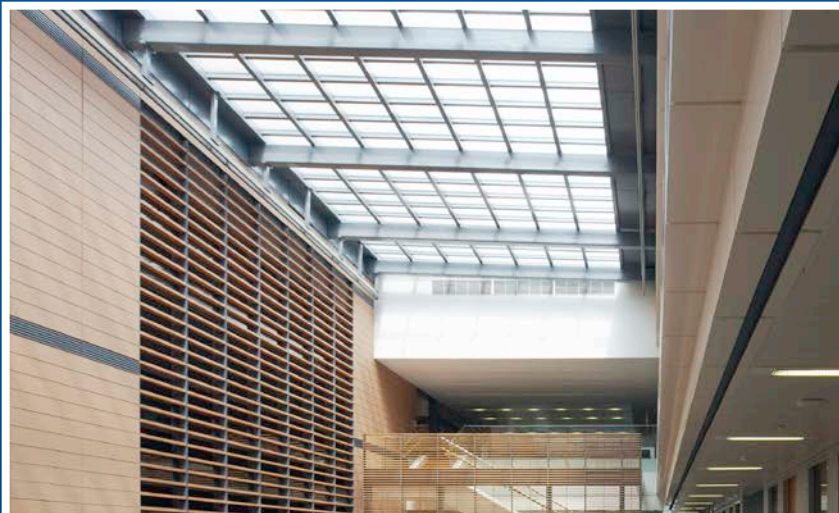




Celebrating 10 years of transforming medicine and improving patients' lives

Singapore Healthcare Management Conference 2015



DUKE NUS
GRADUATE MEDICAL SCHOOL SINGAPORE



PART 1:

Success Factors for Building an Integrated Delivery Network (IDN) in an Academic Center

The Duke Medicine Supply Chain Journey

PART 2:

Care Redesign

THE NEXT LEVEL OF EXCELLENCE IN SUPPLY CHAIN

JANE PLEASANTS

ASSOCIATE VICE PRESIDENT
Procurement and Supply Chain
Duke University and Duke University Health System



DukeMedicine

Expected Outcomes for Today's Session



Introduce Duke Medicine

- Who We Are
- What We Do



Understand the Uniqueness of an Academic Medical Center

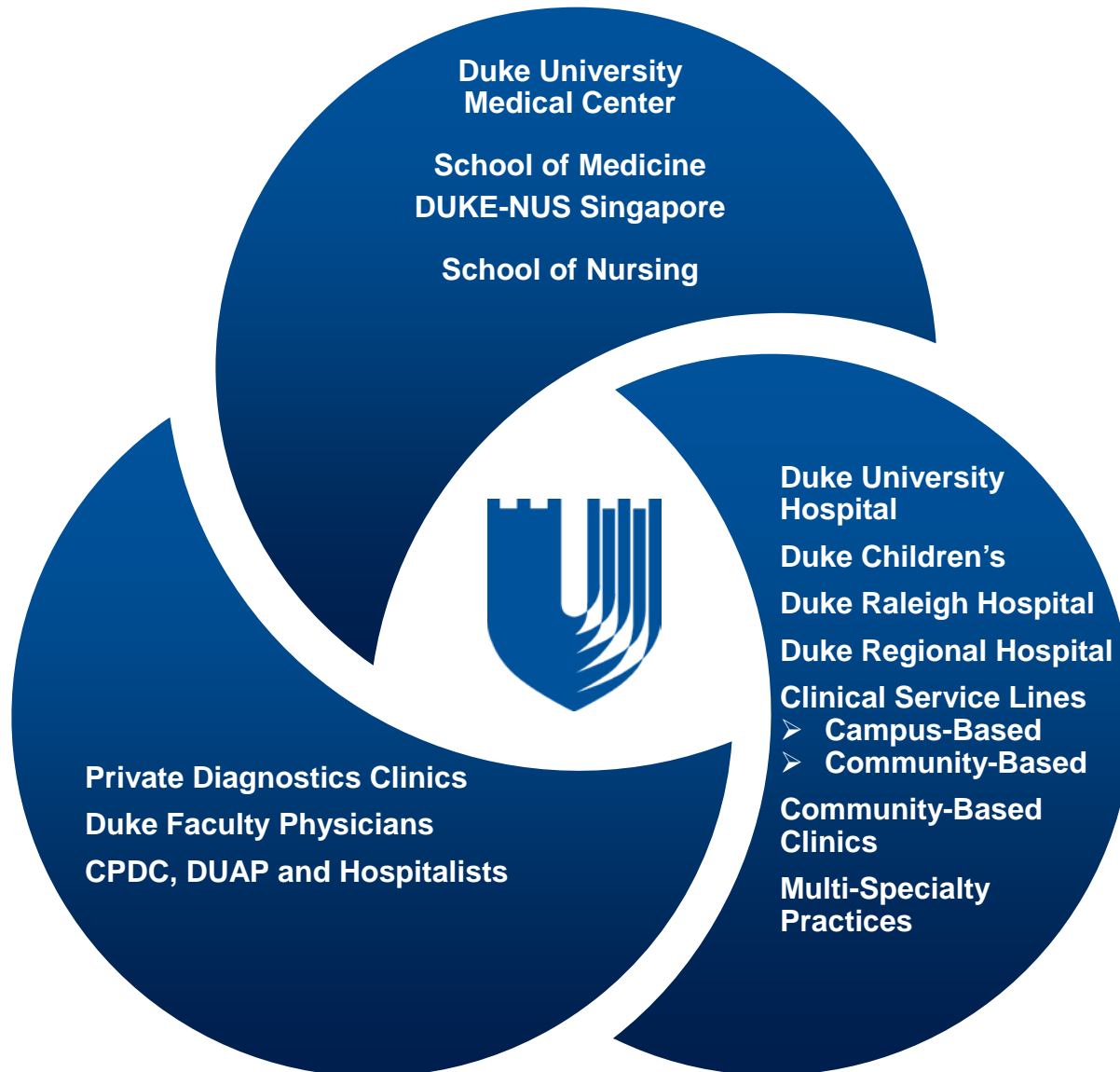
- How does it impact Supply Chain?



What are the Key Pillars and Building Blocks for Duke's Supply Chain

- Patient Safety
- Sourcing, Contracting, and Non-Labor Cost Reduction
- Data and Information
- Logistics and Distribution

What is Duke Medicine?



A World-Class Academic Medical Center

1 Internationally Renowned for Excellence in Clinical Care, Research & Education

2 Duke Medicine Entities Ranked Highly in 2015 U.S. World & News Report

- Duke University Hospital
- School of Medicine ranked in Top 10



3 Global Presence

- Duke-NUS Graduate Medical School
- Duke Kunshan University



4 Largest Cancer Research Institute (DCRI)

5 Local and State Presence

- Duke Regional and Duke Raleigh Hospitals Ranked Highly in North Carolina
- 2nd Largest Private Employer in North Carolina
- Largest Employer in the City of Durham and Surrounding Counties



Duke University Health System (DUHS)

Duke University Health System is Comprised of Hospitals, Physicians Practices, Home Health/Hospice Care, and Integrated Support Services

Hospitals

- Duke University Hospital
 - Academic Medicine Center
 - 957 licensed beds
- Duke Regional Hospital
 - Full service community hospital
 - 369 licensed beds
- Duke Raleigh Hospital
 - Specialty community hospital
 - 186 licensed beds

Ambulatory Care

- Private Diagnostic Clinic
- Duke Primary Care
- Outpatient Specialty Clinics
- Duke HomeCare & Hospice
- Duke Health & Wellness
- Departmental Labs
- Duke Ambulatory Surgery Center
- Davis E. Ambulatory Surgery Center

Duke HomeCare & Hospice

- Home Infusion Services
- Hospice Services
- Home Health Services
- Community Bereavement Services

Support Services

- Patient Revenue Management Organization
- DUHS Corporate Services
- DUHS Clinical Laboratories



DUHS 2014 Facts

	Duke University Health System	Duke University Hospital	Duke Regional Hospital	Duke Raleigh Hospital
Adult Discharges	62,733	39,614	15,352	7,767
Surgical Cases	64,784	38,106	13,256	13,422
Emergency Department Visits	170,461	66,860	60,340	43,261
Outpatient Visits	1,280,514	1,026,501	108,362	145,651
Total FTEs	16,627	13,888	1,620	1,119
Physicians on Staff/Faculty	1,995	1,663	135	197
Graduate Medical Trainees	984	948	31	5

Duke University Hospital Growth

Key Statistic	2009	2015 Ann.	% Change
Adult Inpatient Discharges	38,488	40,212	5%
Average Daily Census	692	772	12%
Emergency Department Visits	66,177	77,186	17%
Ambulatory Visits (Total Arrived)	1,719,320	2,064,556	17%
OR Cases	34,994	40,284	15%
Staff	6,720	7,823	16%
Credentialed Physicians	1,400	1,690	21%
GME (Graduate Medical Education) Learners	965	981	2%

Duke Cancer Institute

How Many People Do We Serve?

8,000

New Cancer cases per year

50,000

Unique patients treated annually

129,000

Clinic visits per year at Duke Cancer Center, ABMT Clinic, and Duke Cancer Center Raleigh

23,000

Chemo infusions across Duke Cancer Center and Duke Cancer Center Raleigh

47,000

Radiation treatments across Duke Cancer Center, Duke Raleigh Hospital, and Duke Regional Hospital

