

The Need For Supply Chain Transformation

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Trinity Health

Livonia, MI

Presentation Expectation

Session Objective:

Healthcare delivery is complex. Healthcare supply chains have evolved to serve that complexity. Simplifying complex systems unlocks opportunity. In this presentation attendees will explore key areas of difference between the healthcare and industry supply chains. The presenter will share transformative strategies to unlock opportunity by "leaning out" the healthcare trade relationships and improve care delivery through comparative effectiveness.

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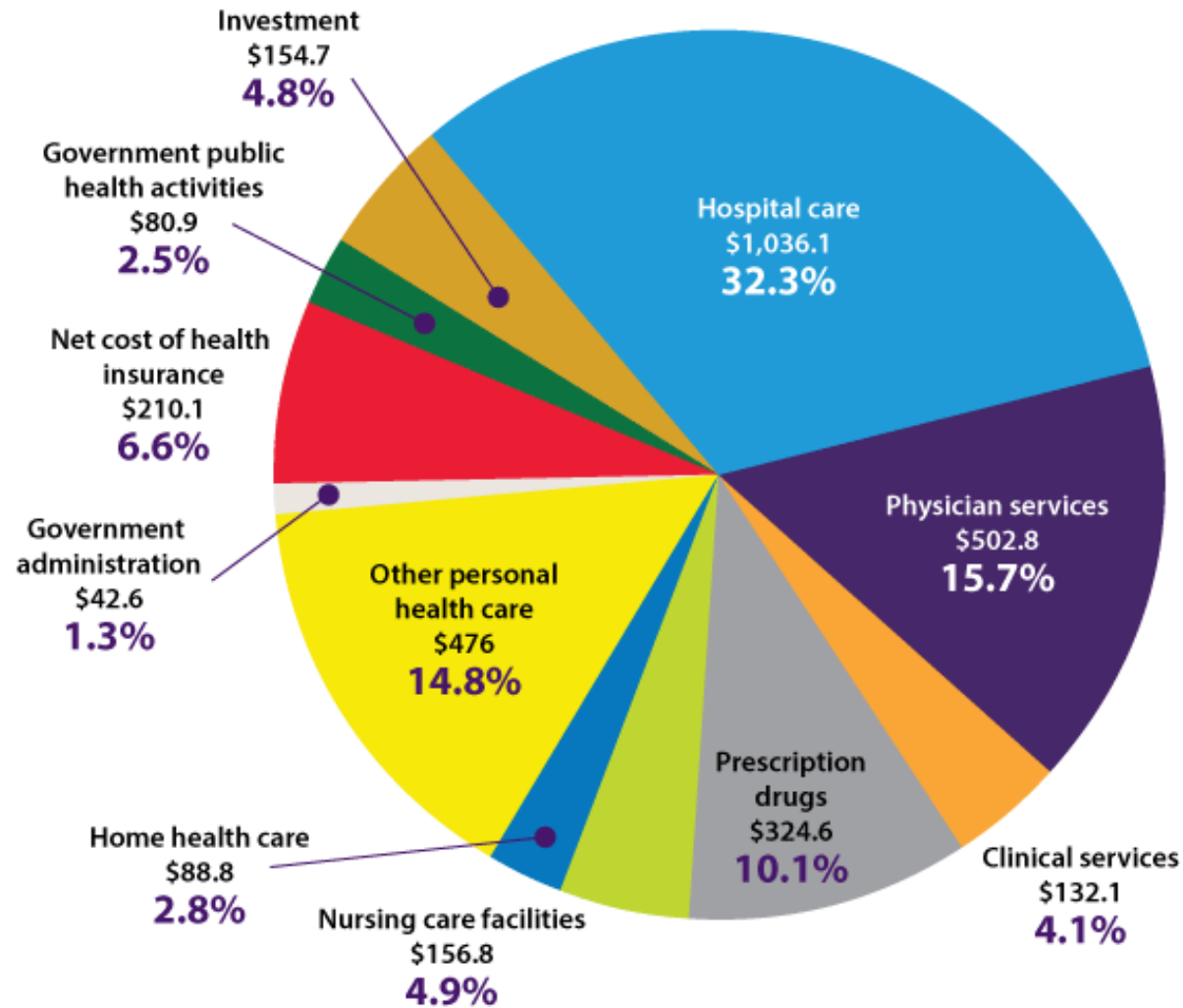
- Learn about key differences between healthcare and other industry supply chains
- Discuss applied strategies to reduce waste in the healthcare trade relationship
- Discover ways in which supply chain can improve care through data

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- ❑ **Introductions**
- ❑ **Healthcare Industry Overview**
- ❑ **Trinity Health Overview**
- ❑ **Supplier Trade Relationships**
- ❑ **Trinity Health Supply Chain Strategies**
 - Supplier Trade Relationship Strategy
 - Clinically Driven Supply Chain Strategy
 - Formulary Sourcing
 - Comparative Effectiveness

The U.S. Spent \$3,205.6 Billion on Health Care in 2015 Where Did It Go?*



* Source: <https://www.cms.gov/Research-Statistics-Data-and->

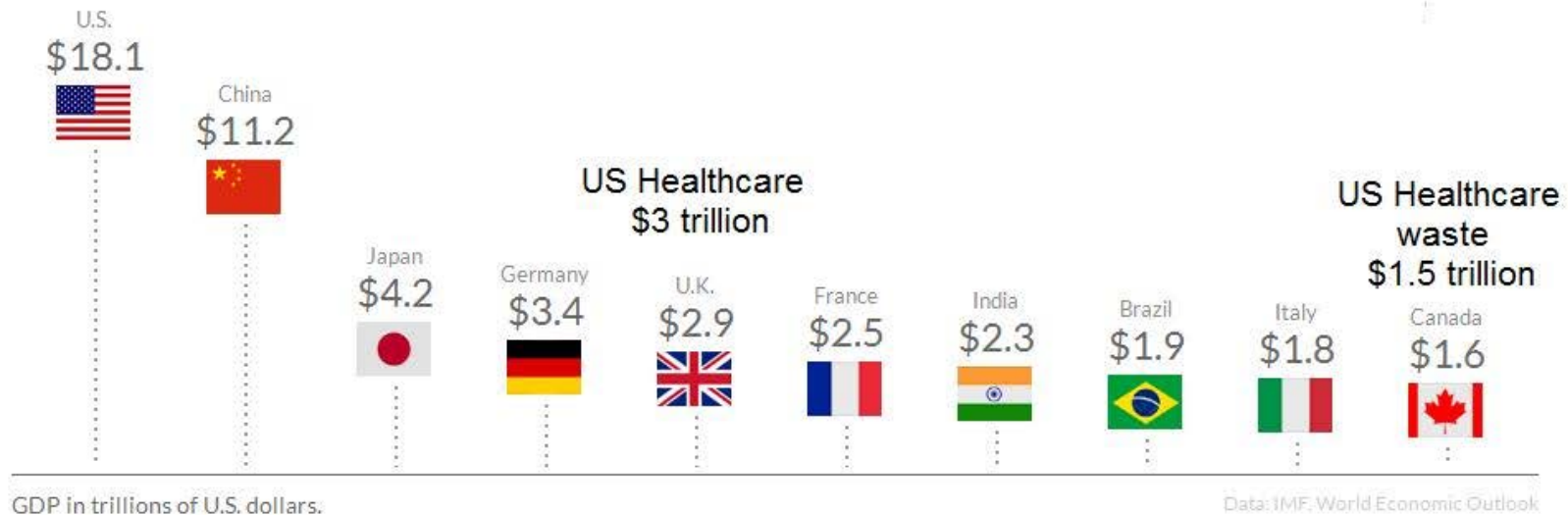
US Healthcare Spending Compared to Total GDP

