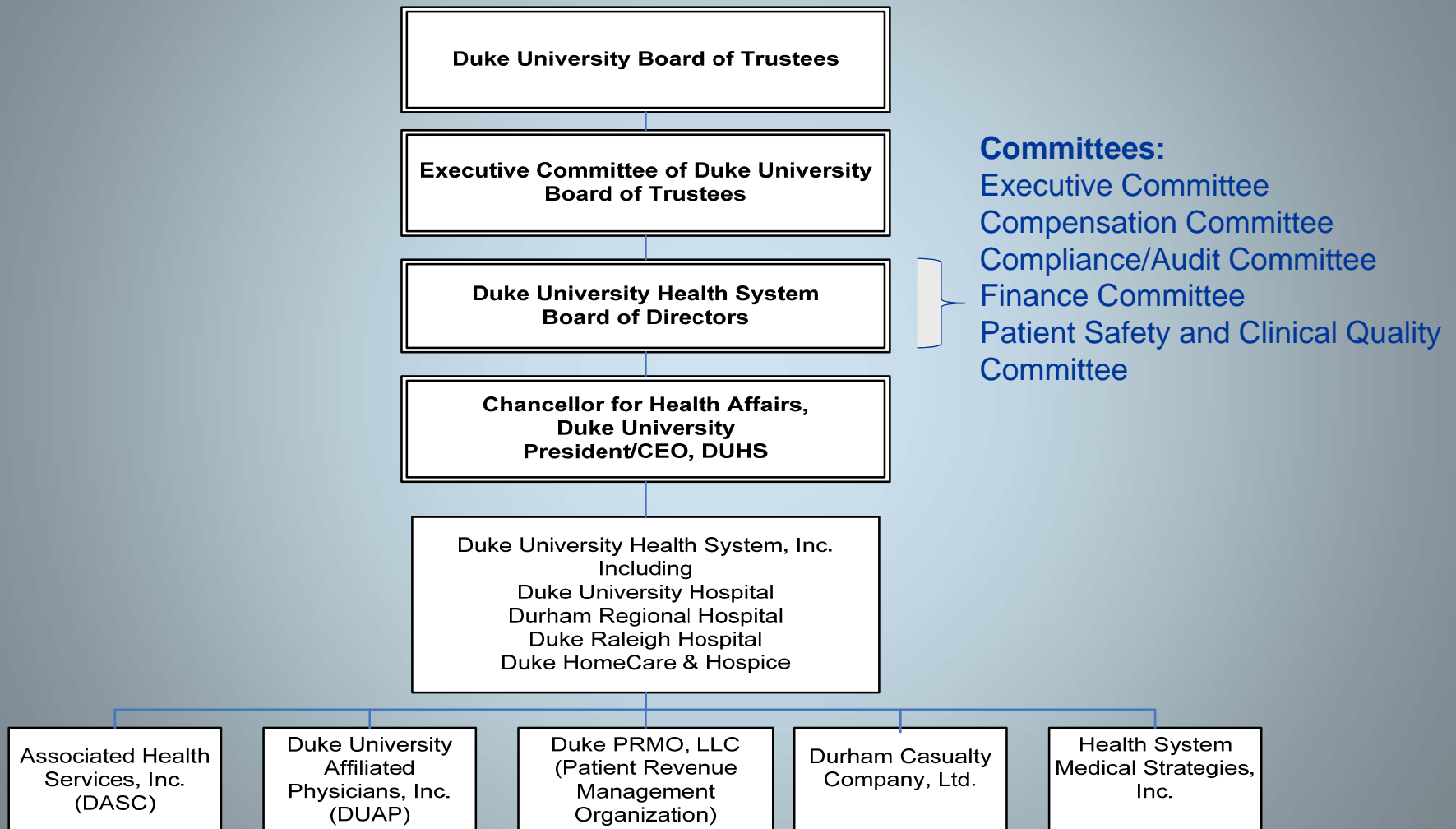
Make that commitment to excellence TODAY…

• Understand the organizational priorities

• Understand how to promote service excellence

• Understand what methods we use to improve performance

• Get involved in your area.