275

Adult Bone Marrow Transplants

Duke University School of Medicine

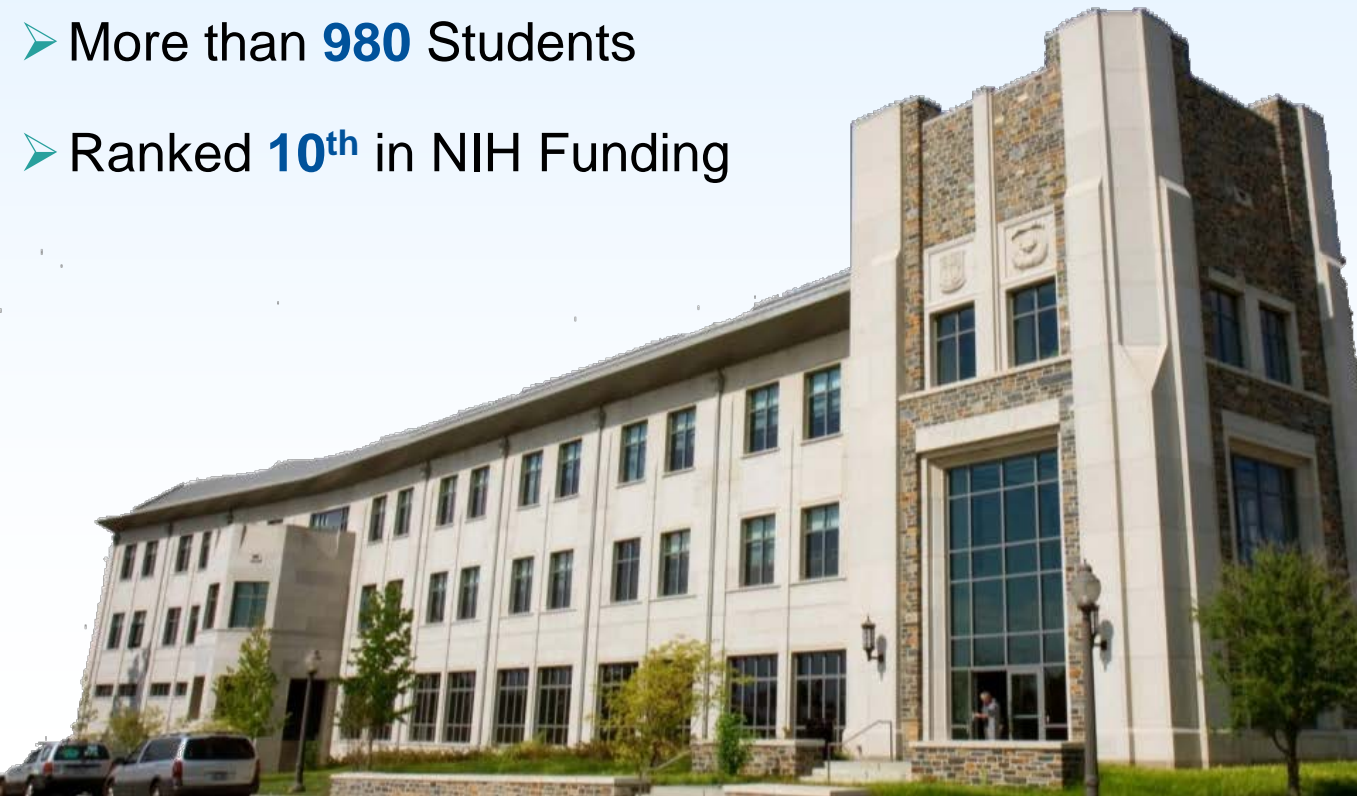
- Among the Nation's Premiere Schools for Medical Education and Biomedical Research
- Ranked **8th** in the U.S. (*U.S. News & World Report*)
 - Includes PT and PA Programs Ranked Among the Best in U.S.; Nation's first PA program and still ranked **#1**
- **7** Basic Science, **4** Clinical Departments and **12** Centers and Institutes
- More than **2,000** Faculty Members
- More than **440** MD Students & more than **540** Medical & Health Profession Students
- More than **\$600 Million** in Sponsored Research Annually
- Home to **Duke Clinical Research Institute** -- World's Largest Academic Research Organization

PRIMARY DEGREE PROGRAMS

- MD
- MD/PhD
- Physician Assistant
- Doctor of Physical Therapy

Duke University School of Nursing

- One of the Nation's Leading Nursing Schools
- Ranked **6th** in the U.S. (*U.S. News & World Report*)
- **90** Faculty Members
- More than **980** Students
- Ranked **10th** in NIH Funding



PRIMARY DEGREE PROGRAMS

- Accelerated Bachelor of Science in Nursing
- Master of Science in Nursing
- Doctor of Nursing Practice
- PhD in Nursing

Excellence in Three Areas of Focus



PATIENT CARE

- Several national programs of distinction:
 - Heart
 - Cancer
 - Neuroscience
 - Orthopedics
 - Pulmonary Medicine
- All three hospitals awarded Magnet® recognition for excellence in nursing



RESEARCH

- Among top NIH-funded academic medical centers
- More than 9,700 patients participating in over 650 active clinical trials



EDUCATION

- School of Medicine and School of Nursing among Top 10 nationally
- Duke-NUS Graduate Medical School in Singapore established 10 years ago

Realizing our Vision



DukeMedicine

Discovering, Developing & Delivering a Healthier Tomorrow



Duke starts First
Brain Tumor Program
in U.S.

1937

Duke is one of the First Institutions
in the U.S. to Successfully Perform
a Kidney Transplant

1965



Duke Comprehensive Cancer
Center Becomes one of
First in U.S.

1971

Duke Starts First Outpatient
Bone Marrow Transplant
Program in U.S.

1992



Duke Pioneers use of
Thymus Transplant to
cure DiGeorge Syndrome

1994

Duke Develops
and Implants First
Bioengineered Blood Vessel

2013

Pioneering Research

Rapidly Translating Findings into Clinical Practice



Duke Doctors First to use
Systemic Hypothermia During
Cardiac Surgery in U.S.



Duke Geneticists Invent Short
Test to Screen Newborns for Over
30 Metabolic Diseases at Once



First Lifesaving Treatment for
Children with Pompe Disease
Discovered & Developed at Duke

1956

1988

1990

1993

2006

2012

Duke Cardiologist
Invents the First Bioabsorbable
Coronary Stent

Duke Researchers Identify
Apolipoprotein E (apoE) as
the Major Susceptibility Gene
for Alzheimer Disease

Robert Lefkowitz, M.D.,
Professor of Medicine,
Awarded the Nobel
Prize in Chemistry

Innovative Education

Developing programs that prepare the healthcare leaders of tomorrow



Duke develops first clinical nursing specialist program in U.S.



Duke develops one of the first MD/PhD program in U.S.



Duke develops accelerated bachelor's in nursing program to address national nursing shortage

1958

1965

1966

1998

2002

2003

Duke develops first physician assistants program in U.S.

Duke and NIH partner to offer joint master health sciences degree in clinical Research

Established graduate medical school in Singapore, Duke-NUS

Our Supply Chain Journey

Developing programs that prepare the healthcare leaders of tomorrow



Health System
established

Completed implementation of
single materials management
system MMIS/SAP

Created Value Analysis Team with
representative from all DUHS Entities

1998

1999

2001

2002

2003

2005

Supply Chain
Leader hired

Centralized all purchasing
and contracting functions to a
corporate model

Completed and implemented
comprehensive contract
portfolio for DUHS covering
90% of DUHS spend

Our Supply Chain Journey

Developing programs that prepare the healthcare leaders of tomorrow



Centralized product recall management in Procurement through the use of web-based workflow tool and became a best practice in healthcare

Linked and cross walked all material items to charge master (EHR)

Implemented e-procurement marketplace



Integrated Supply Chain data into Care Redesign metrics

2006

2007

2008

2009

2011

2014

2015

Installed Contract Management system
Emptoris/IBM

Economic downturn in U.S. –
Burning platform created a
significant cost reduction
initiative led by supply chain

Installed an online
bidding tool

Supply Chain Governance in an Academic Medical Center



Medical

Non-Medical

DUHS Enterprise

Senior VP
CFO

VP Finance

Central
Administration

School of Medicine

School of Nursing

Associate VP
Supply Chain



Uniqueness of a Supply Chain Supporting an Academic Medical Center (AMC) and Health System

**Like Other Health Systems in the U.S.,
We must create a supply chain that is:**



- Efficient and responsive
- Innovative and continually improving
- Focused on reducing waste and lowering total cost
- Supports the highest quality of patient care while competing for patients in our market under potential constraints of the U.S. Government's Affordable Care Act (ACA)
- Demonstrated best practices in supply chain



The Duke Medicine Vision

**As an AMC,
We must support the Duke Medicine vision**

“To transform medicine and health locally and globally through innovative scientific research, rapid translation of breakthrough discoveries, educating future clinical and scientific leaders, advocating and practicing evidence-based medicine to improve community health and leading efforts to eliminate inequalities.”



DukeMedicine



DukeMedicine

Supporting the Duke Medicine Vision Supply Chain Considerations

1 Innovative Scientific Research

- Dedicated Procurement and supply chain team experts
- User friendly and responsive purchasing system (e-marketplace) 
- Negotiated pricing with many vendors

2 Rapid Translation of Breakthrough Discoveries

- Continually introducing many new vendors to supply chain
- Carefully consider vendor relationships due to research partnerships
- Enable the entrance of new products and devices into the supply chain through efficient means while maintaining the “Single Source of Truth” and all other new product entry procedures
- Establishing procedures that support the evaluation of new products

Supporting the Duke Medicine Vision Supply Chain Considerations

3 Educating Future Clinical and Scientific Leaders

- Provide opportunities to utilize a variety of products, implants, and equipment
- Engage MDs on value analysis and care redesign teams

4 Advocating and Practicing Evidence-Based Medicine

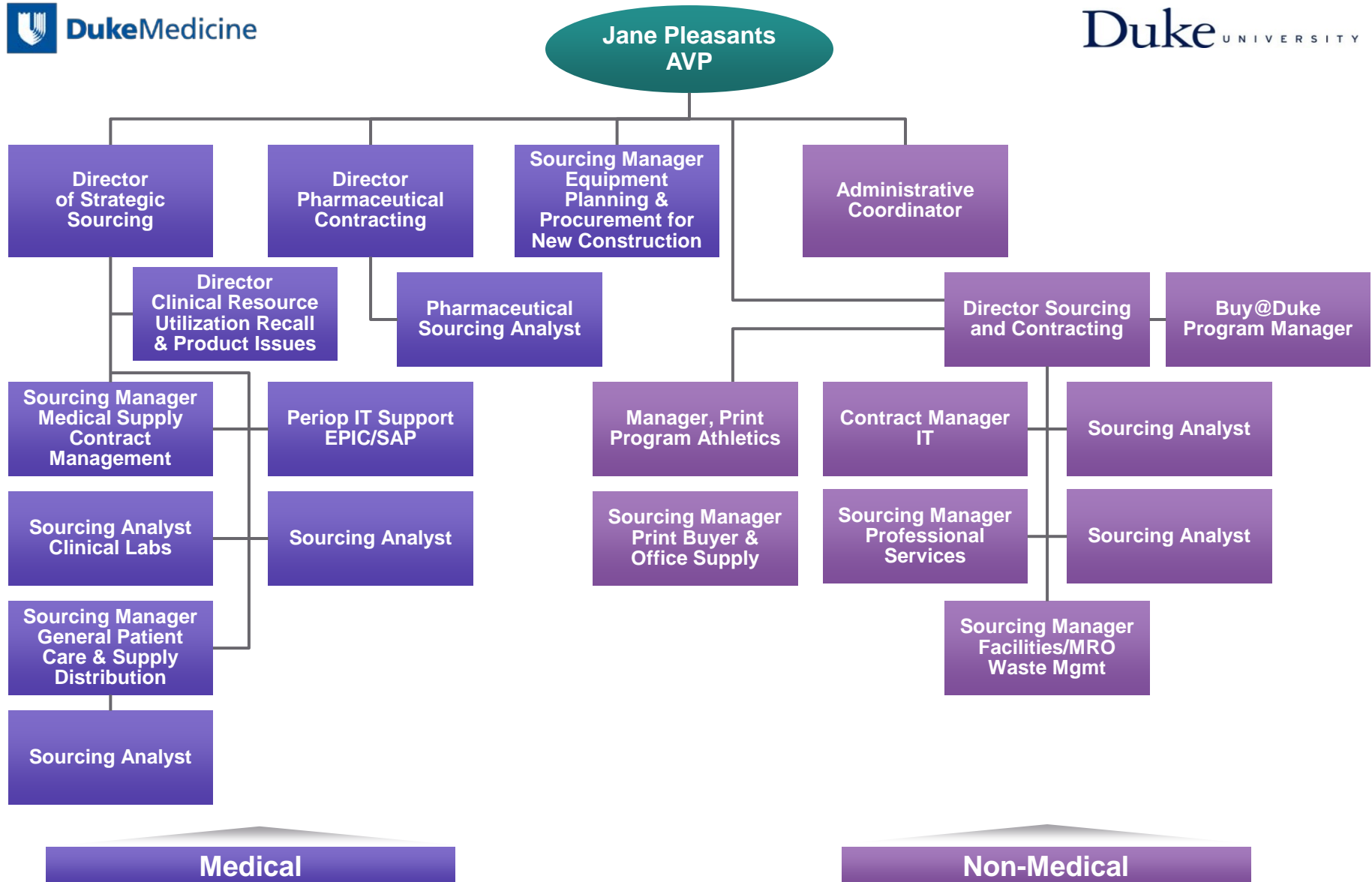
- Be an integral partner in care redesign initiatives
- Provide robust spend analytics and reporting
- Demonstrate knowledge and experience with the products and devices used in patient care