estimated

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

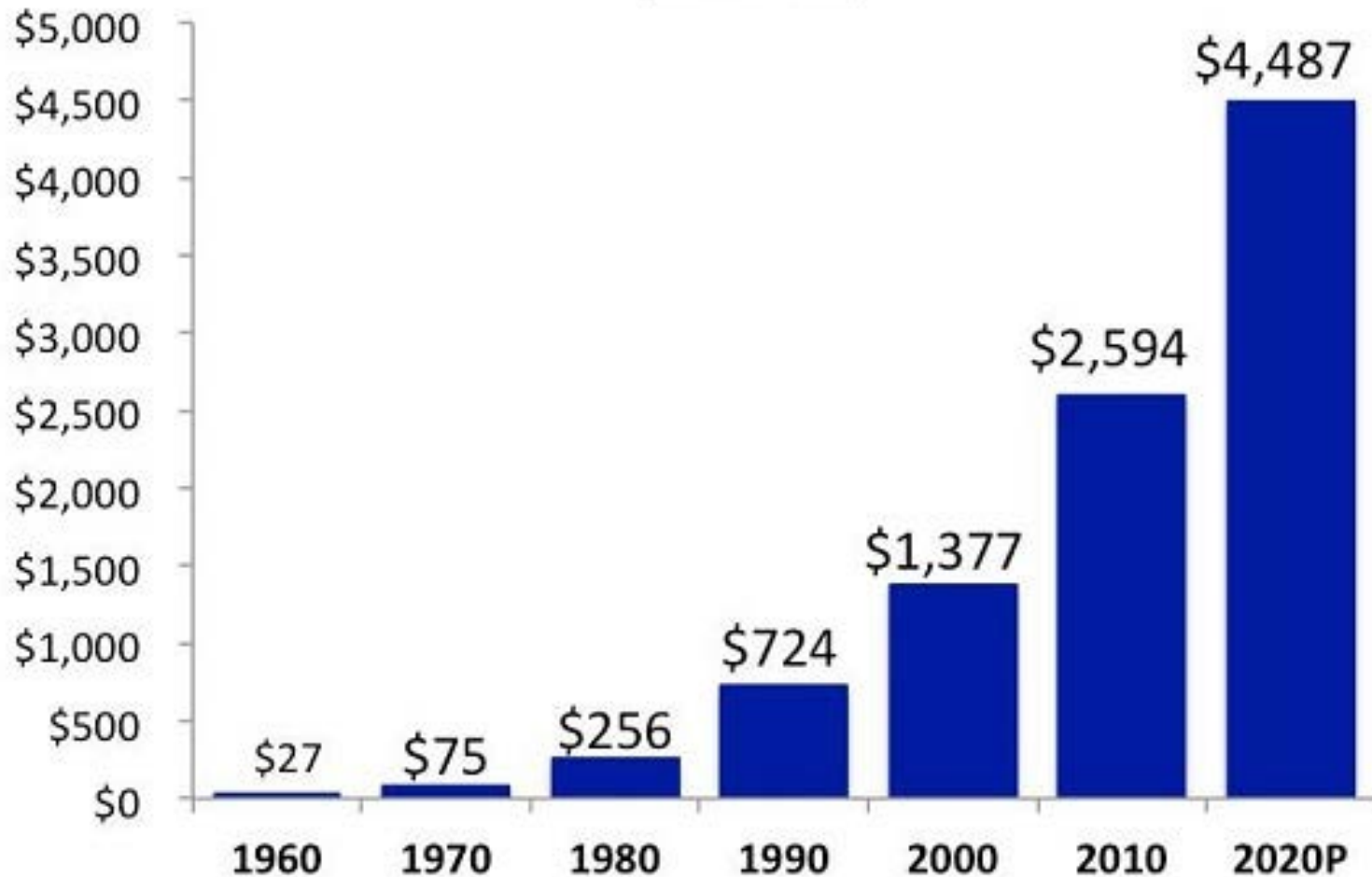
Adapted from
CNN Money

2015



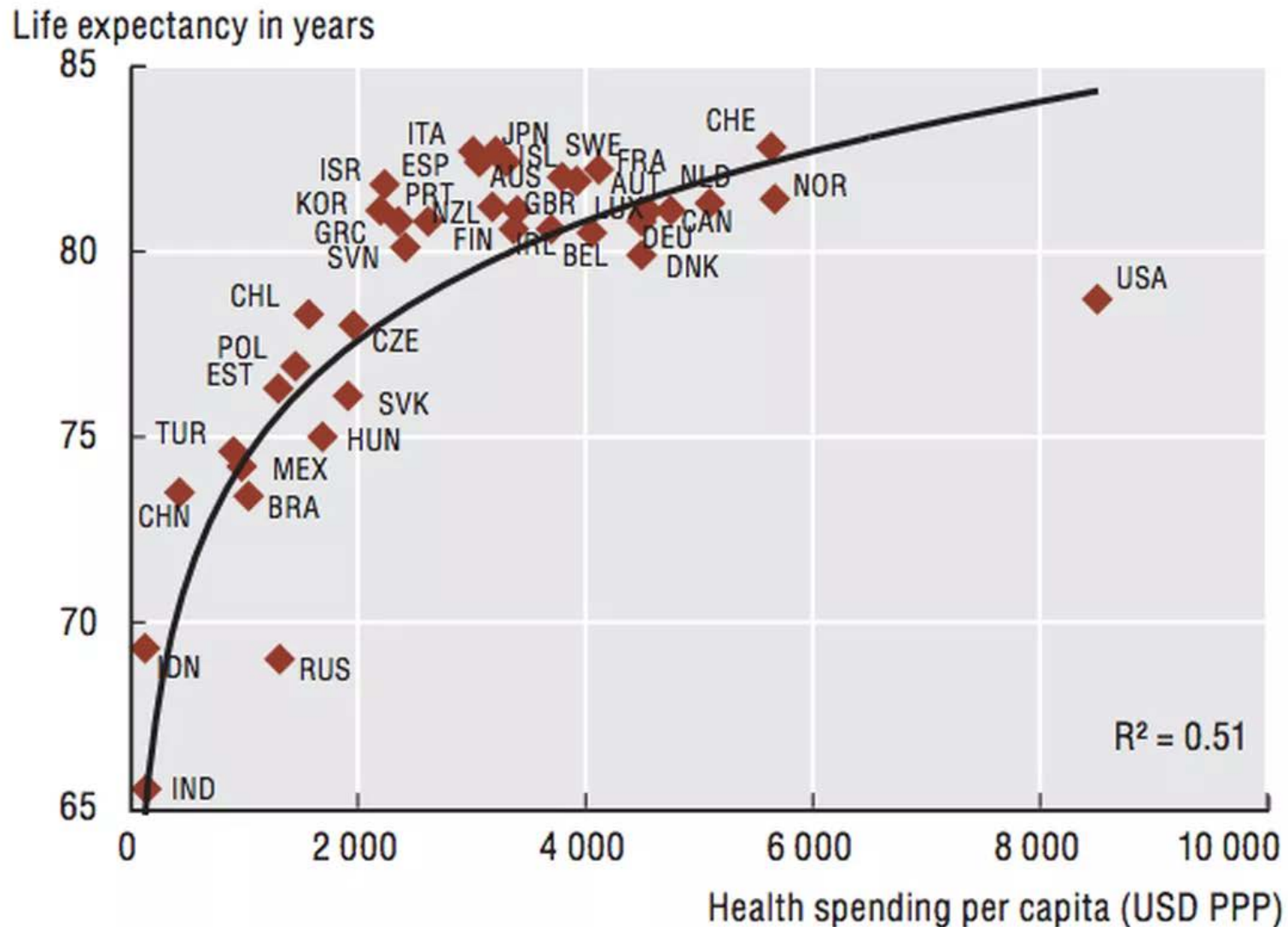
Healthcare Costs 1960 – 2020

(In Billions)



Centers for Medicare and Medicaid Services 2012 California Healthcare Foundation

U.S. – Spending More for a Shorter Life



Healthcare Reform...Again?



Trinity Health



PC 2020
STRATEGY

Trinity Health's 22-state diversified system today