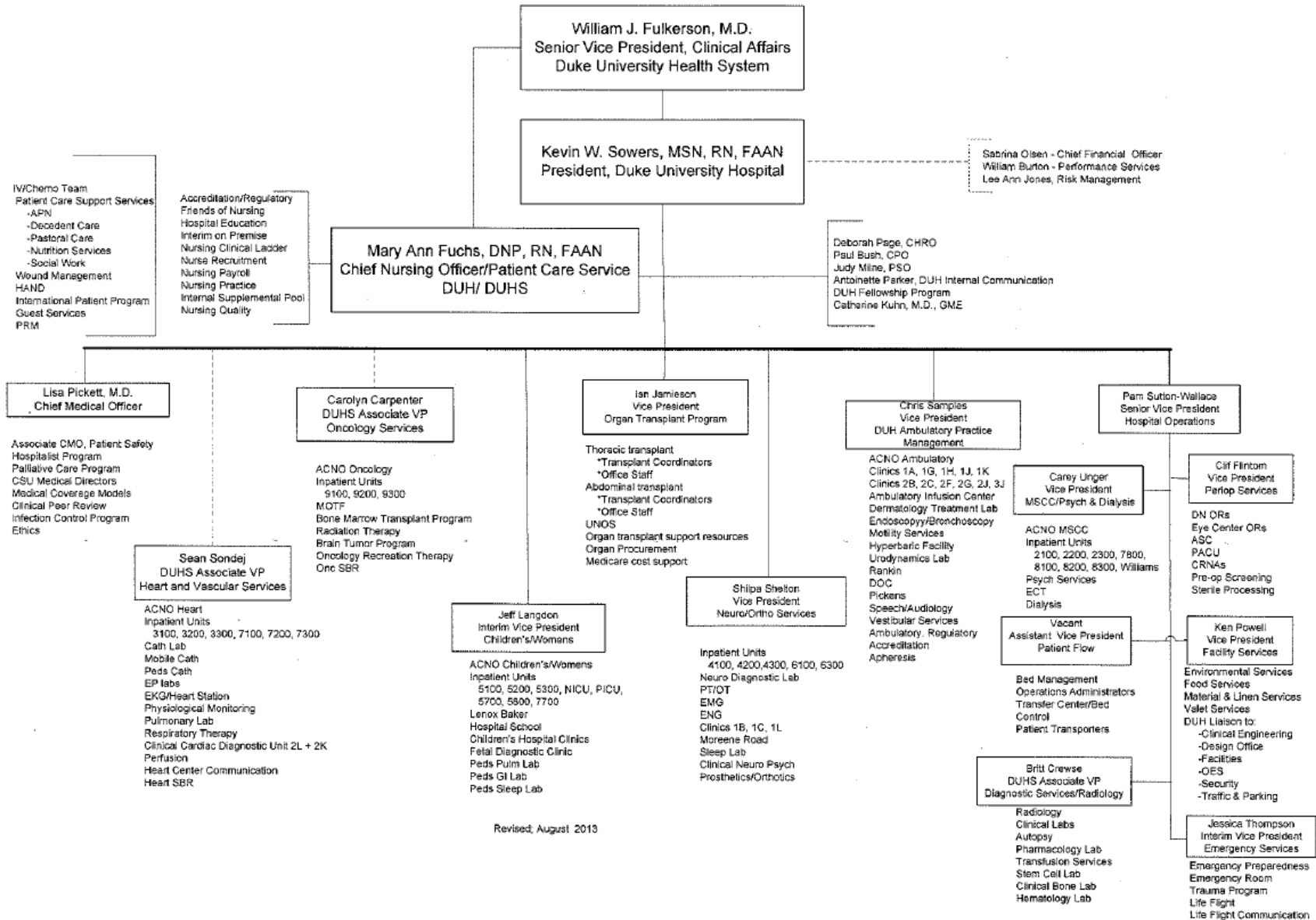# Driving Organizational Performance

Structure

Process

Outcome

Duke University and Health System
Governance Structure

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┌─────────────────────────────────────────┐
│      Duke University Board of Trustees   │
└─────────────────────────────────────────┘
┌─────────────────────────────────────────┐
│  Executive Committee of Duke University  │
│            Board of Trustees             │
└─────────────────────────────────────────┘
┌─────────────────────────────────────────┐
│      Duke University Health System       │
│            Board of Directors            │
└─────────────────────────────────────────┘
┌─────────────────────────────────────────┐
│        Chancellor for Health Affairs,    │
│              Duke University             │
│           President/CEO, DUHS            │
└─────────────────────────────────────────┘
┌─────────────────────────────────────────┐
│      Duke University Health System, Inc. │
│                 Including                │
│           Duke University Hospital       │
│          Durham Regional Hospital        │
│            Duke Raleigh Hospital         │
│          Duke HomeCare & Hospice         │
└─────────────────────────────────────────┘
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Committees:
Executive Committee
Compensation Committee
Compliance/Audit Committee
Finance Committee
Patient Safety and Clinical Quality Committee

Associated Health Services, Inc. (DASC)	Duke University Affiliated Physicians, Inc. (DUAP)	Duke PRMO, LLC (Patient Revenue Management Organization)	Durham Casualty Company, Ltd.	Health System Medical Strategies, Inc.

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Duke University Hospital Organizational Chart

William J. Fulkerson, M.D.
Senior Vice President, Clinical Affairs
Duke University Health System

Kevin W. Sowers, MSN, RN, FAAN
President, Duke University Hospital

Sabrina Olsen - Chief Financial Officer
William Burton - Performance Services
Lee Ann Jones, Risk Management

Mary Ann Fuchs, DNP, RN, FAAN
Chief Nursing Officer/Patient Care Service
DUH/ DUHS

Deborah Page, CHRO
Paul Bush, CPO
Judy Milne, PSO
Antoinette Parker, DUH Internal Communication
DUH Fellowship Program
Catherine Kuhn, M.D., GME

IV/Chemo Team
Patient Care Support Services
-APN
-Decedent Care
-Pastoral Care
-Nutrition Services
-Social Work
Wound Management
HAND
International Patient Program
Guest Services
PRM

Accreditation/Regulatory
Friends of Nursing
Hospital Education
Interim on Premise
Nursing Clinical Ladder
Nurse Recruitment
Nursing Payroll
Nursing Practice
Internal Supplemental Pool
Nursing Quality

Lisa Pickett, M.D.
Chief Medical Officer

Associate CMO, Patient Safety
Hospitalist Program
Palliative Care Program
CSU Medical Directors
Medical Coverage Models
Clinical Peer Review
Infection Control Program
Ethics

Carolyn Carpenter
DUHS Associate VP
Oncology Services

ACNO Oncology
Inpatient Units
9100, 9200, 9300
MOTF
Bone Marrow Transplant Program
Radiation Therapy
Brain Tumor Program
Oncology Recreation Therapy
Onc SBR

Sean Sondej
DUHS Associate VP
Heart and Vascular Services

ACNO Heart
Inpatient Units
3100, 3200, 3300, 7100, 7200, 7300
Cath Lab
Mobile Cath
Peds Cath
EP labs
EKG/Heart Station
Physiological Monitoring
Pulmonary Lab
Respiratory Therapy
Clinical Cardiac Diagnostic Unit 2L + 2K
Perfusion
Heart Center Communication
Heart SBR

Ian Jamieson
Vice President
Organ Transplant Program

Thoracic transplant
*Transplant Coordinators
*Office Staff
Abdominal transplant
*Transplant Coordinators
*Office Staff
UNOS
Organ transplant support resources
Organ Procurement
Medicare cost support

Jeff Langdon
Interim Vice President
Children's/Womens

ACNO Children's/Womens
Inpatient Units
5100, 5200, 5300, NICU, PICU,
5700, 5800, 7700
Lenox Baker
Hospital School
Children's Hospital Clinics
Fetal Diagnostic Clinic
Peds Pulm Lab
Peds GI Lab
Peds Sleep Lab

Shilpa Shelton
Vice President
Neuro/Ortho Services

Inpatient Units
4100, 4200,4300, 6100, 6300
Neuro Diagnostic Lab
PT/OT
EMG
ENG
Clinics 1B, 1C, 1L
Moreene Road
Sleep Lab
Clinical Neuro Psych
Prosthetics/Orthotics

Chris Samples
Vice President
DUH Ambulatory Practice
Management

ACNO Ambulatory
Clinics 1A, 1G, 1H, 1J, 1K
Clinics 2B, 2C, 2F, 2G, 2J, 3J
Ambulatory Infusion Center
Dermatology Treatment Lab
Endoscopy/Bronchoscopy
Motility Services
Hyperbaric Facility
Urodynamics Lab
Rankin
DOC
Pickens
Speech/Audiology
Vestibular Services
Ambulatory. Regulatory
Accreditation
Apheresis

Carey Unger
Vice President
MSCC/Psych & Dialysis

ACNO MSCC
Inpatient Units
2100, 2200, 2300, 7800,
8100, 8200, 8300, Williams
Psych Services
ECT
Dialysis

Vacant
Assistant Vice President
Patient Flow

Bed Management
Operations Administrators
Transfer Center/Bed
Control
Patient Transporters

Britt Crewse
DUHS Associate VP
Diagnostic Services/Radiology

Radiology
Clinical Labs
Autopsy
Pharmacology Lab
Transfusion Services
Stem Cell Lab
Clinical Bone Lab
Hematology Lab

Pam Sutton-Wallace
Senior Vice President
Hospital Operations

Clif Flintom
Vice President
Periop Services

DN ORs
Eye Center ORs
ASC
PACU
CRNAs
Pre-op Screening
Sterile Processing

Ken Powell
Vice President
Facility Services

Environmental Services
Food Services
Material & Linen Services
Valet Services
DUH Liaison to:
-Clinical Engineering
-Design Office
-Facilities
-OES
-Security
-Traffic & Parking

Jessica Thompson
Interim Vice President
Emergency Services

Emergency Preparedness
Emergency Room
Trauma Program
Life Flight
Life Flight Communication

Revised; August 2013

Duke University Hospital:

CSU Structure

- Patient care services are grouped according to Clinical Service Units (CSUs), which is an administrative structure that aligns common units, staff, and services.