The Operations Supporting Duke Medicine



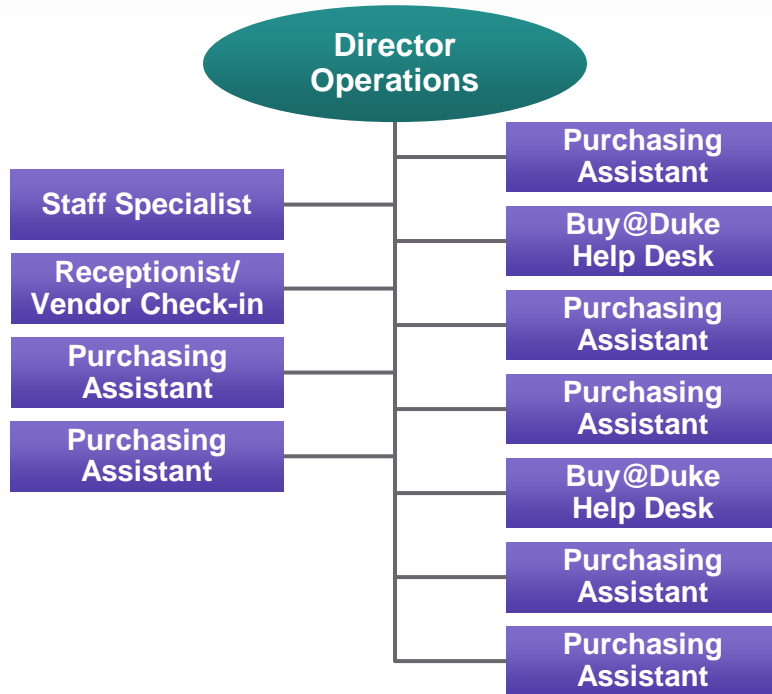
DukeMedicine

The Sourcing Team



The Operations Team

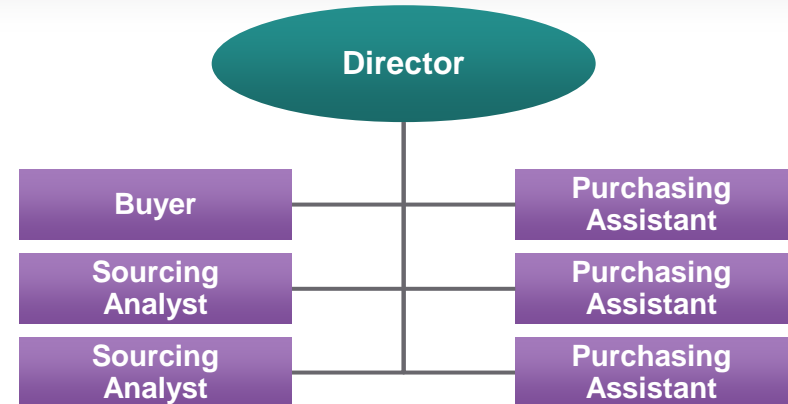
Procurement Operations



Responsibilities – DU & DUHS

- Purchase Order Processing
- Vendor Sanction Checking
- Order Expediting
- Vendor Check-in
- Invoice Discrepancy Resolution
- Procurement Call Lines
- Procurement Policies & Procedures
- Buy@Duke Help Desk

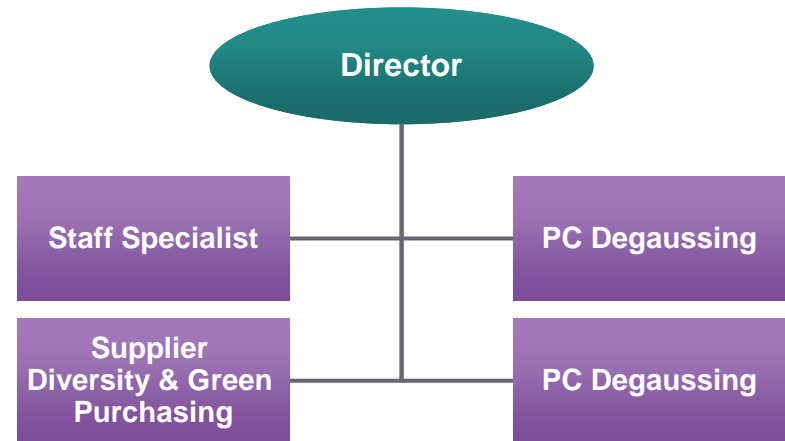
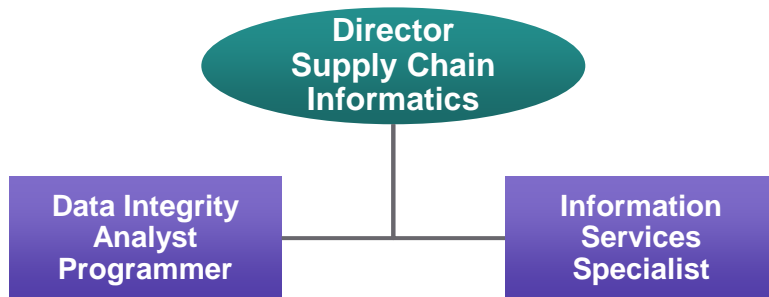
Research Procurement Operations



Responsibilities – Research Procurement

- Sourcing and Contracting
- Sponsored Research Procurement Compliance
- Purchase Order Processing
- Vendor Sanction Checking
- Order Expediting
- Invoice Discrepancy Resolution
- Procurement Call Lines for Research Depts.
- Onsite Storeroom Management

The “Special Forces”



Responsibilities

- SAP Procurement Functional Business Owner
- SAP Data File Loads & Maintenance
- Period Data Support
- Pyxis
- Perpetual Inventory
- EDI
- Spend Analytics and Reporting
- PO Transmission Monitoring
- Procurement Website
- Emptoris
- CDM (Charge Master #)

Responsibilities

- PC Disk Wiping Operations
- Budget
- Surplus Property Office
- Federal Small Business Subcontracting Office
- Small Business Liaison Office
- Equipment Screening Processes
- Storage and Warehouse Operations
- Building Facility/Operations Management
- Supplier Diversity Office
- Green Purchasing Office

What is DUHS's Spend?