\$17.6B

In Revenue

1.3M

Attributed
Lives

\$1.1B

Community
Benefit Ministry

131K

Colleagues

7.5K

Employed Physician
& Clinicians

25.6K

Affiliated
Physicians

93

Hospitals*
in 22 states

22

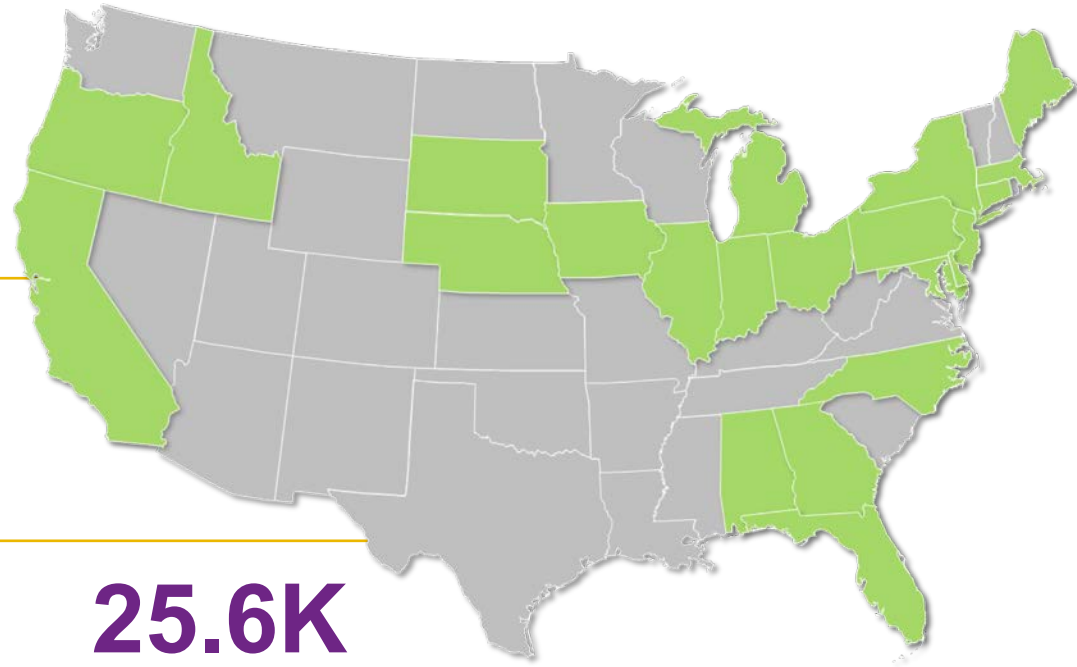
Clinically
Integrated
Networks

13

PACE Center
Programs

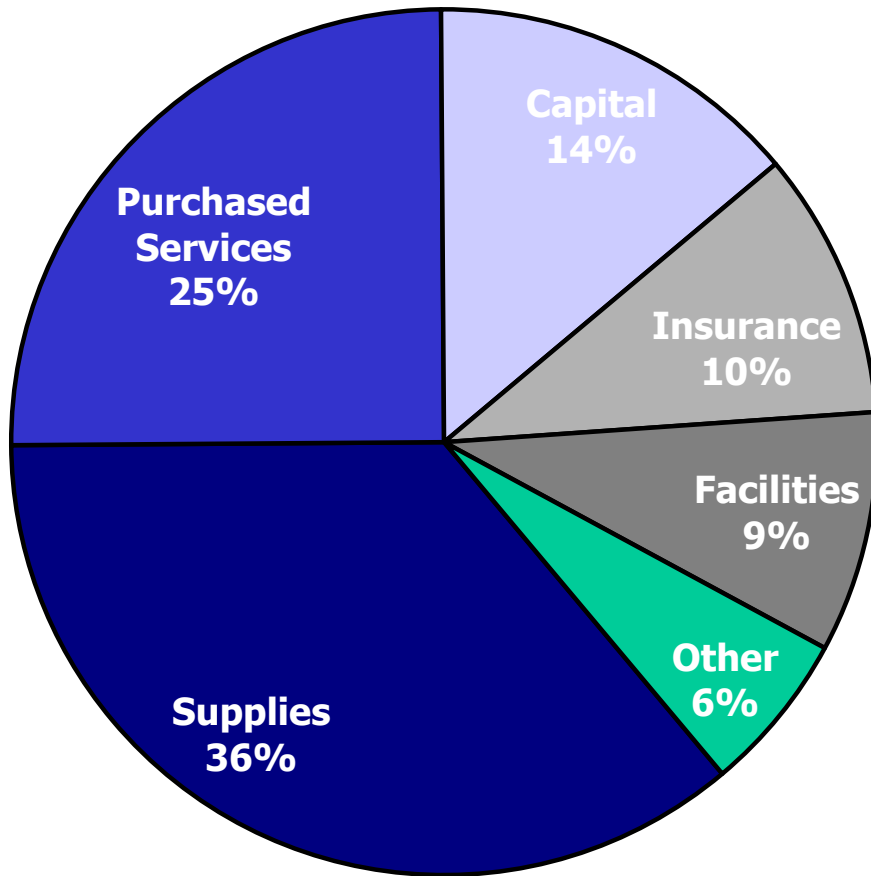
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Continuing
Care Locations