- For instance, Perioperative Services includes:
    - Ambulatory Surgery Center
    - Duke Hospital Operating Rooms
    - Eye Center Operating Rooms
    - Nurse Anesthesia
    - Post-Anesthesia Care Unit (PACU)
    - Perfusion
    - Pre-operative Screening
    - Transfusion
    - Stem Cell Lab
    - Sterile Processing

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Duke University Hospital:

CSU Structure

- Clinical Service Units (CSUs):
  - Ambulatory
  - Emergency
  - Heart
  - Hospital Support
    (i.e. Facilities, Materials, Guest Services, Infection Control, Health Information Management, Clinical Engineering, Decedent Care, Food Services, and Environmental Services)
  - Medical / Surgical / Critical Care / Psychiatry
  - Neurosciences / Musculoskeletal
  - Oncology
  - Perioperative
  - Radiology / Labs
  - Transplant
  - Women's / Children's

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Duke University Hospital:

CSU Structure

- Clinical Service Units (CSUs):
  - **Within each CSU, an administrative & support structure is in place that includes:**
    - Vice President *(overall accountability)*
    - Associate Chief Nursing Officer *(over nursing practice)*
    - Medical Directors *(over physician practice)*
    - Clinical Operations Directors *(over multiple nursing units)*
    - Nurse Managers *(over individual nursing units)*
    - Directors / Managers of Associated Support or Clinical Departments
    - Performance Services Engineer
    - Financial Analyst
    - Accreditation & Patient Safety Representative

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Facilities

- ## Inpatient Care
  - **Duke Hospital – 957 licensed beds**
    - Anlyan Tower
    - Duke Medicine Pavilion
- ## Ambulatory Care
  - **Duke Clinics**
    - Specialty Clinics – 128
    - Primary Care Clinics – 32
  - **Duke Cancer Center**
- ## Perioperative Care
  - **Duke University Hospital**
    - 57 Operating Rooms
    - 113 Prep / PACU Bays
  - **Eye Center**
  - **Ambulatory Surgery Center**

Driving Organizational Performance
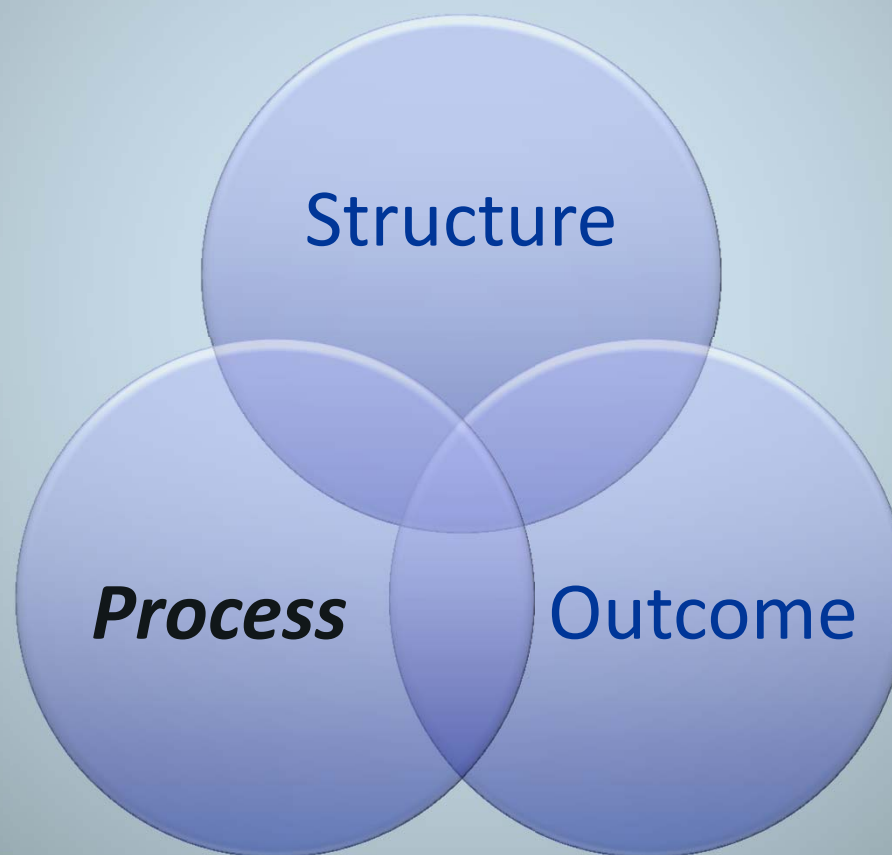
Performance Measurement

How do we decide what is important to the organization?