**Medical Surgical
Supplies and Devices**

\$400M

Pharmaceuticals

\$275M

**Purchased and
Professional Services**

\$200M

**Spinal
Hardware
\$26M**

**Total
Joints
\$14M**

**CRM
\$13M**

**Neuro-
Modulation
\$8M**

**Interventional
Cardiology
\$4M**

**Blood
Products
\$15M**

**Ablation
Catheters
\$5M**

**Reference
Lab
\$10M**

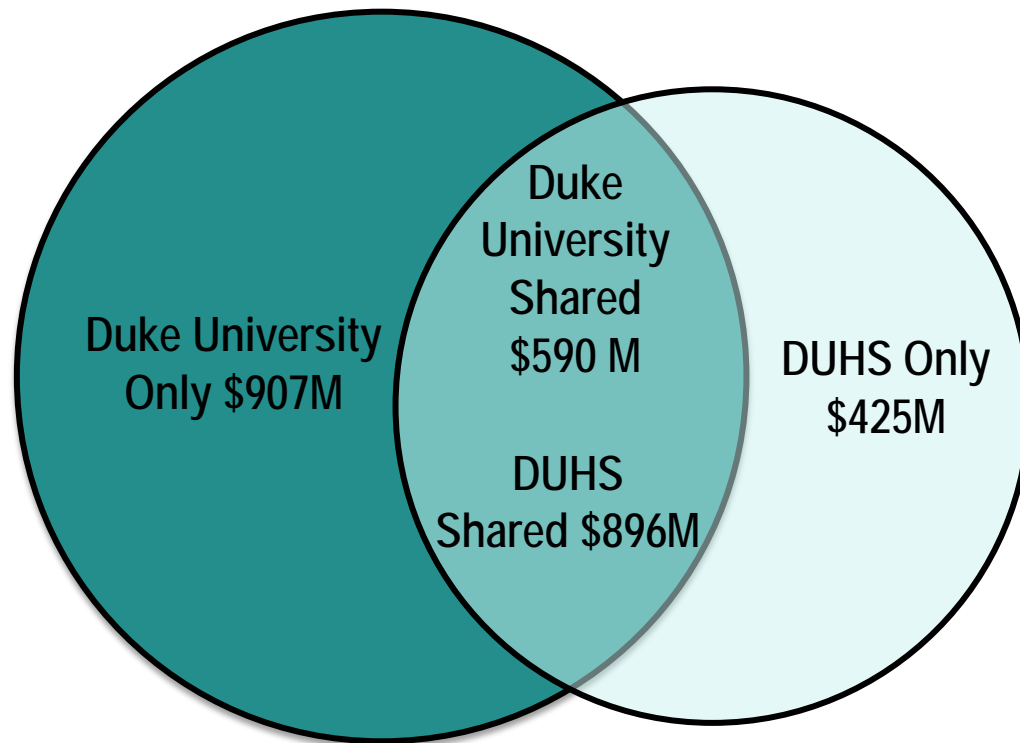
**Surgical
Gloves
\$4M**

**Bone &
Tissue
\$10M**

Shared Governance and Total Spend

Total Duke University and Duke University Health System

Total DU
\$1,497B



Total DUHS
\$1,3214B

Common Item and Vendor Masters

SAP MMIS System

Sourcing Team

Key Pillars for Duke's Supply Chain



Patient Safety



Sourcing, Contracting, and Non-Labor Cost Reduction



Data and Information



Logistics and Distribution

PILLAR 1

Patient Safety

A BEST PRACTICE STORY



DukeMedicine

Industry-wide Challenges with the Traditional Product Recall Process

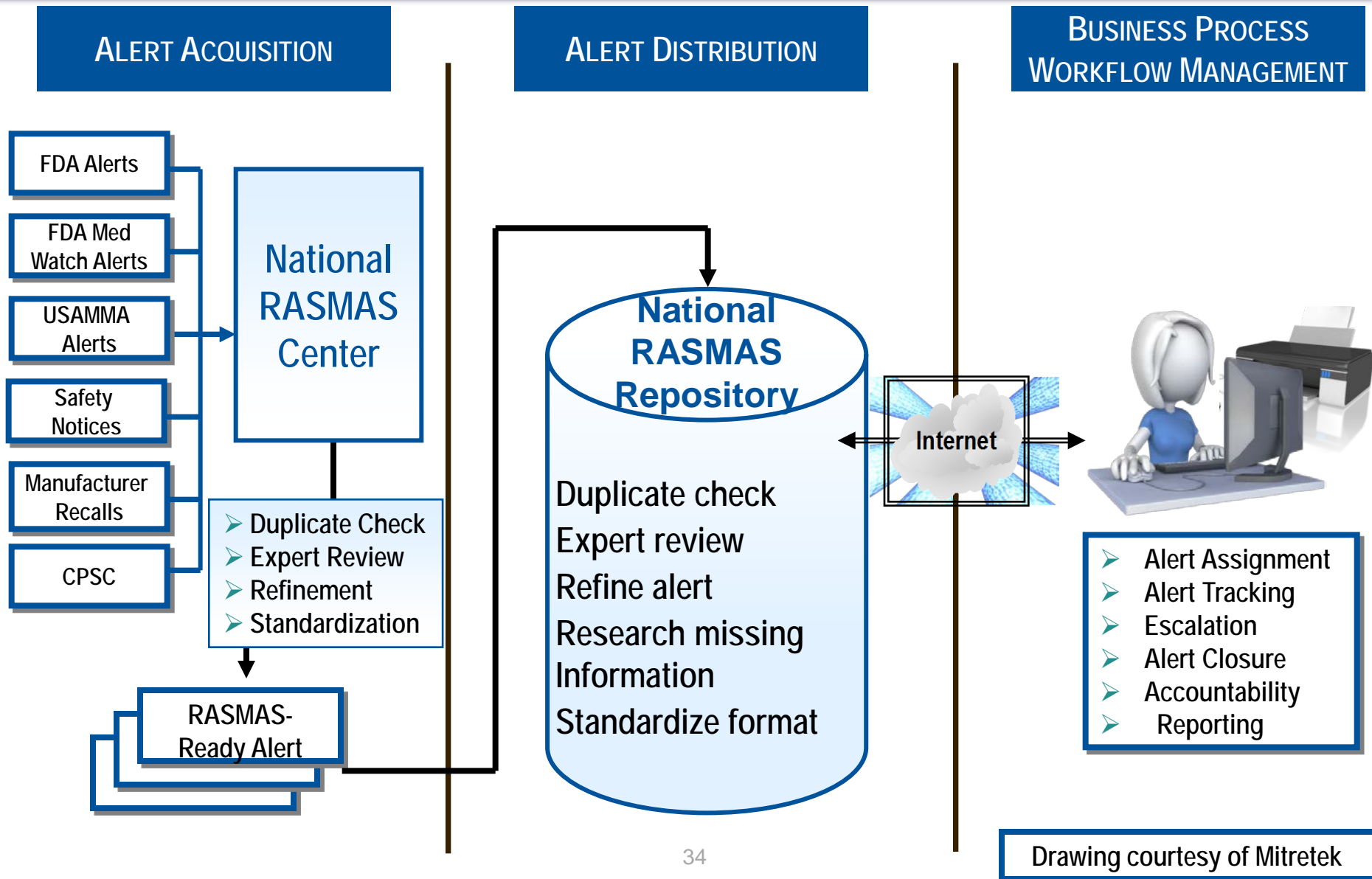
Common External Challenges:

- Unprecedented number of issues and recalls in latest medical devices entering the market
- No industry-wide standard or process for notification by vendors
- Multiple sources of recalls with no standardization
- Receipt of recall notices is generally delayed

Common IDN Challenges:

- Rogue buying patterns make identification of product difficult
- Lack of coordination with patient communication
- Delay in action to respond waiting for physician input
- Delay in assessment of risk
- Most processes have no closed loop

DUHS Leading the Industry in Best Practices



RASMAS Work Flow Management At DUHS

Centralized Multi-Facility Deployment Model

Coordinators dedicated
to Supply Chain at DUHS:

- RN
- Pharmacist

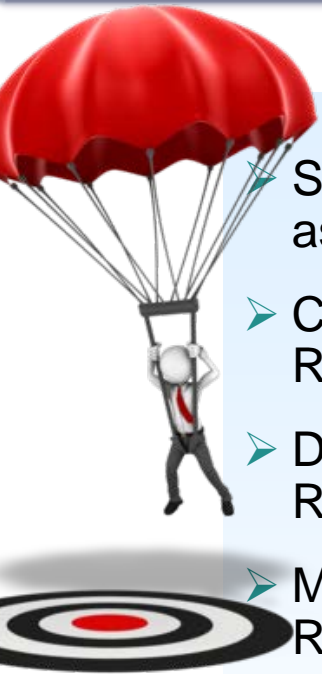
Over 400
Responders
Health System-
wide



Alert Volume By Facility and Domain 6 Month Sample

Domain	Duke Health Comm. Care	Duke Health Raleigh Hospital	Duke Private Diag. Clinic	Duke Univ. Affiliated Phys.	Duke Univ. Medical Center	Durham Regional Hospital	Lincoln Comm. Health Center	The Plaza Pharmacist	Grand Total
Biologics	2	1	2	2	2	1	2	2	14
Biomedical Devices	6	69	3	3	224	87	3	3	398
Blood Products	8	2	8	8	422	10	8	8	474
Children's Cons. Prod.					58				58
Engineering and Facil.	1	39	1	1	120	14	1	1	178
Food	5	40	2	2	448	35	2	2	536
Information Systems					10				10
Laboratory Products	9	30	8	8	206	32	8	8	309
Medical Supplies	4	46	2	2	305	36	2	2	399
OR Products	1	4	1	1	87	11	1	1	107
Other Supplies					1				1
Pharmaceutical Prod.	518	517	518	518	540	509	518	518	4156
Radiology Products	1	13	1	1	90	26	1	1	134
Tissue		7			39	6			52
Grand Total	555	768	546	546	2552	767	546	546	6826

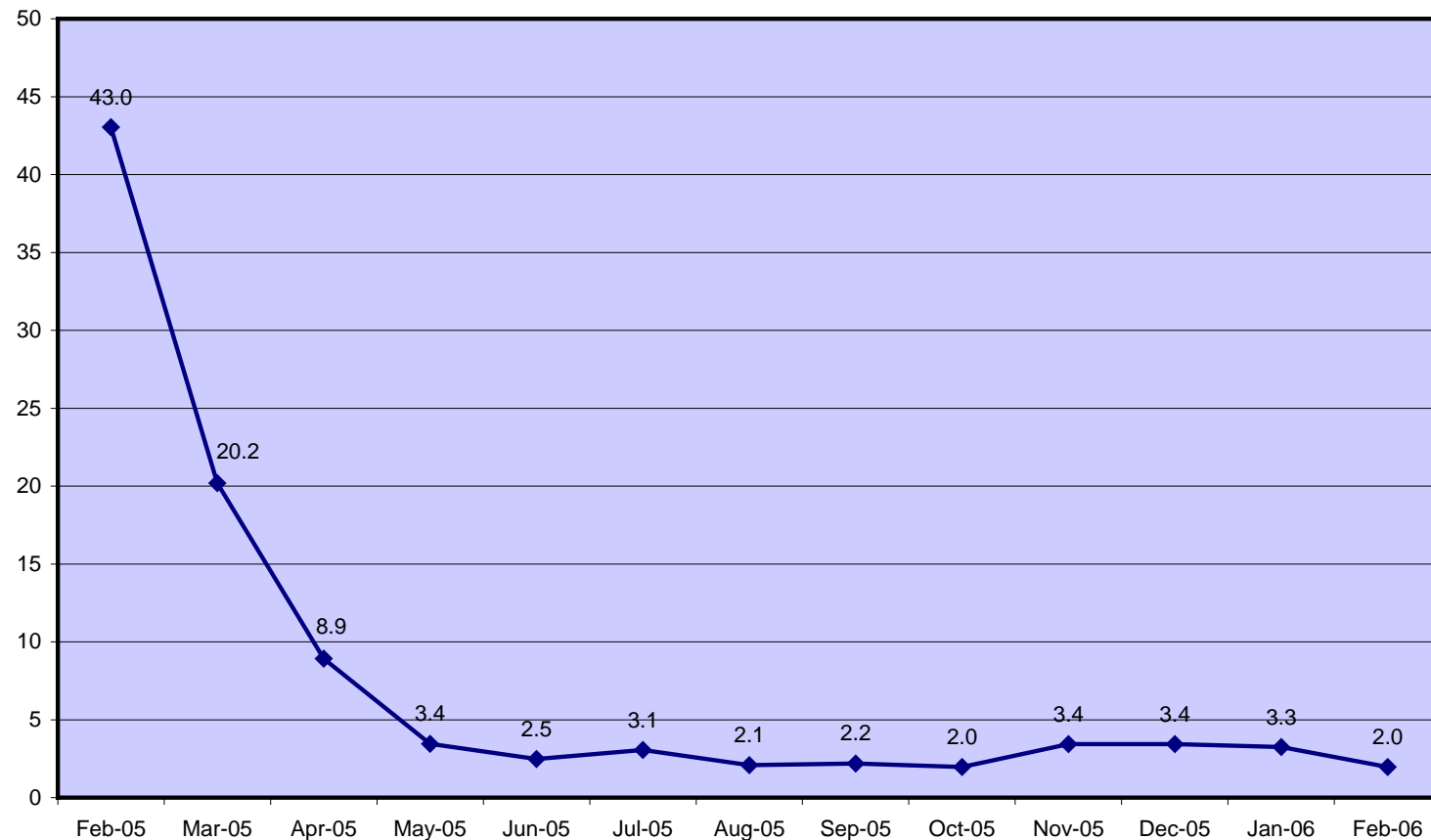
Critical Success Factors for DUHS



- Single Materials Management Information System permits rapid assessment of where product is being used in the Health System
- Centralized accountability for notification – Clinical Expert Review
- De-centralized accountability for locating product – 400 Responders
- M.D. and Chief Patient Officer support and lead the Senior Recall team which is immediately accessible to advise and make critical calls on product issues and advise as to DUHS action and response
- Centralized oversight for Patient Communication by M.D. and Senior Recall Team

Average Days to Close Alerts by Month at DUHS

**Duke University Health System
Average Days to Close Alerts
for Eight Facilities**



PILLAR 2

Sourcing and Labor Cost Reduction

A BEST PRACTICE STORY



DukeMedicine

Duke Self-Contracts 100%



DUHS is 1 of 5 Health System in the US who self contracts for medical supplies and pharmaceuticals

- ✓ Experienced and Knowledgeable Sourcing Staff
- ✓ Sourcing Teams
- ✓ Incumbent Vendor Strategy
- ✓ Physician and Key Stakeholder Involvement
- ✓ Leveraging the Duke name and it's reputation as a Leading Academic Medical Center



Sourcing and Non-Labor Cost Reduction

Special Initiatives and Key Levers

Special Initiatives and Key Levers

- Engage consultants from time to time to bring a fresh set of eyes, new approach, and industry wide perspective
- Market changes and vendor consolidation create new opportunities
- Ongoing price benchmarking activities suggest best pricing to be achieved