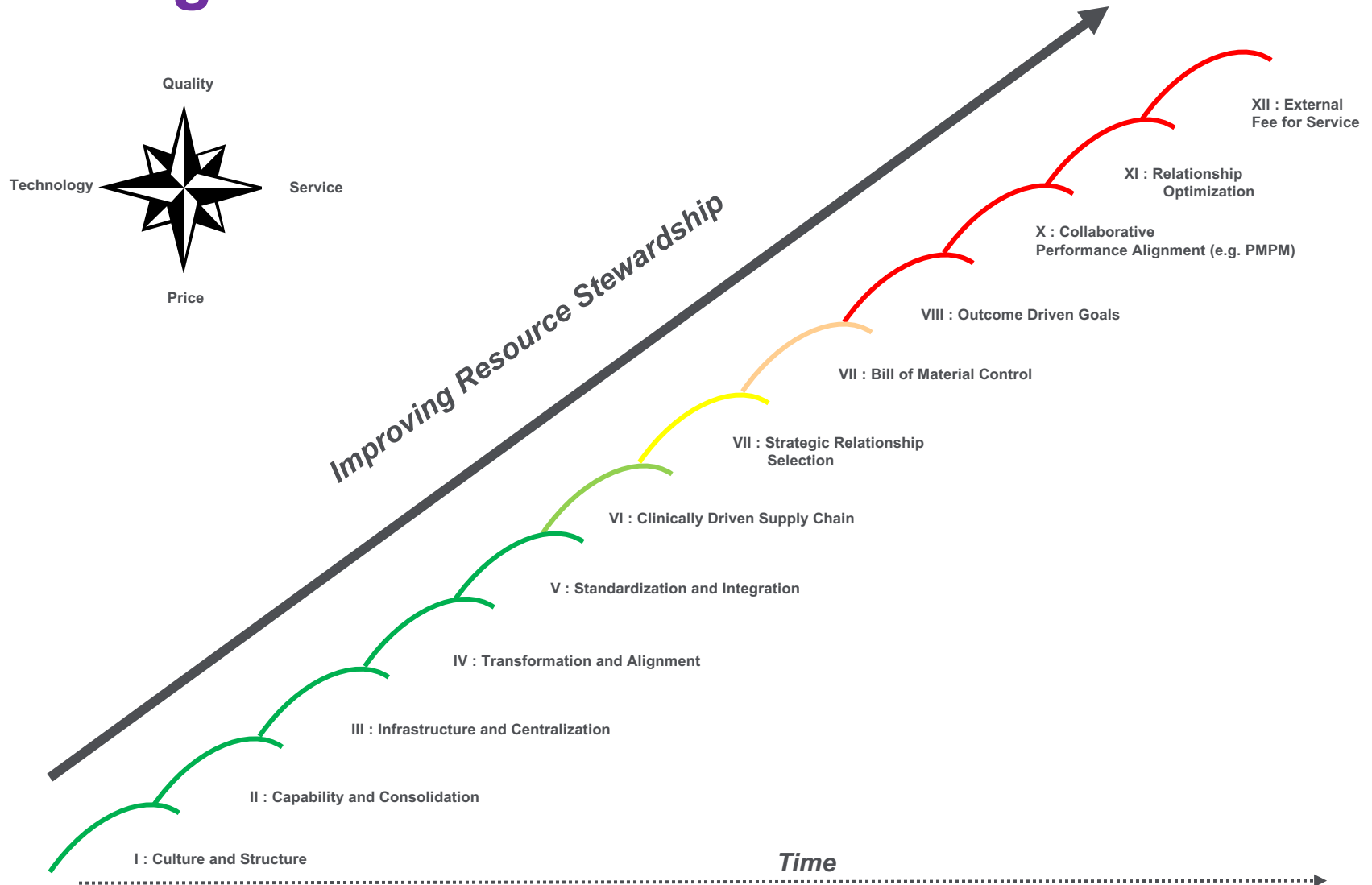
*Owned, managed or in JOAs or JVs.