Mission/Vision/Values

↓

Organizational Priorities

↓

Balance Scorecard Measures

↓

Operational Work Plan
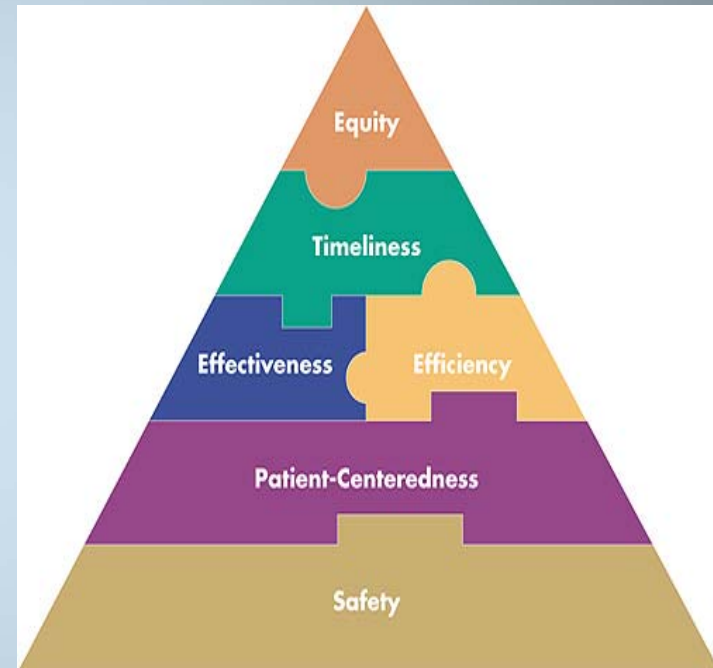
Institute of Medicine's 6 Aims of Quality
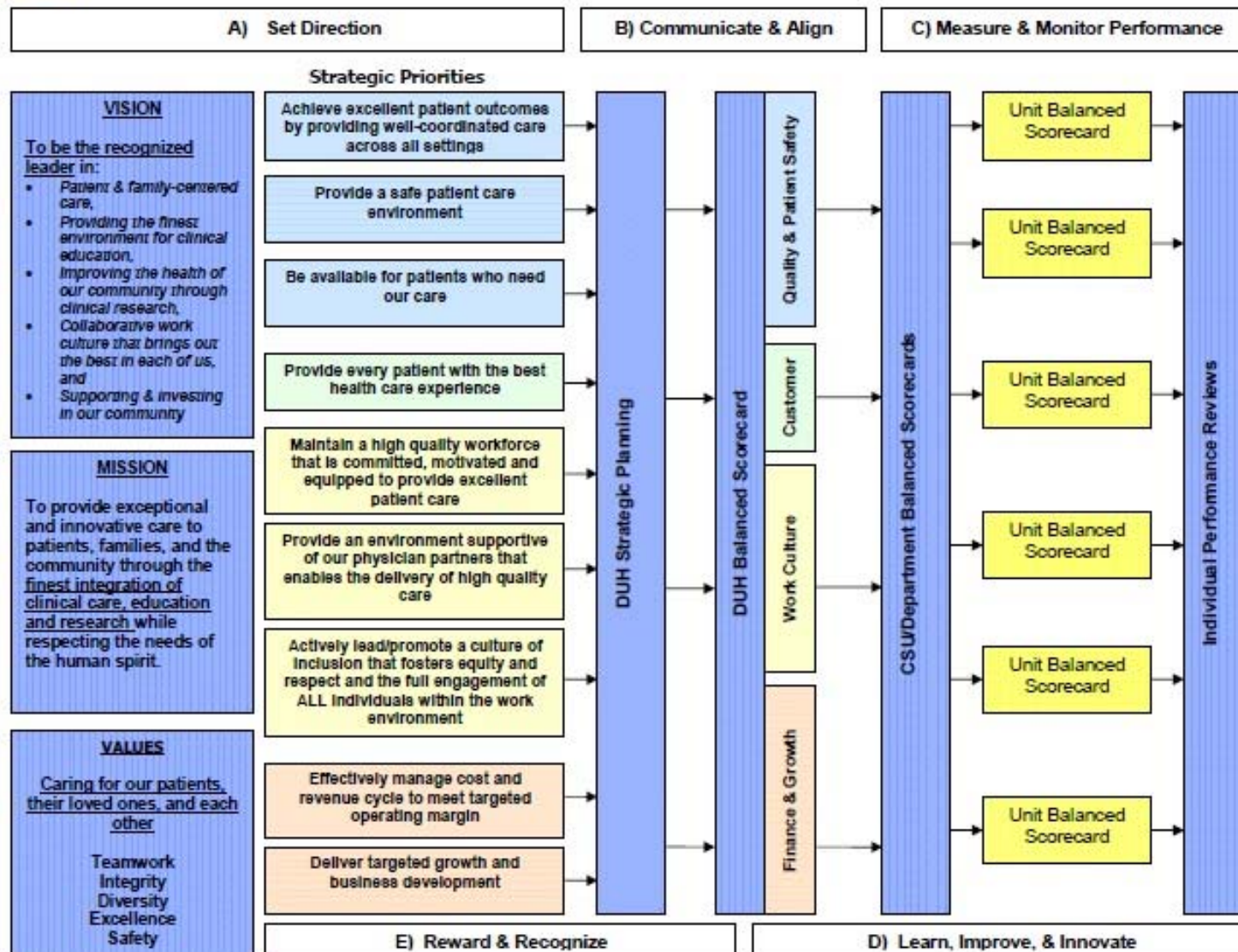
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Organizational Initiatives

- Duke Cancer Center
- Learning Center
- Duke Medicine Pavilion
- School of Nursing
- Eye Center
- Duke Children's Hospital
- Duke LifePoint

- Care Redesign
- Maestro Care EHR
- ICD-10
- Patient-Centered Care
- Network Development
- Enterprise-Wide Planning
- Others

DUHS Pathway To Success

LEADING HEALTHCARE DELIVERY SYSTEM IN THE NATION

Patient-Centered Care	Care Design	Cancer Center Building	Duke Medicine Pavilion	Maestro Care Implementation	ICD-10 Implementation	Primary/Specialty Care Network Development

Performance Excellence

Quality & Patient Safety	Customer Service	Finance	Work Culture	Growth

Faculty, Providers & Direct Care Staff Deliver great, compassionate patient care efficiently and effectively; constantly seek innovations in safety and quality	**Support Care Staff** Improve the patient experience; support optimal care delivery; excellence in operational execution	**All Faculty, Staff, Volunteers** Demonstrate values-based behaviors and decision-making

DUHS Values

Caring for Our Patients, Their Loved Ones, & Each Other

Excellence	Safety	Integrity	Diversity	Teamwork

Performance Measurement

How do we track our performance?

- Through the use of the **balanced scorecard** - An integrated system of performance measures used to **monitor organizational priorities**.

- Success is measured through four **interdependent** perspectives or quadrants – Quality & Patient Safety, Customer, Work Culture and Finance.

- Ensures **alignment** throughout all levels of the organization

DUHS BSC

DUH BSC

CSU/Dept. BSC

Unit BSC

Individual BSC

Balanced Scorecard Cascade
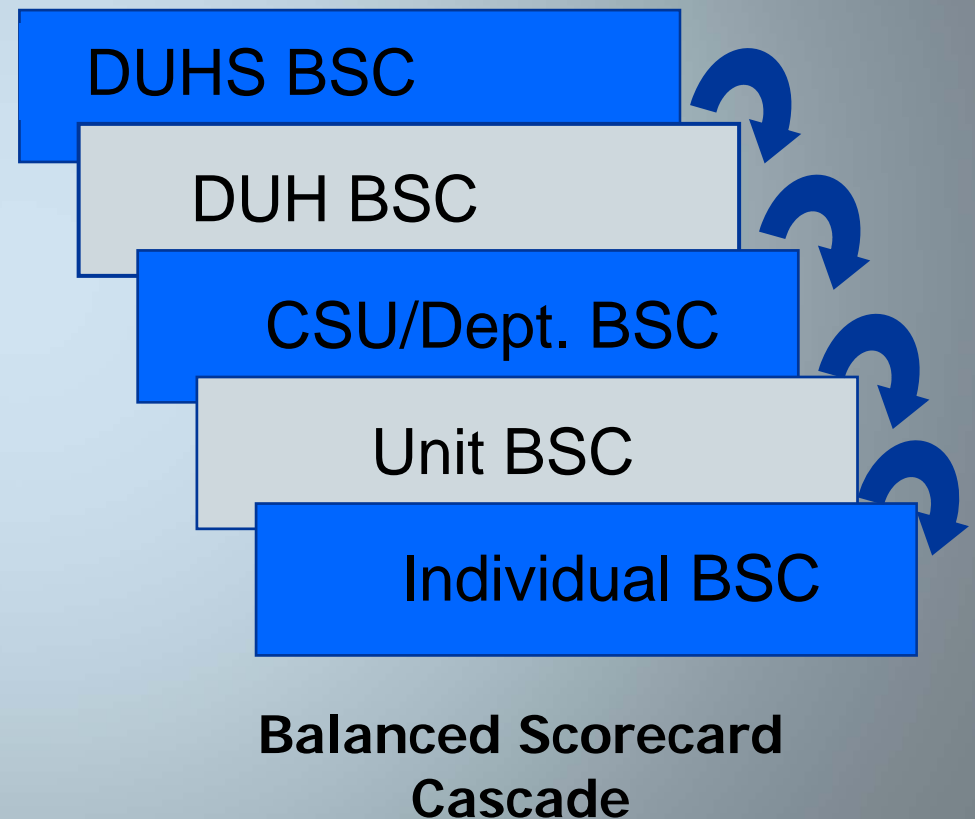
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Balanced Scorecard