Ongoing

- Value Analysis Teams include representation from all entities and focus on primary categories of spend and standardization of products and processes across the Health System
- Create your roadmap
- Develop a consistent timeline for reporting savings to sponsors

Sourcing Supplies, Implants, and Drugs

1 Why self contract for supplies, implants, and Drugs?

- Advantage for Health System
- Advantage for Vendors Having Direct Relationships

2 Difference in RFP Process between Pharmacy & Supplies

- Entire Book of Business
- Clinical Formulary Evaluation Teams
- Majority of Products Through one Source

3 Benefits of Owning Your Contract Cycle

- Align with Care Redesign Bundles
- Respond Real Time to Cost Reduction
- Develop Your Own Roadmap for Coverage

Sourcing Pharmaceuticals



DukeMedicine

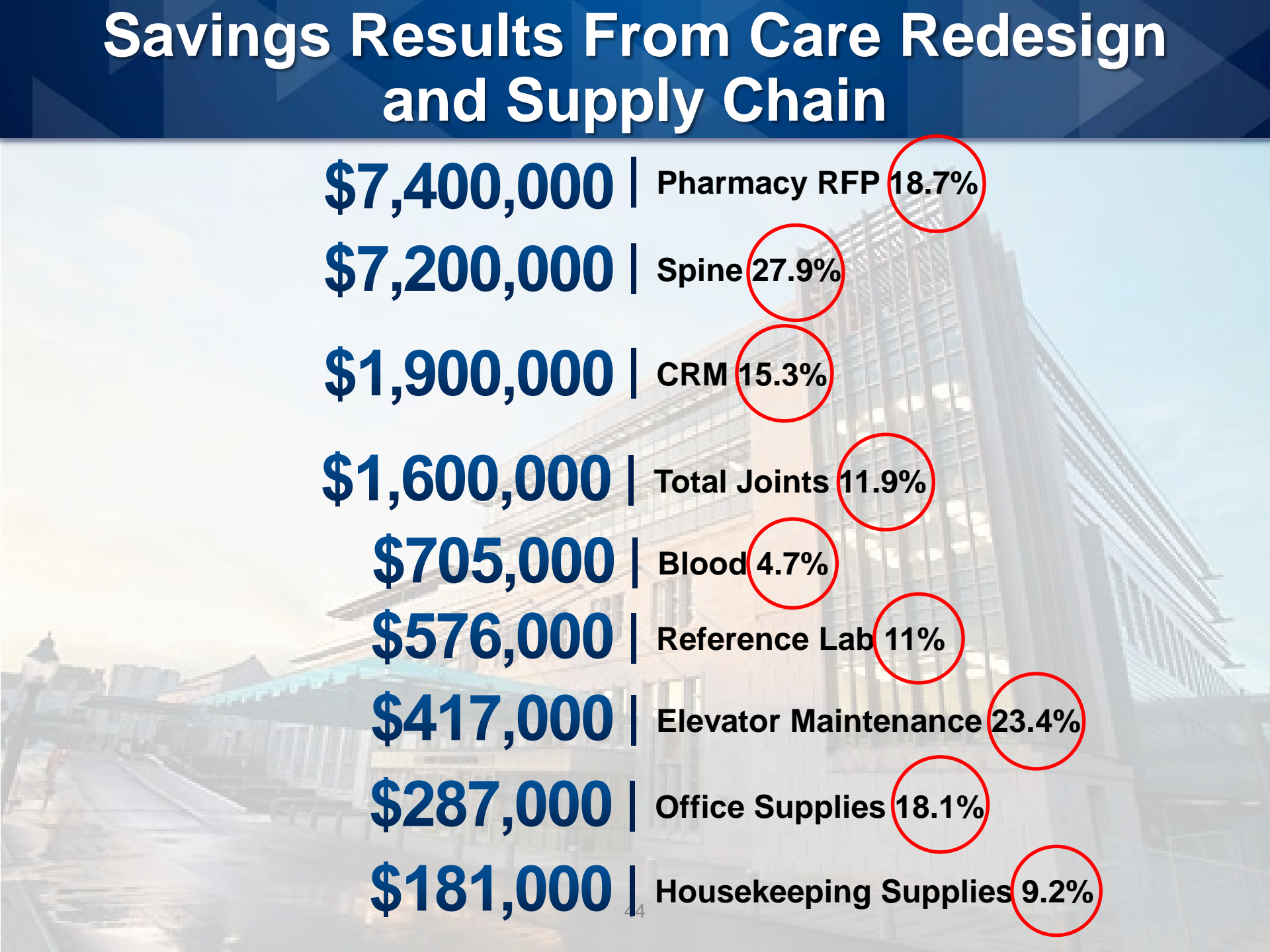
Pharmaceutical Bid Process Overview

Pharmaceutical Vendors Webcast

**Sherry DeLoach, Pharm.D.
Director, Pharmaceutical Contracting**

May 14th, 2014

Savings Results From Care Redesign and Supply Chain



\$7,400,000	Pharmacy RFP	18.7%
\$7,200,000	Spine	27.9%
\$1,900,000	CRM	15.3%
\$1,600,000	Total Joints	11.9%
\$705,000	Blood	4.7%
\$576,000	Reference Lab	11%
\$417,000	Elevator Maintenance	23.4%
\$287,000	Office Supplies	18.1%
\$181,000	Housekeeping Supplies	9.2%