Trinity Health Non-Labor Spend

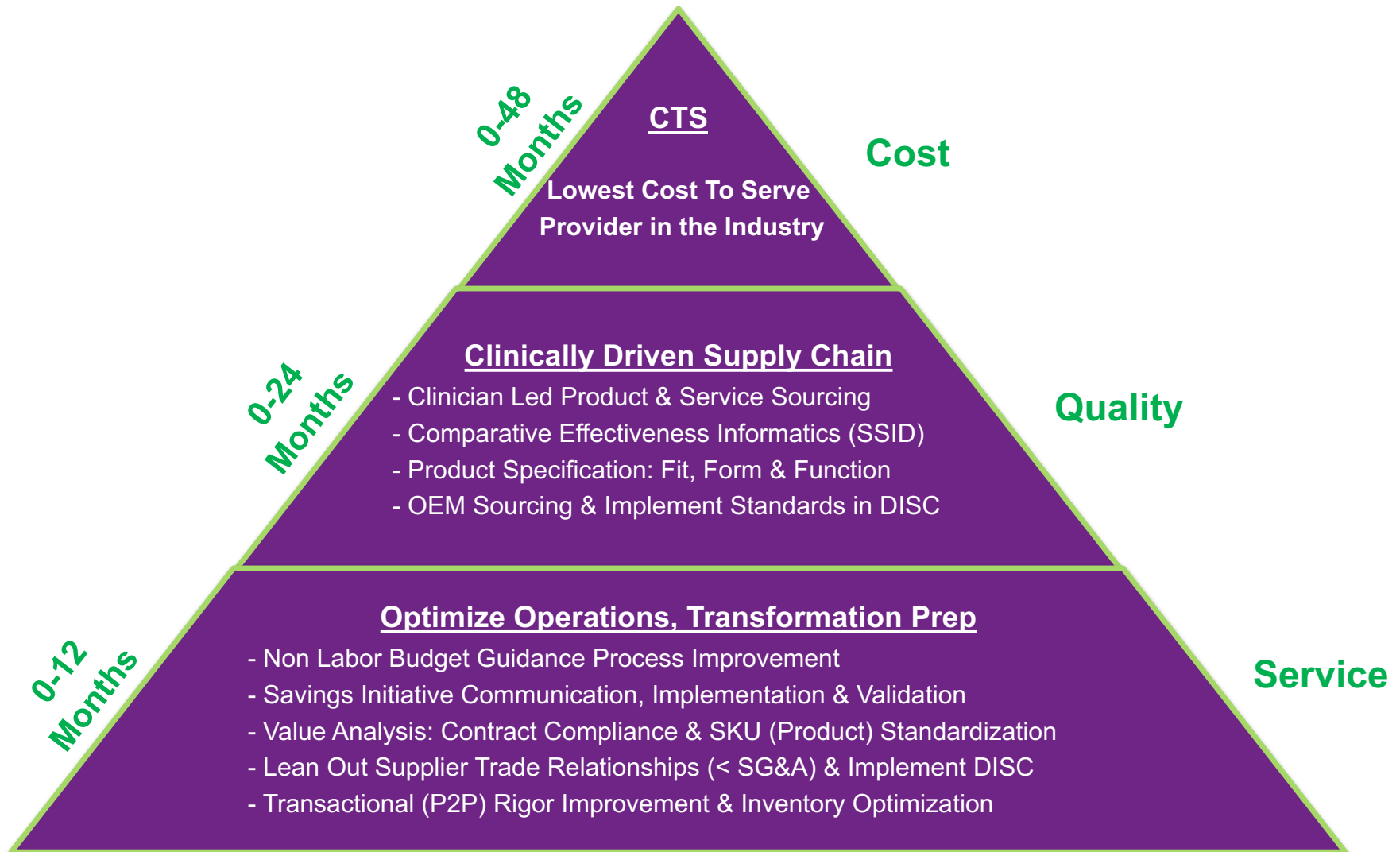


- **Total Non-Labor Spend: \$7.4B**
- **Transactions:**
 - **Over 3 Million invoices processed by accounts payable (A/P) annually**
 - **Generating 4.7 Million A/P lines**
 - **Expenses booked to over 3.2 Million unique company #, G/L account code combinations**

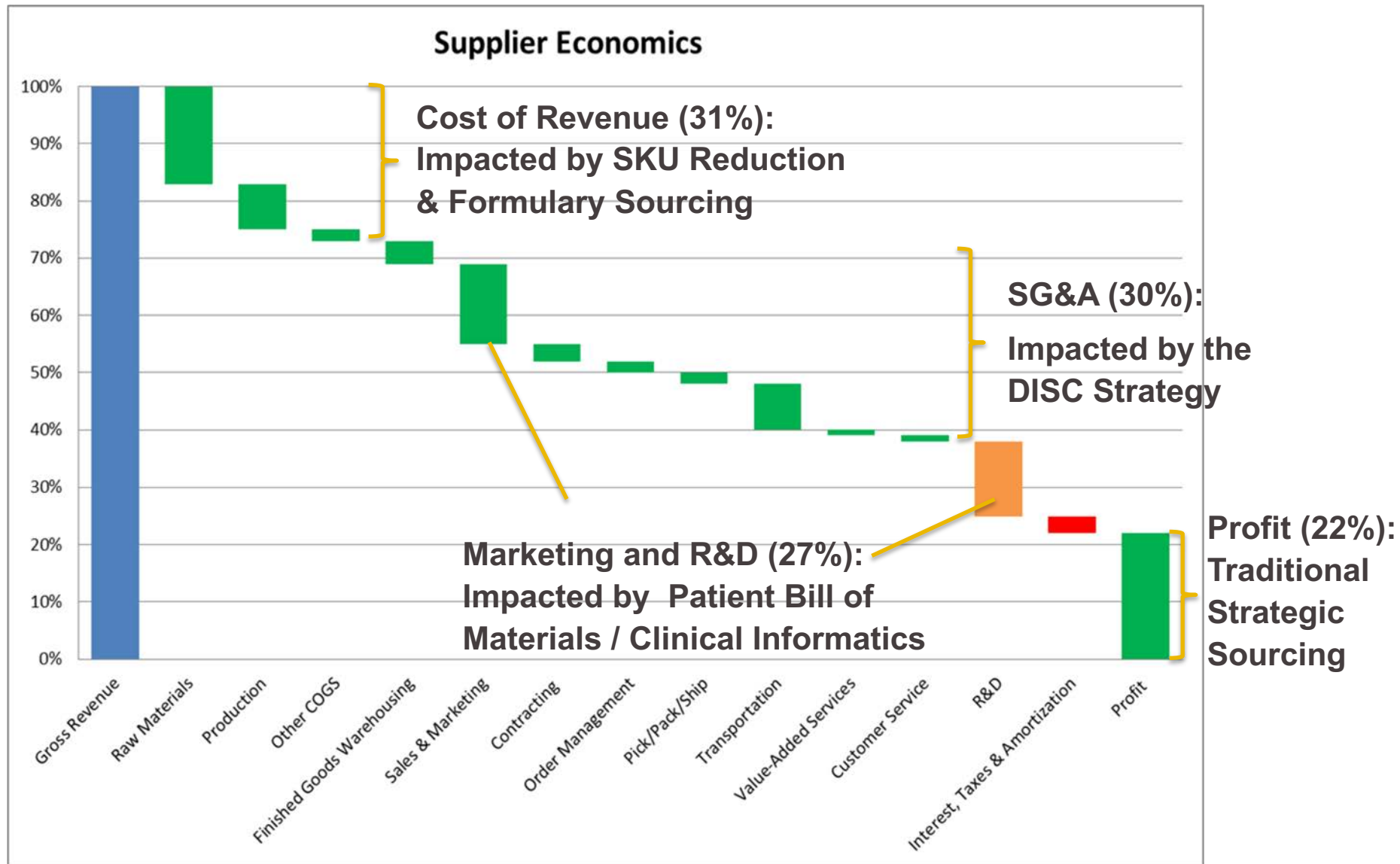
Supply Chain & Fixed Asset Management Strategic Plateaus



Non Labor Transformation Work



Where Does the Value Come From?