At Duke University Hospital, we drive organizational performance and measure our success in four key areas:

- **Quality & Patient Safety**
- **Customer**
- **Work Culture**
- **Finance & Growth**

Quality & Patient Safety:
"What type of care are we giving our patients?"

Customer:
"How satisfied are the patients with the care they receive?"

Work Culture:
"What type of work environment do we provide our employees?"

Finance:
"How well do we use our resources?"
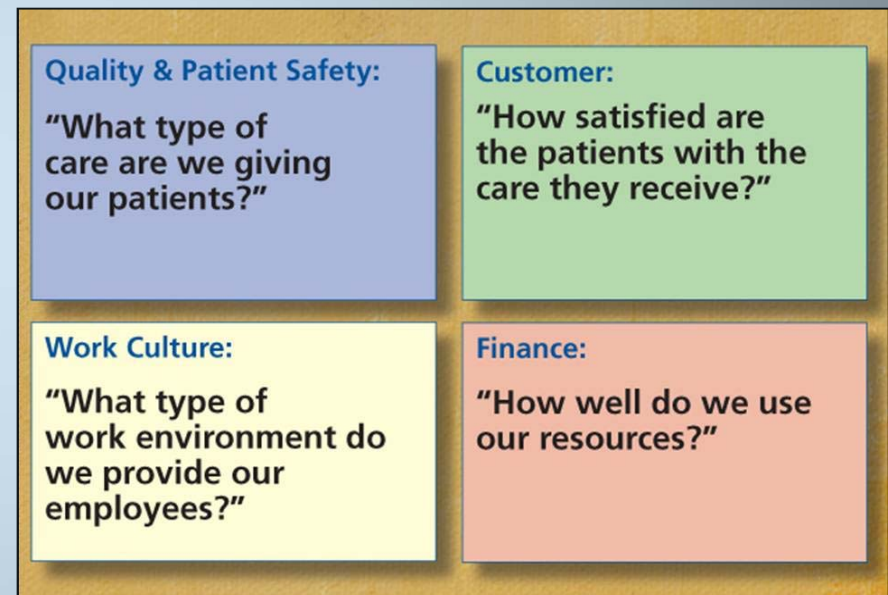
These areas combine to form the hospital **Balanced Scorecard.**

Alignment of Priorities and Individual Efforts

How does all this affect staff?

Priority → Provide a safe patient care environment

Entity level BSC Measure → Nosocomial Infection Rate

CSU/Dept BSC Measure → MSCC Nosocomial Infection Rate

Individual Job Performance → Wash your hands

Duke University Health System's Goals
↕
Entity Goals
↕
Department/Clinical Unit Goals
↕
Individual/Team Performance Expectations
Job Results | Behaviors
↕
Performance-based pay

Performance management

DUH Balanced Scorecard Target Development

How do we set targets for our measures?
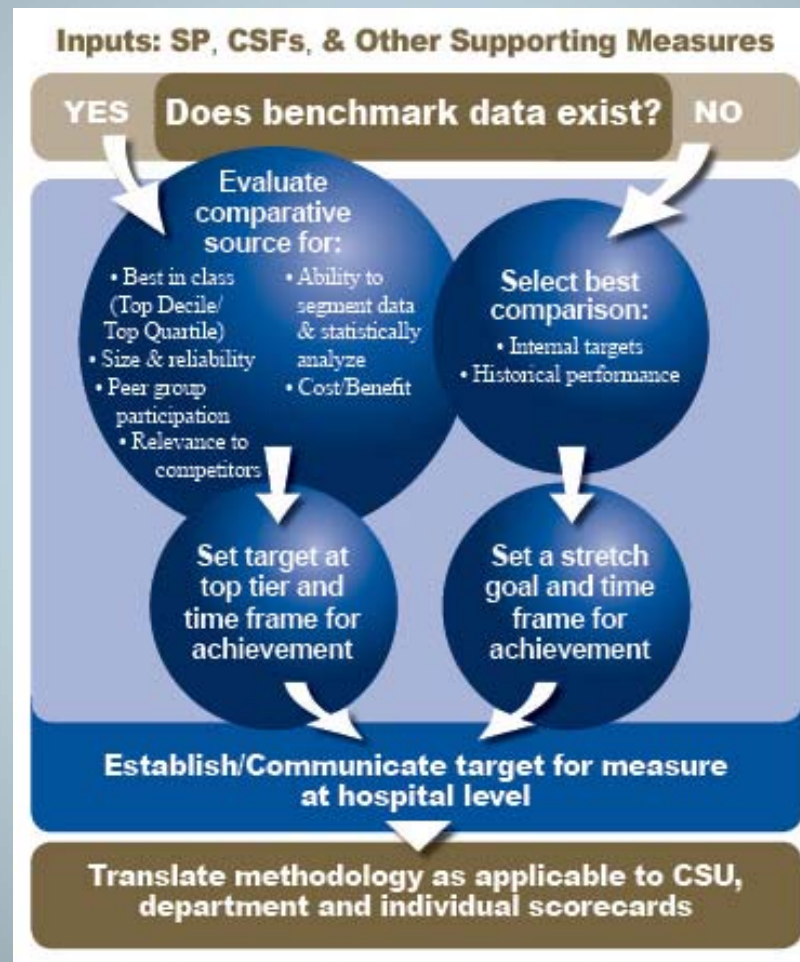
Performance Services Website
http://psweb.dukehealth.org/

Performance Review Process

- Each week, a different Clinical Service Unit (CSU) presents to the President and senior team.

- 'Performance book' is produced prior to meeting.
  - **Includes scorecard(s) and relevant routine reports.**

- Each quadrant of balanced scorecard is reviewed as a part of the presentation by CSU leadership (Vice President & Medical Director).