Recap of Key Points



Self Contracting is One Option – But not for Everyone



Strong Supply Chain Infrastructure is Critical



Robust Spend Analytics is an Imperative



Must Take Full Accountability by Sourcing Team for Cost Reduction Leadership



Clear Governance and Strong Senior Executive Sponsorship is a Key Success Factor

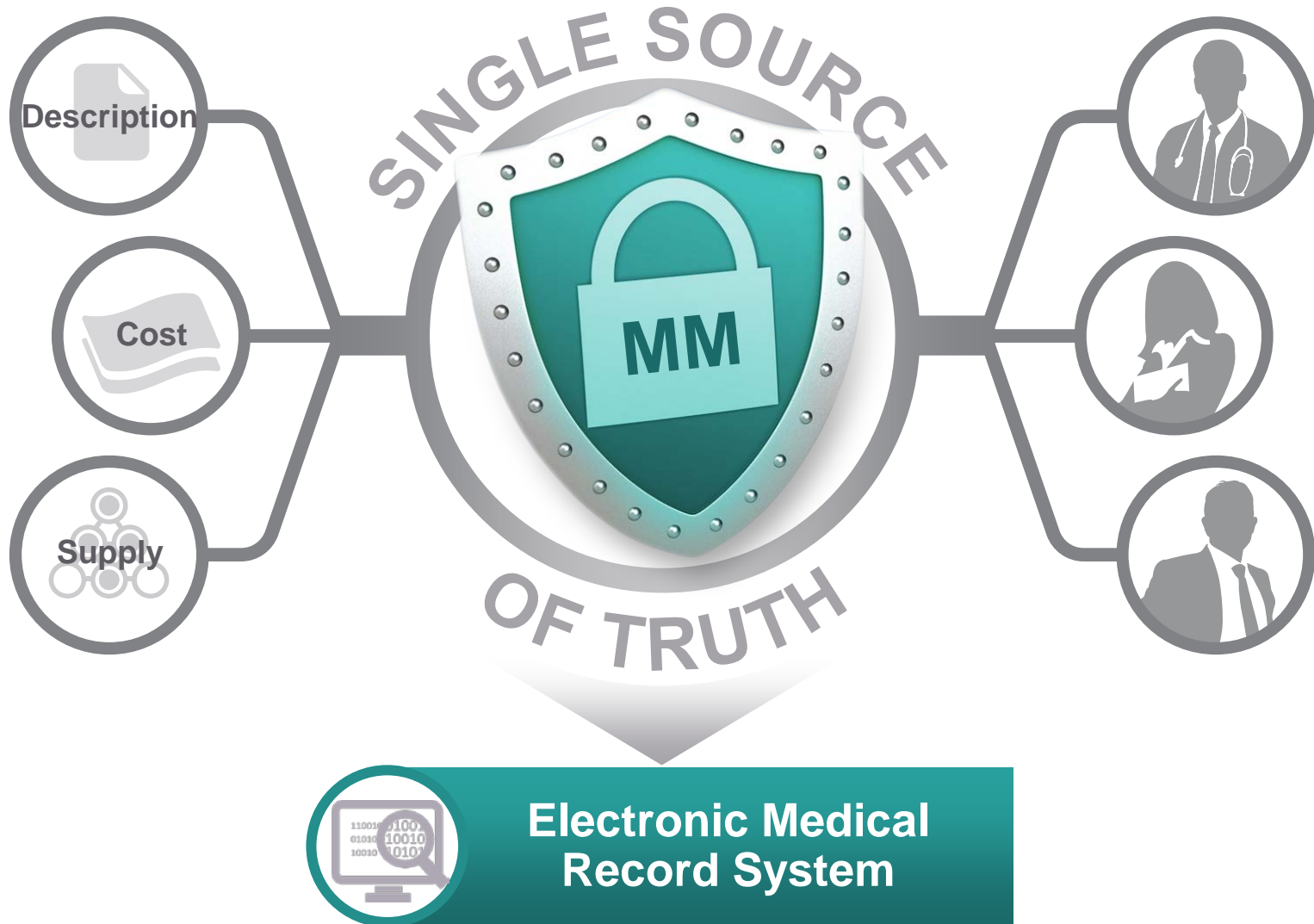
PILLAR 3

Decision and Performance
Against Practice Study



DukeMedicine

Key Foundation for Duke's Supply Chain

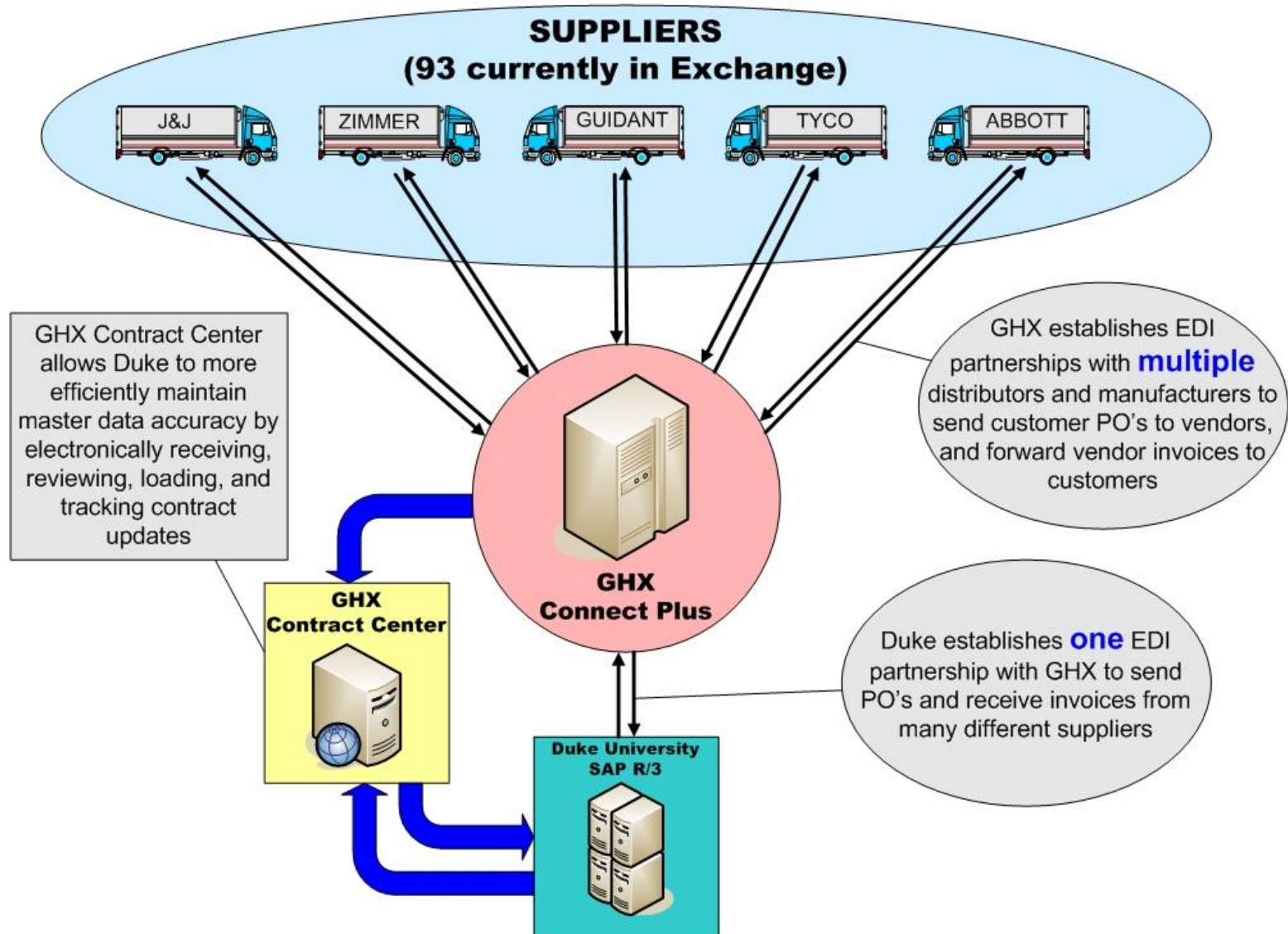


PILLAR 4

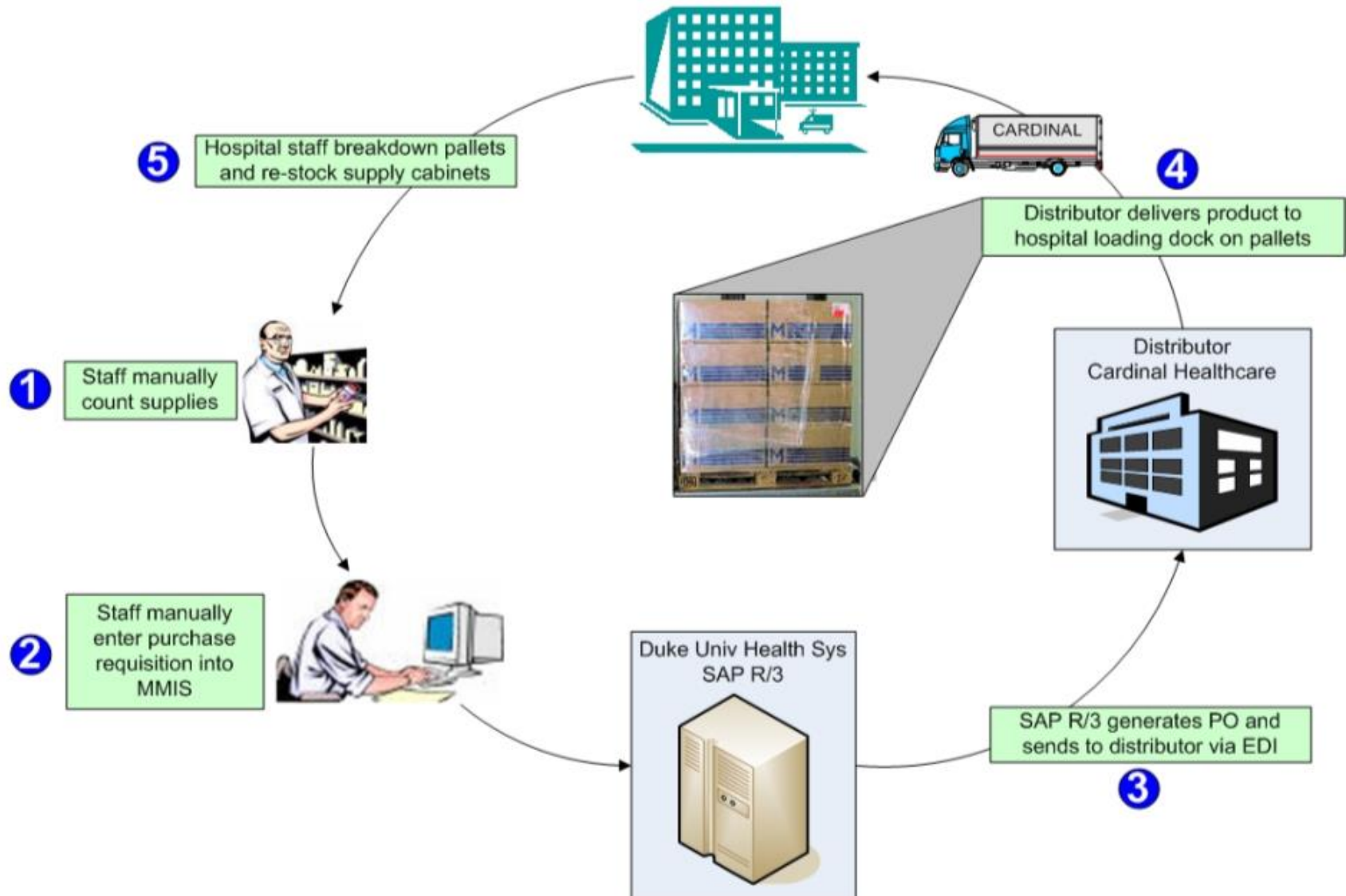


DukeMedicine

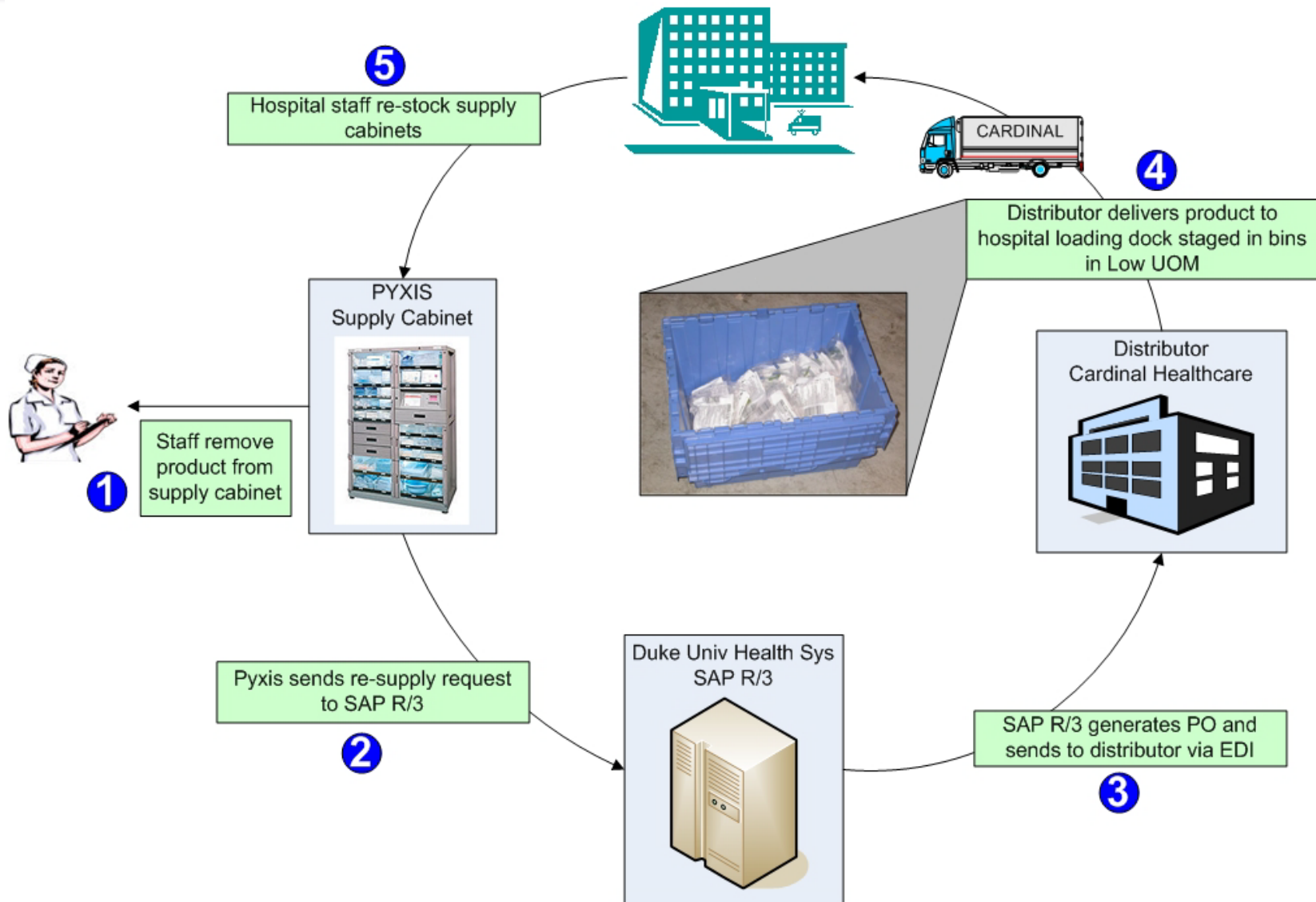
Global Healthcare Exchange (GHX) E-Commerce



Hospital Supply Cart Replenishment Process - Traditional



Hospital Supply Cart Replenishment Process - LUOM



PART 2: Care Redesign

THE NEXT LEVEL OF EXCELLENCE IN SUPPLY CHAIN



DukeMedicine

What is Care Redesign?