Supplier Trade Relationship

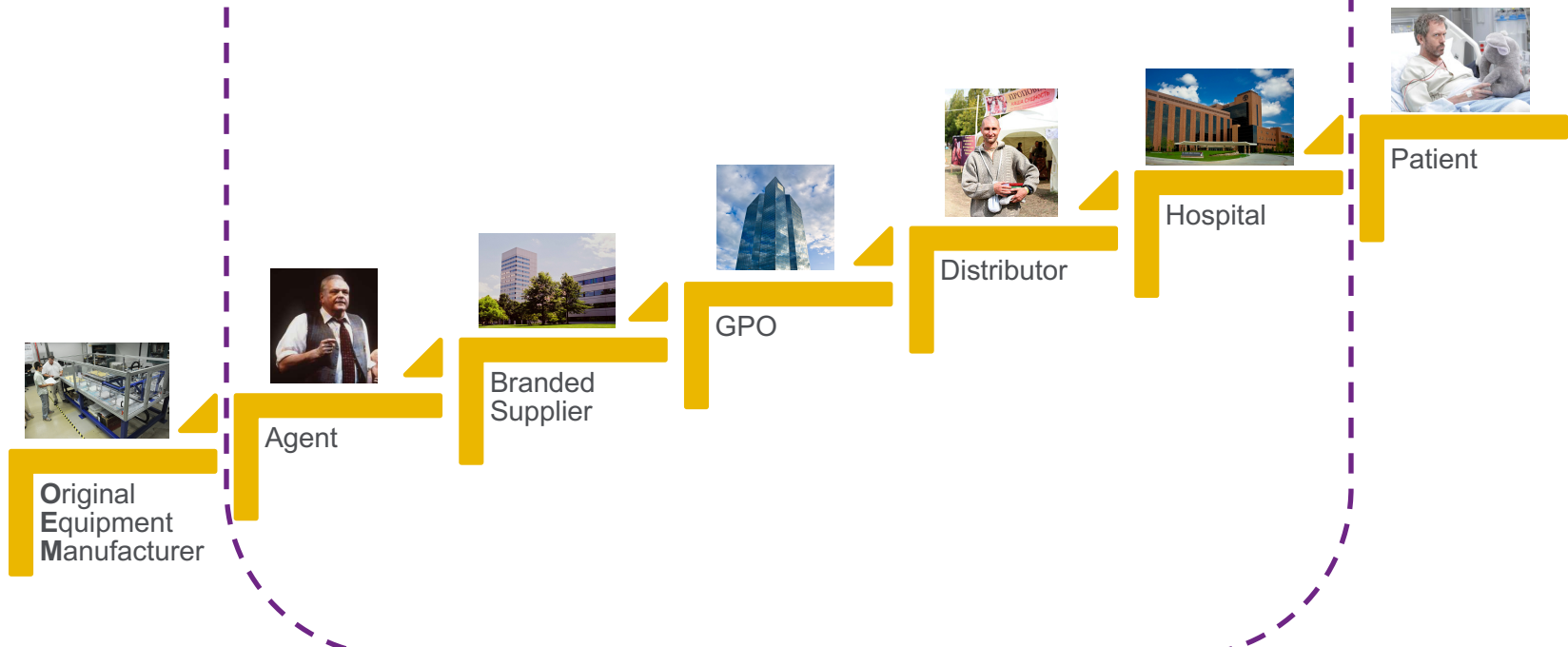
Healthcare Supply Chain Trade Relationship

Current State



Healthcare Supply Chain Intermediaries

Every physical handoff and information exchange represents added cost and creates an opportunity for error and waste



Healthcare Trade Relationship Waste

SG&A Expense as a Percentage of Sales by Industry Sector

Industry Sector	10% ile	Median	90% ile
Energy	2.49	9.37	29.11
Materials	4.45	10.15	25.52
Industrials	6.99	16.95	36.17
Consumer Discretionary	7.97	22.88	47.67
Consumer Staples	7.49	23.26	52.80
Health Care	12.83	38.50	67.34
Financials	6.60	38.85	53.32
Information Technology	14.14	37.61	74.02
Telecommunication Services	9.42	23.12	49.15
Utilities	3.81	17.10	46.45
Real Estate	3.54	8.80	26.03
All sectors combined	6.49	25.00	54.74

Healthcare SKU characteristics and demand patterns are similar to the Consumer sector

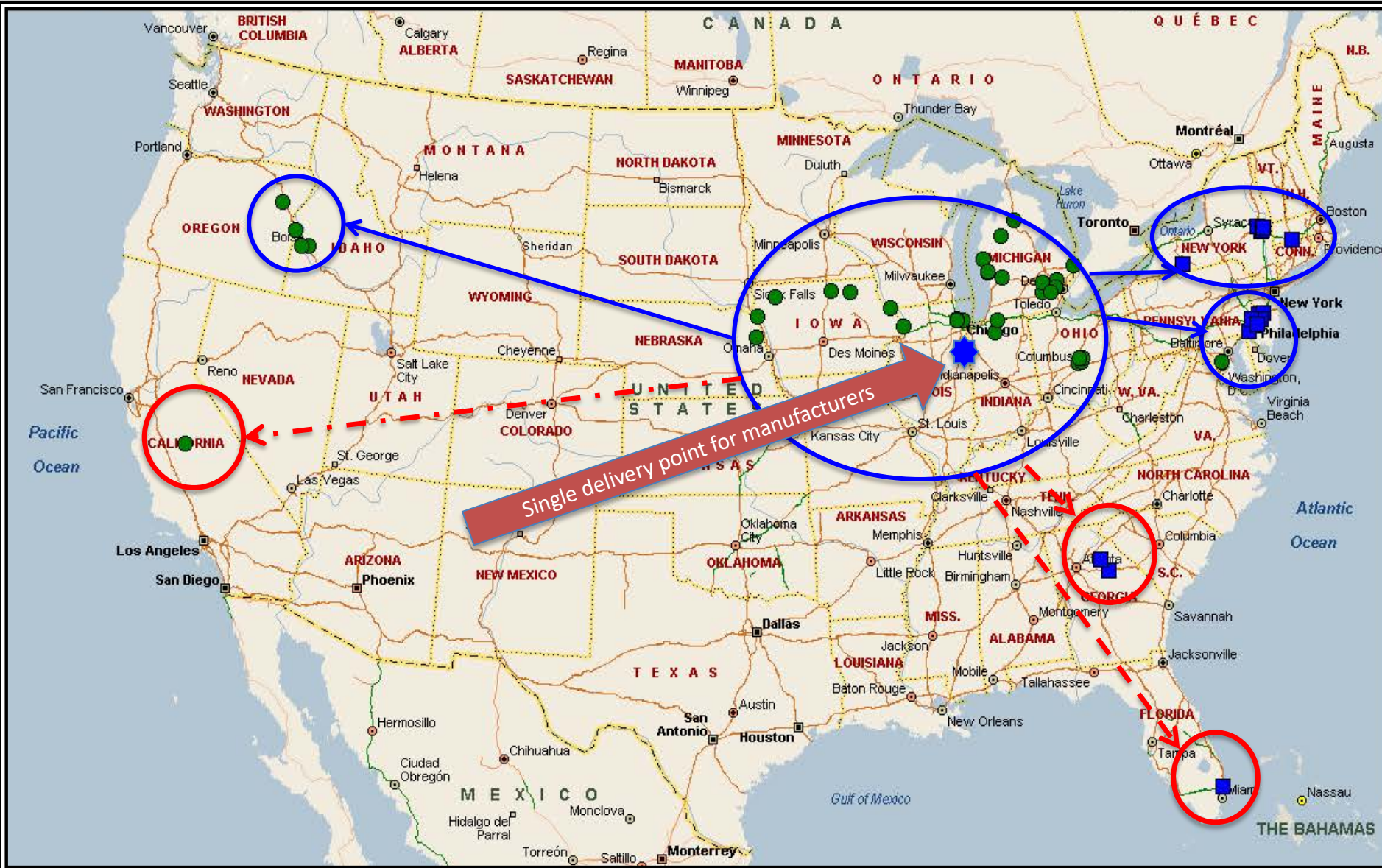
This suggests a waste reduction opportunity in excess of 15%