- After meeting, memo is created to accent key action items and follow up.
  - **This review process has been in place since 2000.**
  - **Supports how we measure/manage performance in our leadership system.**

Driving Organizational Performance

Structure

Process

Outcome

U **Duke** University Hospital

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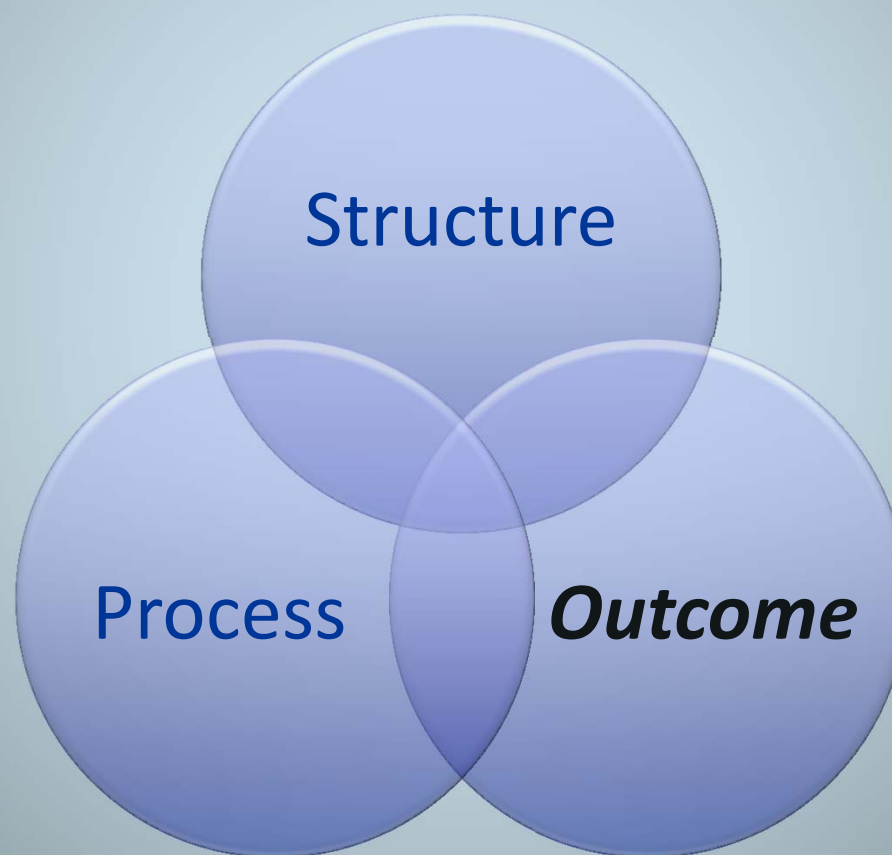
DUH Performance Improvement Framework
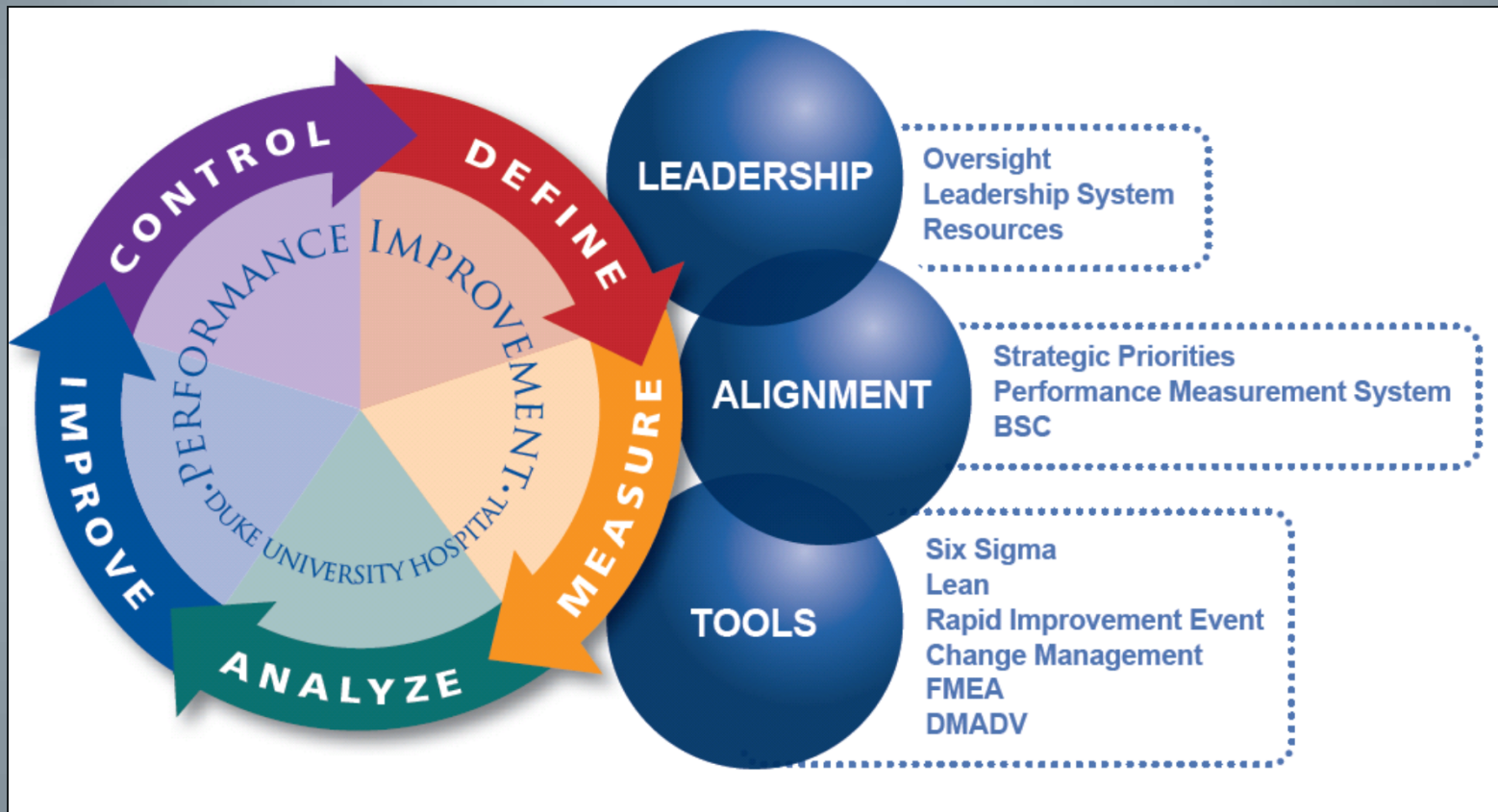
Emergency Department High Utilizers