Updating Traditional Approaches to Care Delivery

The Past

**Fragmented
Volumetric
Customized
Provider
Driven
Paper-based
Opaque**

Value Based Purchasing

EBM + Implementation Science

Healthcare Consumerism

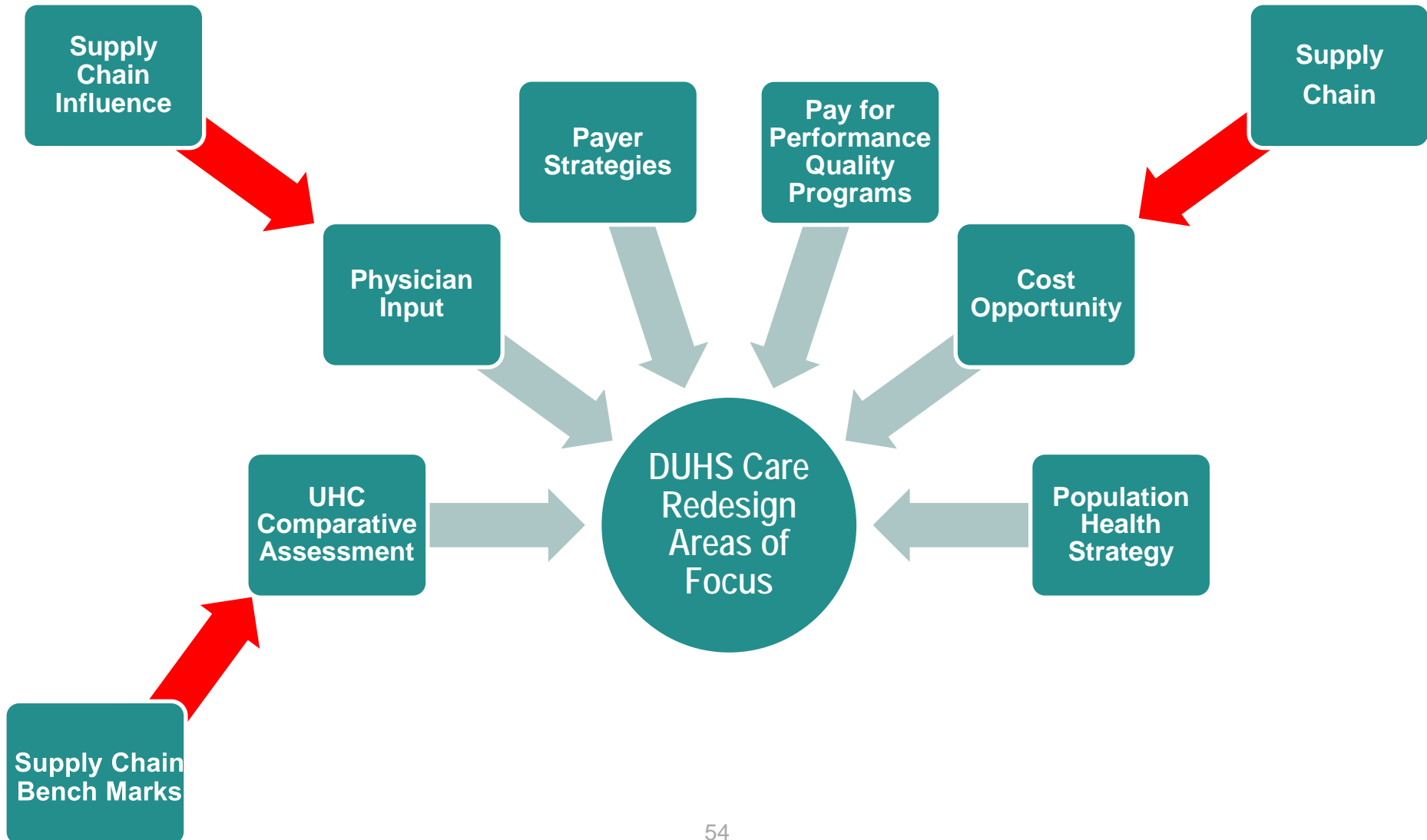
Meaningful Use

Health Insurance Exchanges

One Future

**Coordinated
Valuemic
Optimized
Patient centered
Hardwired
Translucent**

Local and National Considerations Influence the Focus for Redesigning Care



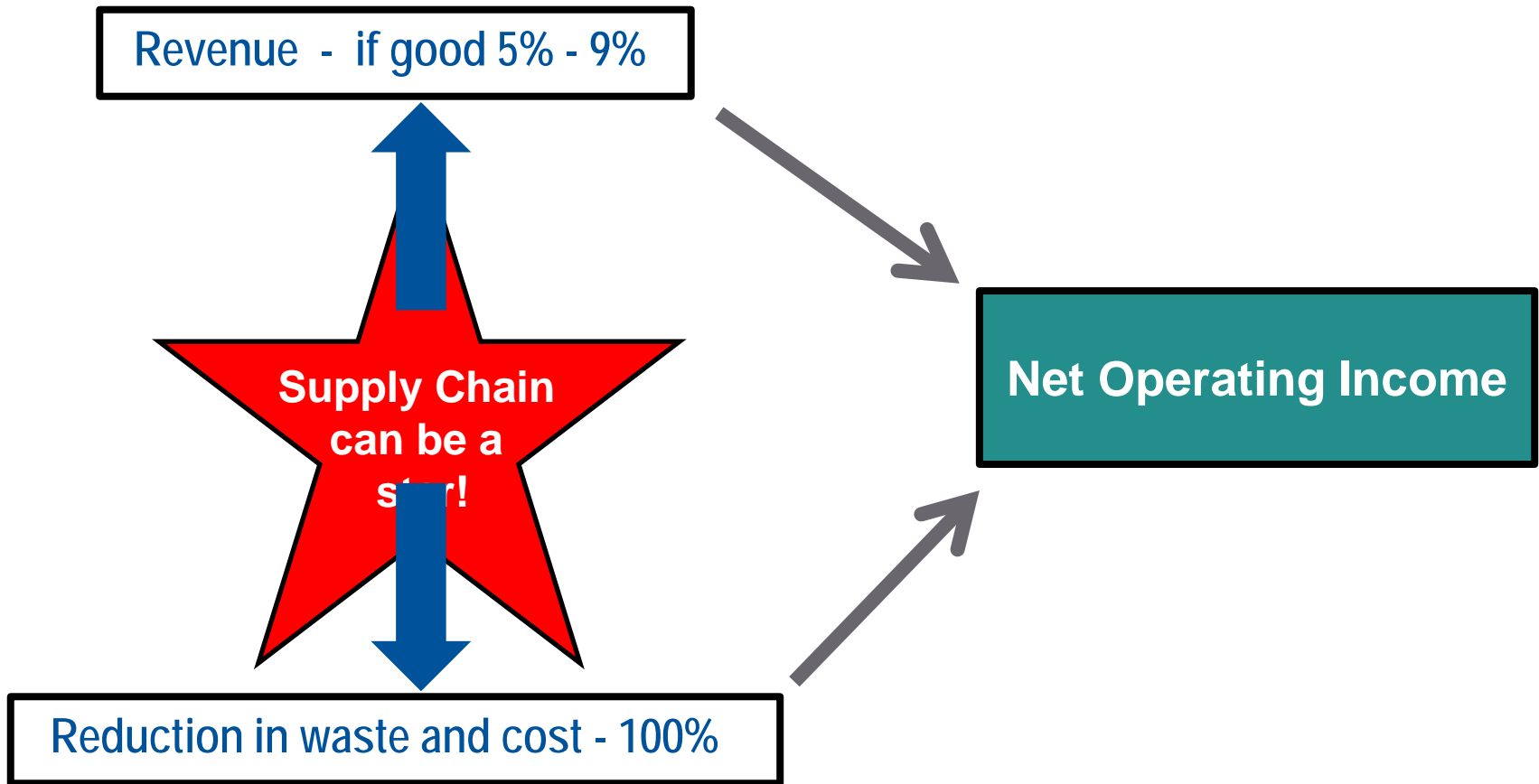
Redesigning Care – Why Now?



Affordable Care Act is Changing Healthcare Economics in the US

- ✓ Massive variation in clinical care
- ✓ High rates of inappropriate care
 - Definition: Where the risk of harm inherent in the treatment outweighs any potential benefit
- ✓ Unacceptable rates of preventable care – associated patient injury or death
- ✓ Huge amount of waste leading to spiraling prices that limit access to care

Financial Pressures Intensify



Formalized Governance and Oversight

Oversight Committee Responsibilities

- Provide oversight for Care Redesign program
- Hold teams accountable to achieve Team activities and work products
- Review progress to ensure redesign initiatives are on track
- Resolve issues and remove barriers to making progress
- Drive acceptance across functions and business units
- Support prioritization and phasing of implementation efforts
- Support established decision rights for Care Redesign efforts

CARE REDESIGN OVERSIGHT COMMITTEE SELECTED MEMBERSHIP

CHIEF MEDICAL OFFICER, CHAIR

EXECUTIVE VICE PRESIDENT

CHIEF NURSING OFFICER

HOSPITAL PRESIDENTS

CHIEF INFORMATION OFFICER

ASSOCIATE CHIEF FINANCIAL OFFICER

CLINICAL DEPARTMENT CHAIRS

CHIEF SUPPLY CHAIN OFFICER

Care Redesign Teams

Focus on All Aspects of Care

Patient Safety

Implant Choice

Length of Stay

Utilization of
Supplies

Time in the OR

Waste

Quality Metrics

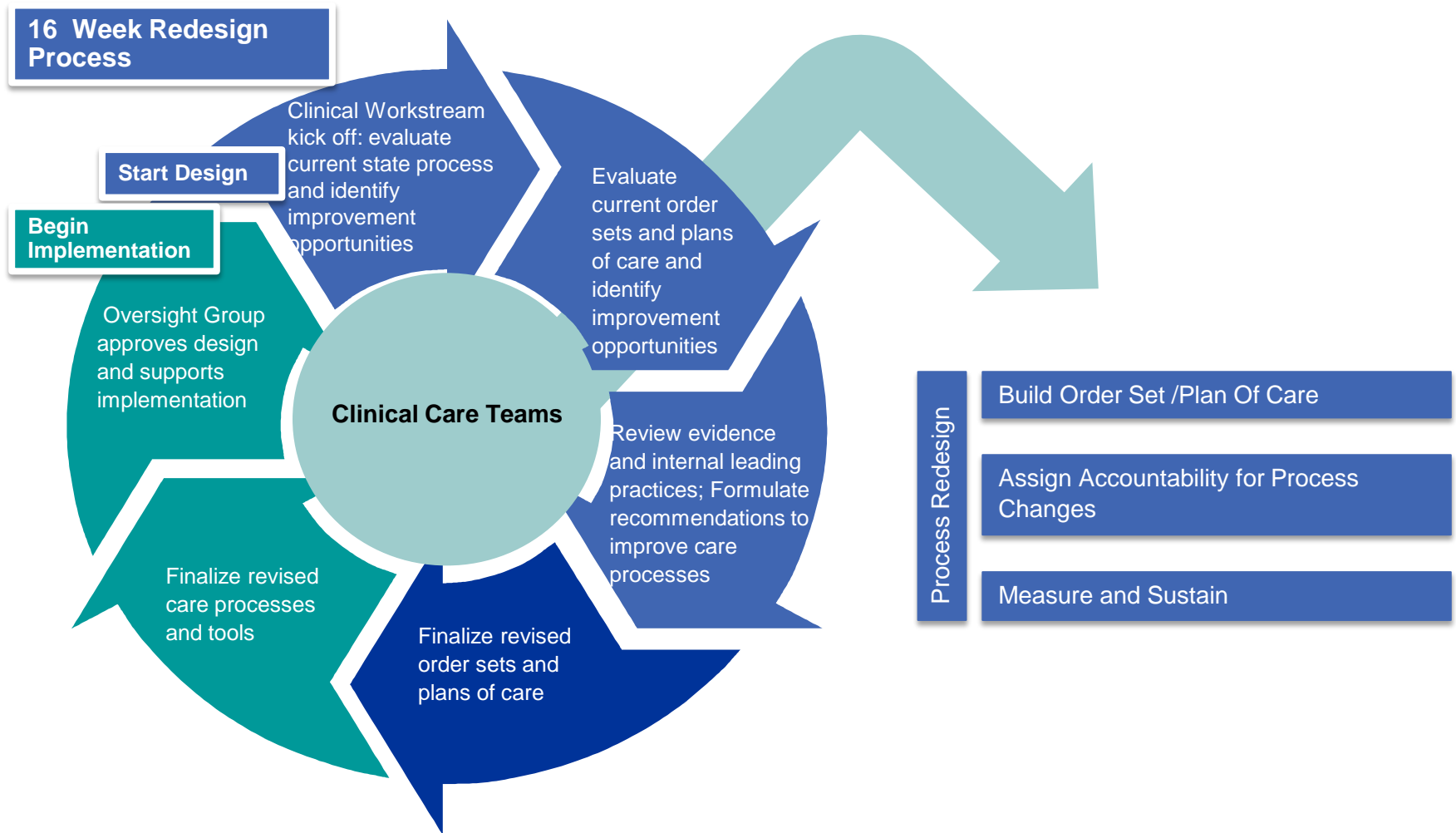
4 Major Steps in the Care Redesign Process