Trinity's Top Product Supplier Costs

Top 4 Suppliers by Spend								
	Medtronic		J & J		CR Bard		Stryker	
Total Revenue	\$28.8B		\$70.0B		\$3.4B		\$11.3B	
Cost of Revenue	\$9.1B	32%	\$21.5B	31%	\$1.3B	38%	\$4.15B	37%
Gross Profit	\$19.6B	68%	\$48.5B	69%	\$2.1B	62%	\$7.2B	64%
R & D	\$2.2B	8%	\$9.0B	13%	\$259M	8%	\$715M	6%
SG & A	\$9.6B	33%	\$21.2B	30%	\$1.0B	29%	\$4.9B	43%
Profit	\$3.5B	12%	\$15.4B	22%	\$135.4M	4%	\$1.65B	15%
Total Spend with Trinity	\$156.5M	0.52%	\$104.0M	0.15%	\$58.3M	1.7%	\$50.8M	0.45%

Supplier Trade Relationship Strategy

Trinity DISC



Leaning Out The Trade Relationship

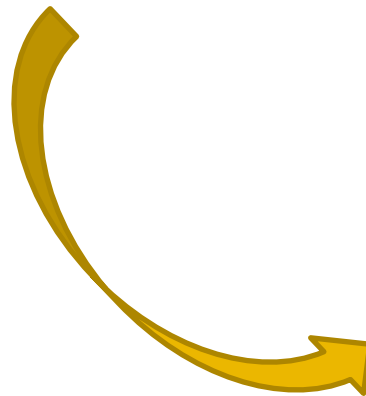


- Current state workshops with Supply Chain / S&OP team
 - How is demand expressed?
 - What are the resulting pick, pack & ship steps?
- Future state modeling
 - Optimize flow: Demand to Receipt into the Trinity DISC
 - Identify waste and negotiate share
 - Kickoff project to eliminate

One Week of Orders - WORKSHOP



From this....



To this.....



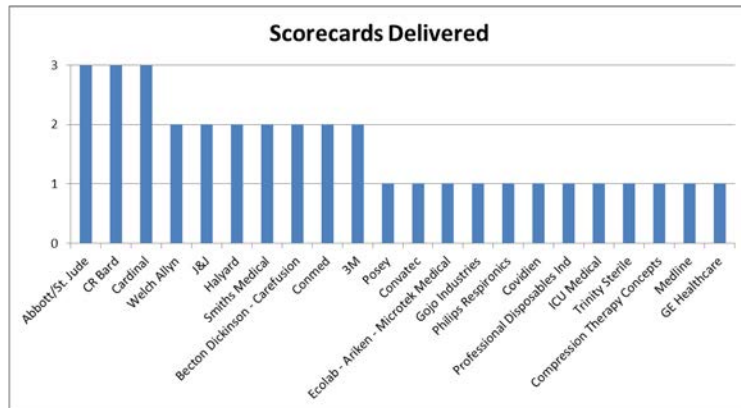
Waste....



Supplier Quality & Performance Management Stats

1/5/2018

35 Scorecards Delivered



DISC: All Spend Being Measured



BD Carefusion

5-1-17 to 11-28-17

Source	Total Score	Delivery Performance	Order Management	Quality	Value & Support	Spend (DIR, DIST)	% of Total DIR Spend	Line Count	% of Total DIR Count
West Lawson	58.2%	77.3%	17.2%		N/A	\$1,386,043.04	35.4%	2,724	58.5%
						\$16,342,046.87		170,947	
DISC	58.1%	57.5%	40.0%	74.1%		\$2,151,777.42	55.0%	1,184	25.4%
						\$376,051.67		750	
East Lawson	62.9%	76.9%	33.3%			\$9,778,586.12	9.6%	57,218	16.1%
Weights		35%	30%	35%	P/F				

Quality Program: 14 SCARs Launched

SCAR (Supplier Corrective Action Report)

Section 1: Completed by Trinity

Supplier: Date: Purchase Order #/Lot Item: Part Number:

L/S/L Healthcare: 10/18/17

Lot Quantity: 7501 pieces

Quantity Accepted: 7501

Quantity Suspended:

Quantity in Error:

Non-Conformance Information

Type of Non-Conformance: Product Quality

Responsibility: L/S/L

Non-Conformance Description:

Supplier part number: 25464 (Trinity 562 260101). Lot # FIC245 was received at Trinity Health's Distribution Center in St. Louis, MO, a few of the lots found have been found to contain the vacuum sealed packages. Please see attached pictures and issue 1000 for full details of this product. Trinity Health also reports that L/S/L is responsible for this occurrence and provide additional detail in Sections 2 and 3 of this report. Corrective Action Request (SCAR) Report was sent on November 1st, 2017 to Tim McCannell, Trinity Health Manager of Supplier Quality & Performance (timccannell@trinityhealth.org).

Section 2

Root Cause Analysis Completed by L/S/L

Our production process starts every day with a machine warm up, which consists of the activation of all machine engines until a validated temperature is reached. This period is the only time when empty packages are produced. The root cause was found to be a human error occurred when an operator mislabeled the lot dedicated to staging these empty packages with the regular lot used during production. When the personnel realized what had happened, Quality Inspectors went through the mixed lot and segregated out all the empty kits, we believe a very small percentage (less than 10%) were shipped in the case prior to launch. Correct inventory was checked and no empty packages were found.

Section 3

Supplier Corrective Action Completed by L/S/L

A smaller lot of empty kits is now used to stage and then keep all empty packages produced during the warm up period. Quality Inspectors have been trained to conduct proper checks to verify that all empty packages have been discarded.

Section 4

Conclusion Completed by Trinity Health



Clinically Driven Supply Chain Strategy

Clinically Driven Supply Chain Evolution



	standardize supplies	latex free surgeons' gloves	reprocessing renewal	specific orthopedic implant initiatives	specific cardiology initiatives with Care Optimization Team
Physician co-led partnerships	Thibault RN Farkas RN SC Dir Mott, SC Dir	Whitehouse, MD Farkas, RN SC Dir	Komins, MD Stout, MS, RN Mott, SC Manager	Pinto, MD Young, SC Dir	Rosenblum, MD Young, SC Dir Lentz, MSN, RN
Triple aim objectives	1. Reduce number of sku's 2. Reduce cost and improve products selection 3. Establish key clinician buy-in with change	1. Mitigate increased price for latex free surgeons 2. Establish surgeon buy-in with the change 3. Reduce caregivers and patients exposure to latex	1. Implement refresh of reprocessing strategy with new vendor 2. Establish physician champion and partner at each ministry 3. Reduce cost of products	1. Reduce number of implants available 2. Standardize other ortho clinical products (sports) 3. Change utilization practices, reduce variation in care 4. Reduce cost of products	1. Review new product absorbable stents for clinical efficacy 2. Decision to hold off on product, too early to implement 3. Review TAVR products for opportunity to reduce cost 4. Evolve Service Line team
Savings	\$ 6M Annually Clinician led	Reduce spend on switch to latex free gloves Budget neutral change	Goal \$10M	Goal > than \$3M Shoulders \$4M/yr 3 yr Sports \$3M TH/TK tbd	Reduce care variation with new product selection Goal > \$7M