Emergency Department High Utilizer:
Prior to Redesign

- "Frequent Flyer" is any patient who visited the ED more than 12 times per year

- Identified 180 patients who accounted for 3,500 visits to the Emergency Department in FY10 (68K Total ED Visits at DUH)

- The common reason for this patient population visiting the ED:

  1. **Chronic Pain with Limited Access to Care in Community**
     - Substance Abuse
     - Mental Health

Payor Mix Comparison

Payor:	Emergency Department All Visits	Emergency Department Frequent Flyers Only
Commercial	1.5%	0.0%
Duke Select	5.0%	1.8%
Managed Care	22.4%	4.5%
Medicaid	29.1%	41.6%
Medicare	15.8%	29.6%
Other	1.9%	0.6%
Self Pay	24.4%	21.9%
Total	**100.0%**	**100.0%**

Emergency Department High Utilizer: Care Model

- Case Study: Pain Patient
    - **Have pain pills at home, but want I.V. medications**
    - **Visit multiple locations for pain prescription**

- Intervention
    - **Coordinate across ED, Psychiatry and Community and Family Medicine**
    - **Before prescribing narcotics to patient the physicians are now able to review the state narcotic registry**
    - **Develop Patient Contracts**
    - **Psychology Provider in Primary Care site**

- System
    - **Coordinated care to address underlying issues to drive down utilization**
    - **Substance abuse patients need improved outpatient access**

Strategies to Innovate in Service & Models of Care: Same Day Access (SDA) Heart Failure Clinic

Strategies to Innovate in Service & Models of Care: Duke Heart Failure Program

- The Duke Heart Failure Program treats more than 3,600 patients each year, using a proven disease-management approach that has evolved over the past decade to reflect advancements in care

- In 2012, Duke launched a same-day access clinic for heart failure patients, providing acute management of shortness of breath and edema in early-stage heart failure

Strategies to Innovate in Service & Models of Care: Same Day Access Heart Failure Clinic

- This novel urgent care heart failure clinic represents a patient-centered approach to managing this chronic condition by providing support during the critical transition out of the hospital and in times of acute distress
  - **The clinic offers intravenous diuretics and ultrafiltration with the goal of reducing unnecessary hospital admissions**
  - **SDA Patient Population:**
    - Patients who were recently discharged from the inpatient service and would benefit from early preventative follow-up
    - Patients with a diagnosis of heart failure symptom exacerbation and would benefit from the SDA

Duke University Hospital Congestive Heart Failure
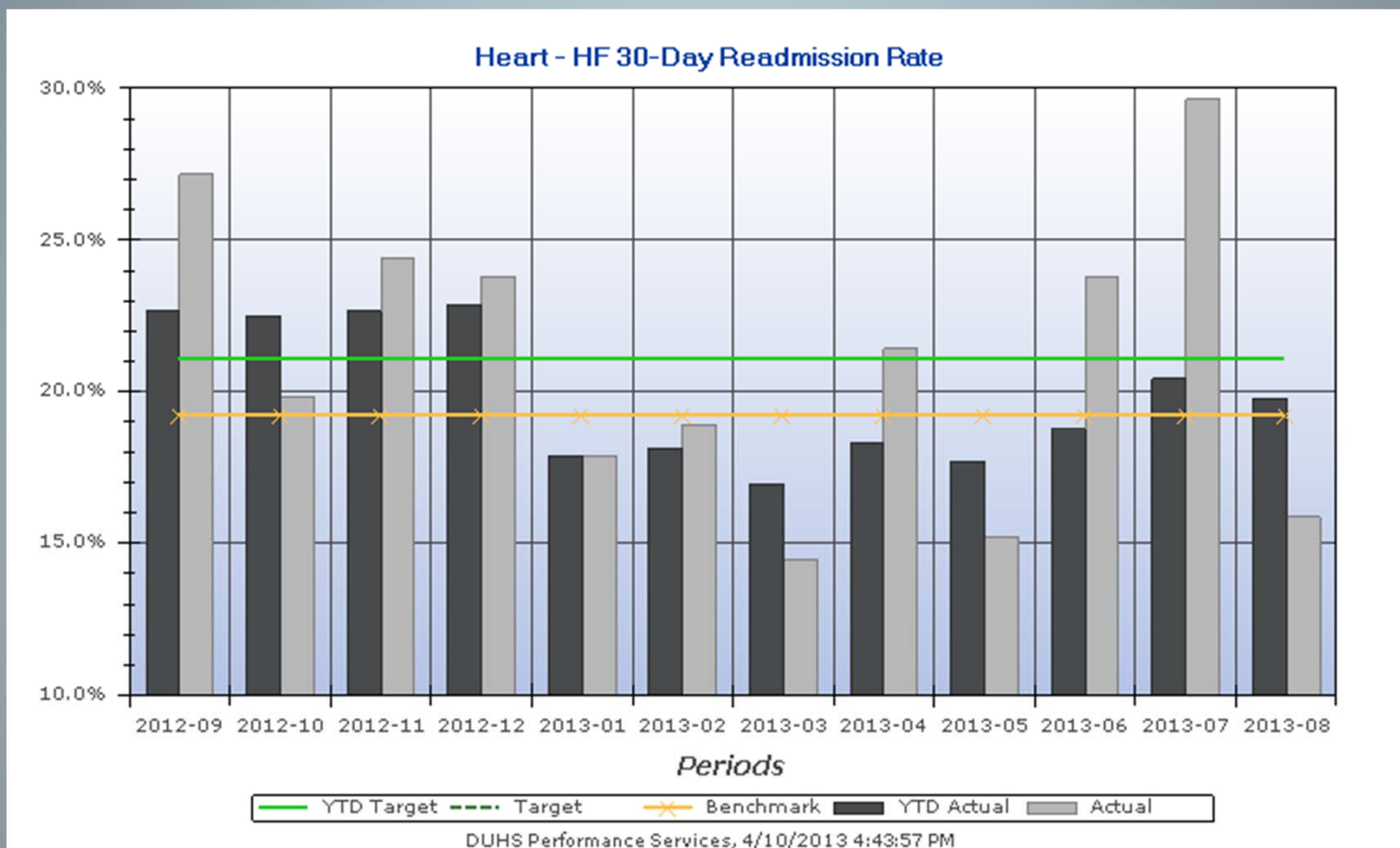
Down ~11% from prior year.