1 Remove Variation in Clinical Care

2 Key to Effect Variation is Standardization

- Pull patients treated over a defined period of time
- Patients identified and staged according to acuity and other factors
- Compare Physicians with Meaningful Number of Patients
- Build into workflow so that clinical team doesn't have to memorize

Care Redesign Process



Care Redesign Teams Developed Key Project Milestones

Care Redesign Team Milestones

- **Physician and stakeholder engagement**
 - **Goal:** Maintain engagement of Care Team Leaders
 - **Deliverable:** Leadership designation and project charter
- **Patient activation and engagement**
 - **Goal:** Establish expectations and how to stay in touch
 - **Deliverable:** Patient Pledge and Educational Materials
- **Workflow consistency**
 - **Goal:** Optimize delivery of evidence-based medicine
 - **Deliverable:** 90 day Care Path
- **Care coordination across the episode**
 - **Goal:** Care management, post-acute management
 - **Deliverable:** Post-discharge care process map
- **Utilization Review**
 - **Goal:** To identify product usage and selection outliers
 - **Deliverable:** To standardize product utilization
- **Real-time data and analytics**
 - **Goal:** Maintain insight into performance
 - **Deliverable:** **Performance Dashboards including supply chain metrics**

TEAM BUNDLES

Afib Ablation

CABG

CHF

Cystectomy

COPD

Laparoscopic Hysterectomy

PCI

TIA

Stroke

SUPPLY CHAIN TEAM BUNDLES

Bariatric Surg

Hip Fracture

Total Hip

Total Knee

Spine

Valve Replacement



With Week-By-Week Goals

Pre Launch

[Week 1](#)

[Week 2](#)

[Week 3](#)

[Week 4](#)

[Week 5](#)

[Week 6](#)

[Week 7](#)

[Week 8](#)

[Week 9](#)

[Week 10](#)

[Week 11](#)

[Week 12](#)

[Week 13](#)

[Week 14](#)

[Week 15](#)

[Week 16](#)

Prepare for Care Redesign kick off

Hold team kick off and introduce Care Redesign

Review current state patient flow, process flows, plans of care, order sets, etc



in review of leading

algorithms, checklists,

outcomes

Develop and initiate an Implementation plan and tests of change

Develop and initiate a communication plan

Develop and initiate an increased patient engagement and education plan

Develop and initiate an education and training plan

Complete toolkit for implementation (identifying what has not already been implemented)

Supply Chain



Supply Chain



Improvements Include Measurable Impacts

2013

- **10% decrease in DUH PCI ALOS**
 - Led by Manesh Patel and Catherine McCarver
- **5% decrease in DUHS CHF readmissions**
 - Led by Zubin Eapen and Catherine McCarver
- **24% decrease in DUH Stroke Readmissions** from prior year and **34% decrease in TIA admissions**
 - Led by Larry Goldstein and Jennie Wahl
- **ALOS and readmissions down across DUHS for Primary Knee**
 - Led by David Attarian and Jennie Wahl
- **6% decrease in ALOS and 58% decrease in readmissions for DRAH Primary Hip**
 - Led by David Attarian and Jennie Wahl

2014

- **57% Inpatient Afib Ablations** moved outpatient
 - Led by Brett Atwater and Catherine McCarver
- **9% decrease in Peds Asthma ALOS**
 - Led by Heather McLean and Jeff Langdon
- **51% decrease in DUH Cystectomy Readmissions, 23% decrease ALOS**
 - Led by Ed Rampersaud and Kara Penne
- **TLH Same-Day Discharges** increased from **1% to 35%**
 - Led by Andrew Berchuck and Kim Nolte
- **5% decrease in ALOS and 13% decrease in readmissions for DRH COPD**
 - Led by Alicia Clark, Harvey Marshall, Adam Wachter, and MJ Stillwagon

How Does Supply Chain Partner with Care Redesign?

What are the Supply Chain Must Haves?



DukeMedicine

Care Redesign Supply Chain and Others Built Upon Initial Successes

Performance Improvement Goals

- **Redesign** care delivery in order to transform our future as a health system
- **Improve the quality of care** we deliver to our patients and **improve the patient experience**
- Enhance **growth** of key clinical services
- Identify new ways to work collaboratively with **payers**
- Improve **efficiency** of current processes and procedures and reduce waste

Workstream Teams

AFTER



Supply Chain Must Haves in the Care Redesign World

1 Experienced Staff

- Strong product knowledge
- Ability to communicate with physicians and clinical staff
- Well developed interpersonal skills
- Motivated to reduce cost within the organization

2 Integrated EHR– Single Source of Truth

- Interface to Clinical, Financial, Performance and Revenue Systems

3 Bench Marking Tools

4 Contract Management System and Cycle

5 Internal Quality Controls

- Robust Material Master – 99% Utilization and Minimal Text Ordering
- Vendor Master

Supply Chain Must Haves in the Care Redesign World

6 Well Developed Spend Analytics

- Link Materials to Revenue Cycle and EHR

7 Clinical and Sourcing Team Alignment

- Supply Chain is Critical Partner with Care Redesign

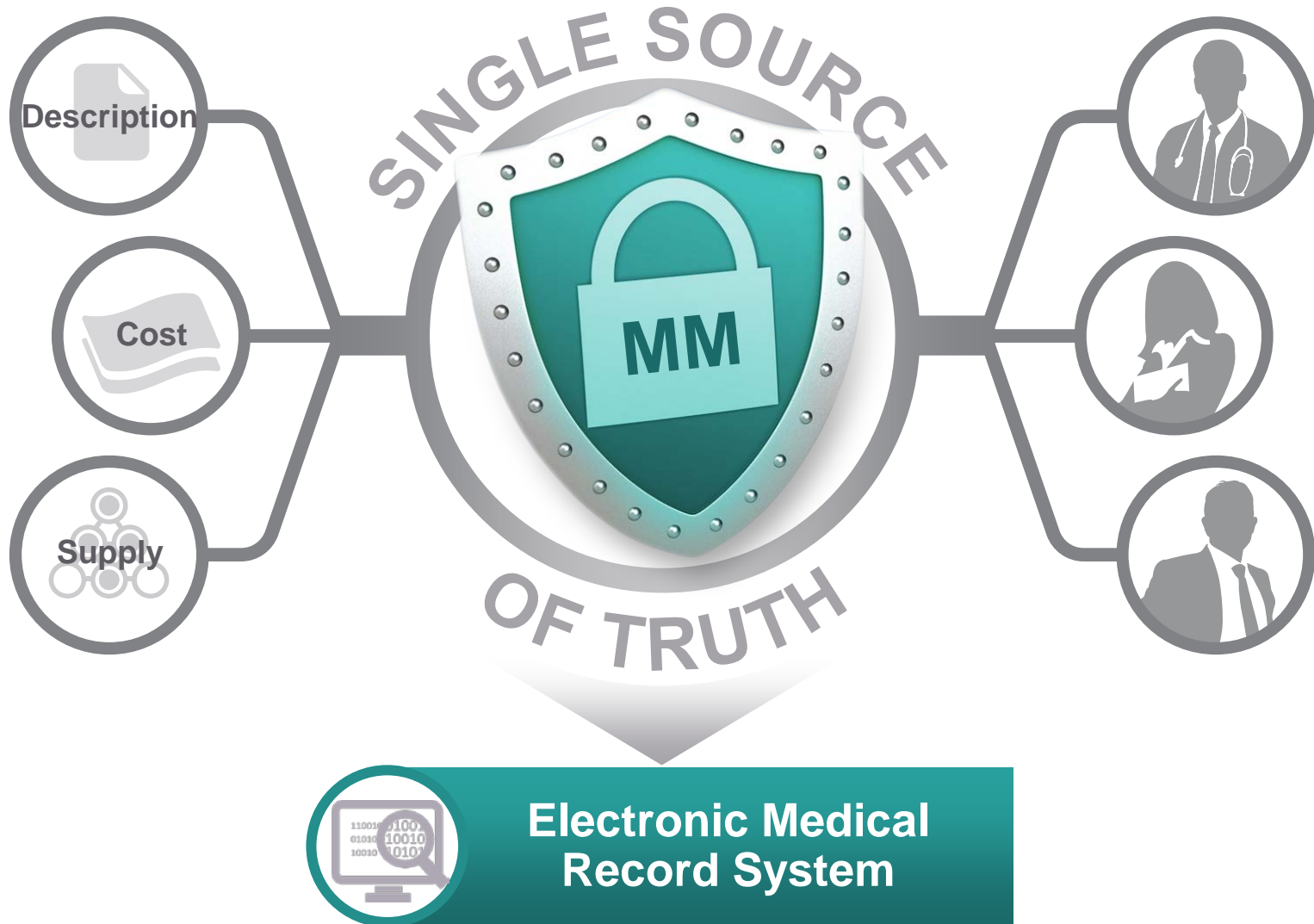
8 Functional Value Analysis and New Product Introduction Teams

- | | |
|--------------------------|---------------------------|
| ➤ Perioperative Services | ➤ Representation from all |
| ➤ Nursing | DUHS Entities |
| ➤ Cardiology | ➤ Multi-Disciplinary |
| ➤ Radiology | – Clinical |
| ➤ Lab | – Procurement |
| | – Revenue |
| | – Finance |

**Most Importantly:
“Single Source of Truth”!**

99% Utilization of Your Internal ERP Catalogue

Key Foundation for Duke's Supply Chain



Spend Analytics



DukeMedicine



DUKE-NUS
GRADUATE MEDICAL SCHOOL SINGAPORE

THANK YOU FOR YOUR
PARTICIPATION TODAY!