CDSC Strategy: Formulary Sourcing

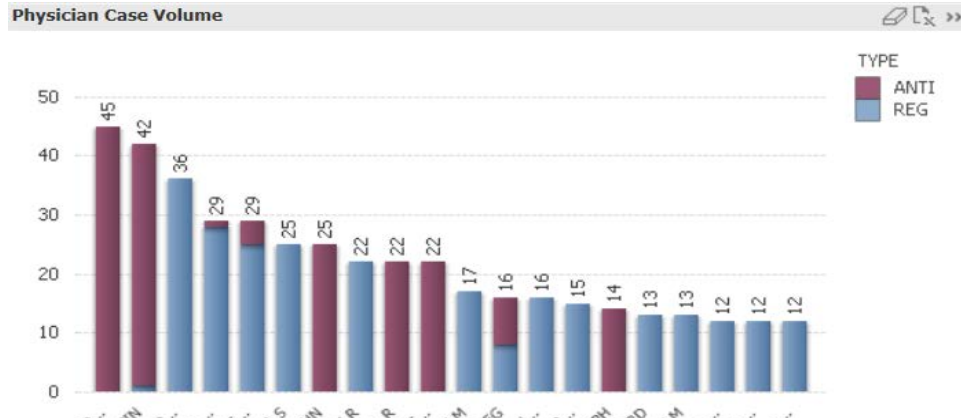
Example: Patient Slippers

	Traditional Sourcing	Formulary Sourcing
Contracted Suppliers	2	1
Suppliers with Spend	8	1
Number of SKU's	97	32 (2 colors each size)
Annual Spend	\$1.2M	\$850K
Number of pairs annually	1,764,464	Same
Feedback from Ministries	Poor satisfaction	N/A
	Current sizing does not fit enough patients	
	Top welt too tight – nurses cut with scissors to relieve tightness	
	Tread - too small to prevent falls	
	Reports of falls with slippers a contributing factor	

CDSC Strategy: Comparative Effectiveness

Example: Bone Cement Utilization and Practice Variation

- Variation in clinical practice exists related to bone cement utilization and type of cement
- Opportunity exists to standardize approach through protocol development for type and amount of bone cement utilized for Total Joint Replacement cases
- Multiple options create shadow costs (see next slide for decision tree)
- Data shows the following:
 - Antibiotic bone cement use per case is \$150 higher than regular cement
 - Variable practice is apparent as some surgeons use antibiotic cement, some use regular cement
 - Over 60% of cases using 2 or more units of bone cement
 - Pre-Mix or Self-Mix Antibiotic Cement is based on surgeon preference
- Develop clinical evidence and best known practices to support a standard approach
- Potential impact across Trinity Health annually
 - \$1,000,000+ savings potential (on \$7M Spend)

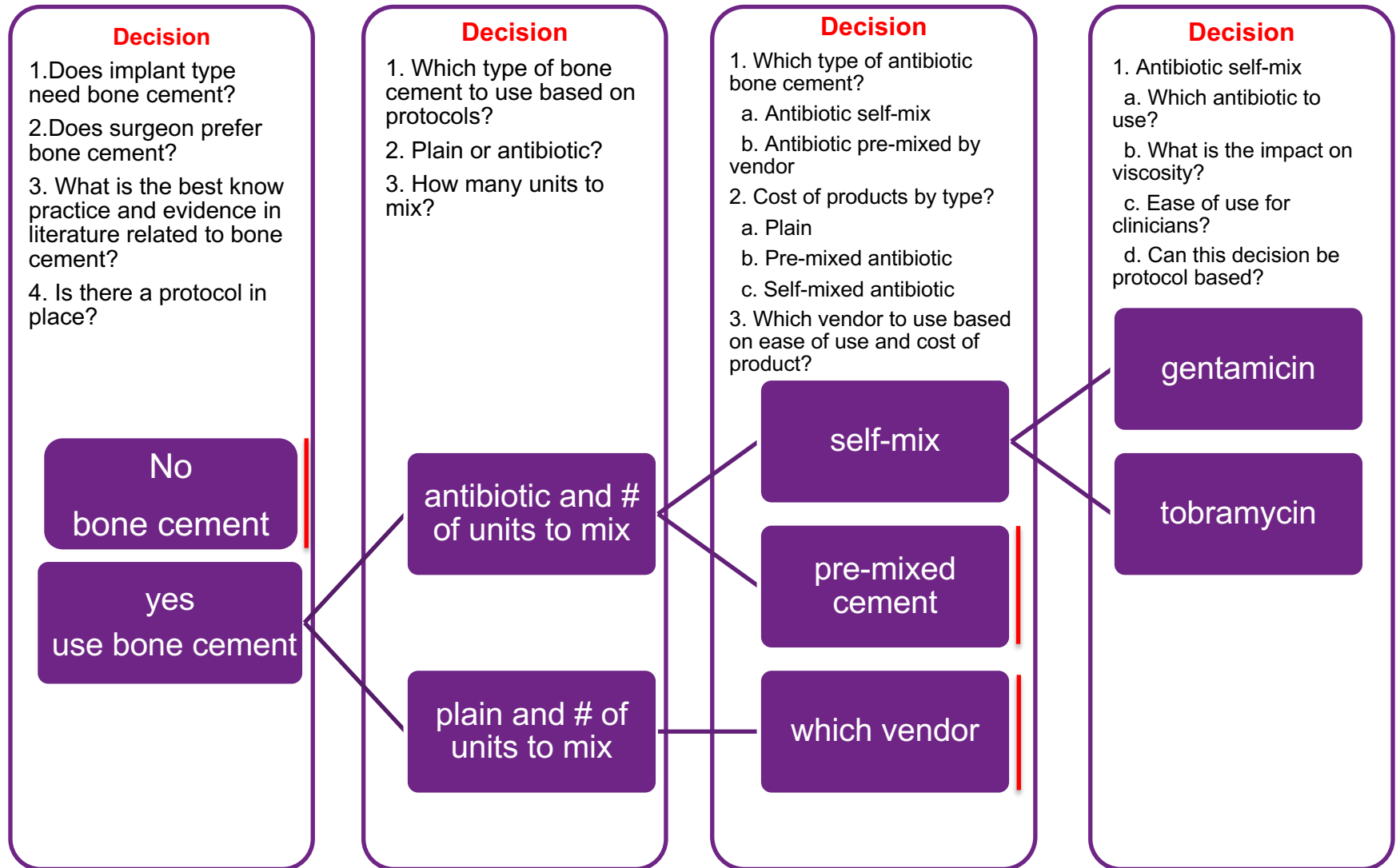


>> TOTAL (REG + ANTI)

KPI	FYTD
Case Volume	13,884
Total Bone Cement Cost \$	\$3,332,121
Total Bone Cement Cost / Case	\$240
Total Bone Cement Units	21,148
Total Bone Cement Units / Case	1.52

CDSC Strategy: Comparative Effectiveness

Example: Bone Cement Utilization and Practice Variation



“To conceive of knowledge as a collection of information seems to rob the concept of all its life....Knowledge resides in the user and not in the collection. It is how the user reacts to a collection of information that matters.”

Churchman, 1971

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QUESTIONS?

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