Comprehensive Sick Cell Center

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Comprehensive Sickle Cell Center:
Prior to Redesign

SCD Patient Population (FY11 thru FP11)

- Growing **9%** annually at Duke SCC

- **26%** of SCD patients visit the ED at least once

- **50%** of SCD patients admitted from ED

- **6.7 d** mean ALOS (5.5 – 6.5 other Institutions) [1,2]

- Current direct inpatient expense: **$5,617/patient**

- YTD cost for inpatient care: **$1,864,844**

- IP Service will be covered by Hematology

SCC Outpatient Services

- **3 ½** sessions per week Wed-Fri in Clinic 1B/1C and 2B

- Return pts seen by NP, PA, and MDs

- **35 %** Cancellation/No show rate

- Limited means for immediate pain management

- Disconnect between Duke outpatient and inpatient practice

    - **Acute and chronic pain management**

    - **Specialty consultation**

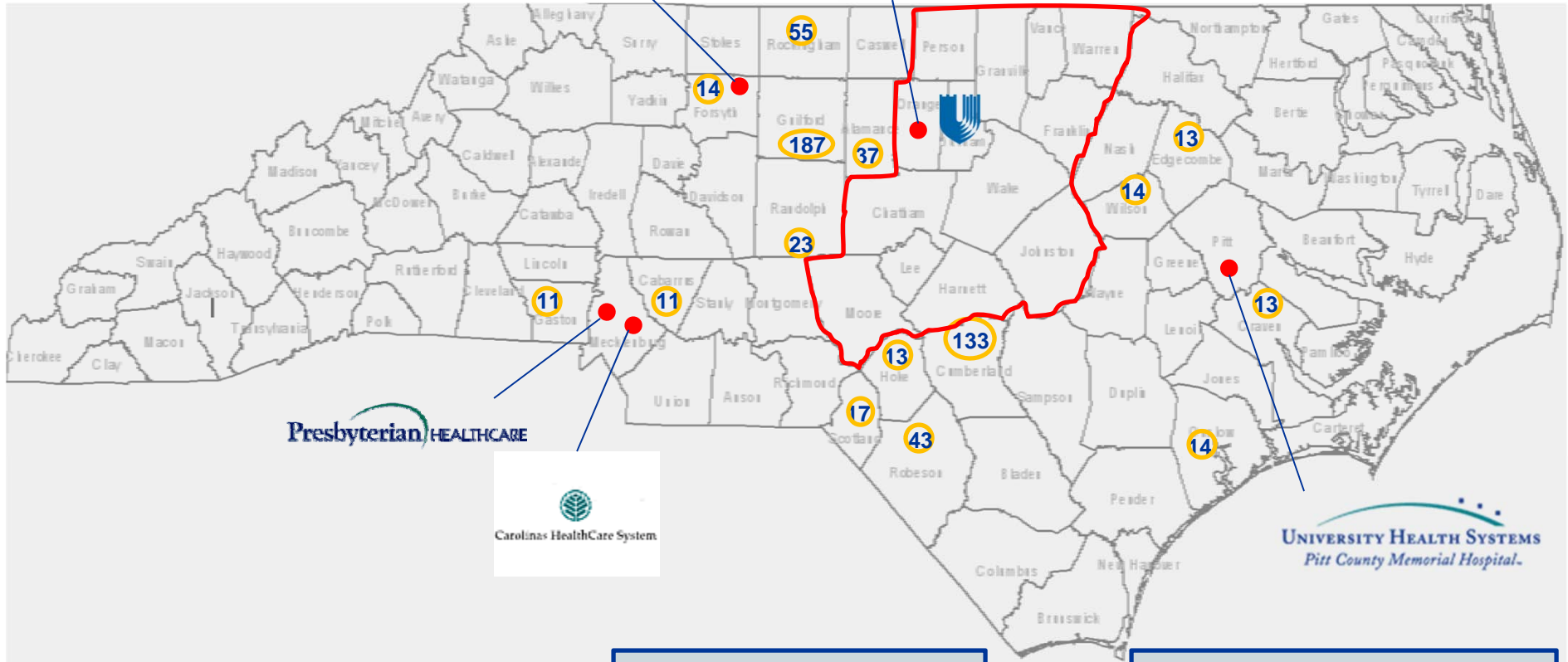   - **Psychosocial support**

SCD Patients ED Visits	
Disposition	FY-2011 Annualized
Admitted	332
Left Before Treatment Complete	3
Treated and Released	328
Grand Total	**663**

Sickle Cell Visit Volume FY09
Total Visits: 2,133

Virginia FY09 Visits: 13

South Carolina FY09 Visits: 29

━━━ = Primary Service Area
Total Visits: 1493
◯ =Secondary Service Area
Total Visits: 640

Comprehensive Sickle Cell Center: Care Model

Goals

1. Develop longitudinal clinical care guidelines and coordination/co-management with primary care, pediatric and Hem / Onc advance care practices locally and in the state of NC.

2. Control costs for treating SCD patients through reduce ED visits, hospital admissions and ALOS for SCD patients.

3. Improve patient satisfaction scores and health outcomes for SCD patients.

Guidelines for reaching Goals

•   Alignment of comprehensive care with basic, clinical and translational research in SCD – standardizing a care model that can be distributed at national level.

•   Patient-centered and disease-specific team approach utilizing advanced practice providers (NP & PA) to the full scope of their licensure. Explicitly define roles and responsibilities of all staff.

•   Advancement of collaboration between inpatient, outpatient and community resources, such as patient advocacy groups, to provide a longitudinal model of managing acute and comprehensive care.

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Comprehensive Sickle Cell Center: Care Model

Two-Parts for New Model of Care

- Redesigned outpatient clinic
    - **Daily sessions (6) Mon-Fri**
    - **Improved patient schedule & flow**
    - **Timely evaluations –Acute slots**
    - **Distinct personnel roles and tasks**

- Estimate of Cost Savings from reduced admissions: **$670,333**
    - **Does not include savings from reduction in ALOS**

- Establish Day Hospital
    - **Duke Adult Sickle Cell Day Hospital (DASH)**
    - **Acute SCD management Extender oversight provided by PA**
    - **New hours – 8:00AM-6:00PM**
    - **Divert SCD who normally visit ED**

- Estimate cost savings from treating in DASH: **$30,294**
    - **DASH ($94/expense per procedure) vs. ED ($413.43 variable expense/case)**

The new clinic and day hospital are expected to reduce admissions, decrease length of stay and improve patient satisfaction for the SCD population.

Comprehensive Sickle Cell Center: Outcomes

Subject	Metric	Reviewed
DASH Utilization by Sickle Cell patients	· Overall number of patients evaluated · Number of patients treated and release · Number of patients Treated and admitted	6 mo
SCC Outpatient Clinic	· Overall number of patients evaluated · Cancellations and No Show Rate · Scheduling Efficiency	Monthy
ED visits by Sickle Cell patients	· Overall decrease in number · Number transferred to and from DASH · Number of admissions to from ED · Wait times for Sickle Cell Patients	Monthly
Patient Satisfaction Scores for Sickle Cell Patients	· Outpatient Clinic · DASH · ED	Quarterly
Hospital Admissions for SCD patients	· Number of admission · In-patient Length of Stay (LOS) · Readmissions within 30 days for Sickle Cell Patients	Monthly
Longitudinal care of SCD by primary Care /Family medicine partners	· 1-2 visits in the 1 yr, 2 visits by yr 2, Yearly visit thereafter).	6 mo

Thank you!

Questions?