



Using Cost Accounting to Achieve Strategic Advantage

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Sun 23 June 2019

12:30 PM – 3:30 PM

hfma[™] | 2019
Annual Conference

June 23-26, 2019
Orlando, Florida

Session Summary

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Description

This session will help attendees:

- Learn to make systematic enhancements that improve their costing approaches
- Develop accurate cost and profitability data to support informed decision-making

The speakers will:

- Present a multidisciplinary approach to gain control of new reimbursement contracts
- Introduce models to evaluate alternative cost-management strategies and reimbursement proposals

Learning Objectives

- Gain an understanding of cost accounting's importance and use in today's environment
- Evaluate enterprise, service-line, and payer-specific cost behavior and profitability
- Model and evaluate alternative cost-reduction strategies and reimbursement proposals
- Learn how to optimize operating-profit models under current constraints

Session Outline

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Session Outline

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Using Cost Accounting to Achieve Strategic Advantage

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Introduction and Housekeeping

Courtesy and Participation

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- Please turn off your cell phones
- Ensure you have an evaluation form
- Download class materials
 - Click on www.never2busy.com at “free software” tab
 - Look for “hfma”
 - Click to download “.zip” file, then double click to open
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 - Type hfma.cnf.io directly into your browser
 - Select this session: CW5



Industry Trends 2019

Continuing Profit Pressure

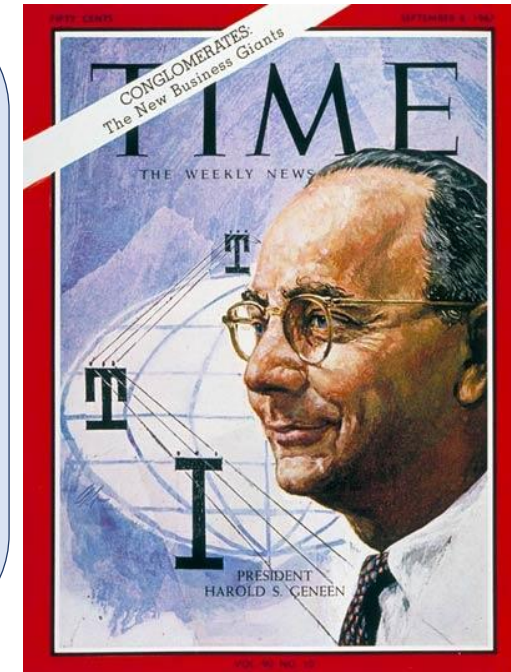
Industry Trends 2019

Continuing Profit Pressure

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***“In business, words are words,
explanations are explanations,
promises are promises, but
only performance is reality.”***

Harold S. Geneen
Former President and CEO of ITT



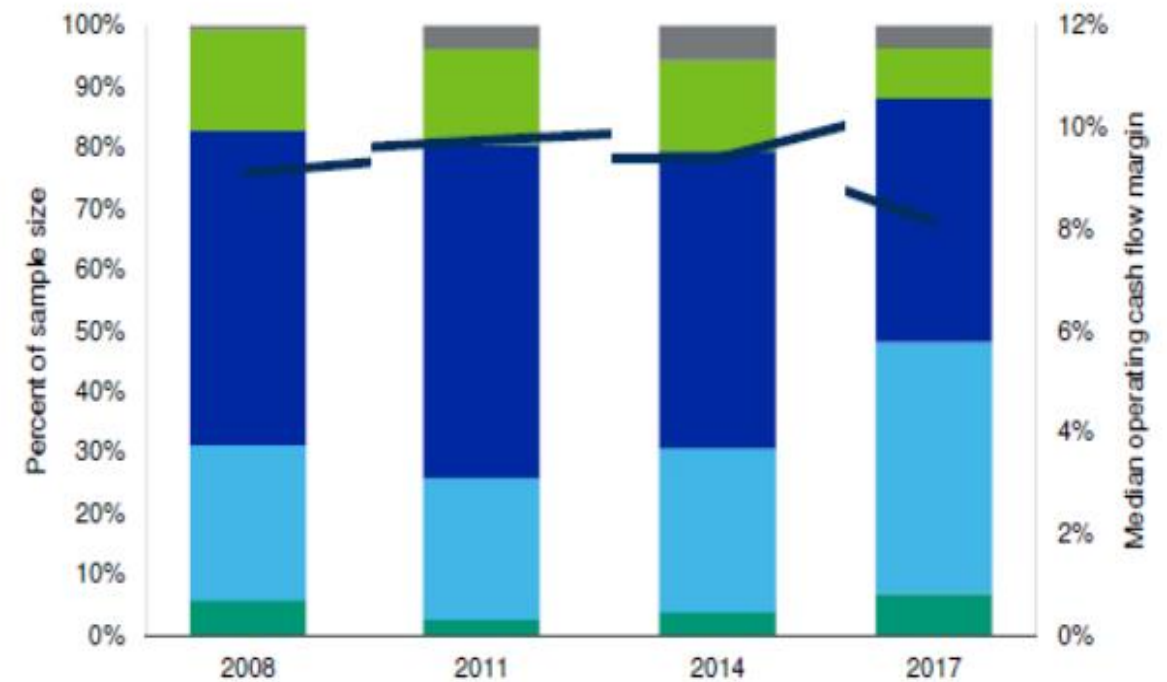
Industry Trends 2019

Continuing Profit Pressure

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- **Hospitals more troubled than any time since the 2008 financial crisis**, and the outlook is not expected to improve in 2019
- More than **28% of hospitals reported operating losses** in 2017, which rose from 16.5% in 2016.
- **Expense growth outpaced revenue growth** for the third consecutive year. High labor costs and lower reimbursement drove the squeeze
- "This is no longer solely about expense reduction. If not-for-profits just focus on that, **they will be out of business in the next few years**," said Lyndean Brick, CEO of the Advis Group. "They have to grow volumes, be creative and **do things differently** than they have done."

Decline in 2017 profitability represents the largest drop over the past decade



Source: Moody's Investors Service

Industry Trends 2019

Continuing Profit Pressure

- Moody's Investors Service has issued a **negative outlook** on the nonprofit healthcare and hospital sector for 2019. The outlook reflects Moody's expectation that operating **cash flow in the sector will be flat or decline and bad debt will rise** next year.
- Moody's said operating cash flow will either remain flat or decline by up to 1% in 2019. Performance will largely depend on how well hospitals manage expense growth.
- Cost-cutting and smaller increases in drug prices will cause expense growth to slow in 2019. Moody's said, however, **expenses will still outpace revenues** due to several factors, including the ongoing need for temporary nurses and continued recruitment of employed physicians
- Hospital bad debt is expected to grow 8% to 9% as benefit-plan design transfers greater financial burdens to patients. An aging population will increase reliance on Medicare, which will also constrain revenue growth, Moody's said.



Industry Trends 2019

Continuing Profit Pressure

- Despite a stable outlook on the healthcare sector for 2019, Fitch Ratings expects **pricing and profit margins to be under pressure** in 2019, according to the rating agency's new Outlook Report
- According to said Megan Neuburger, managing director at Fitch, "Most disruptive threats to healthcare business models boil down to:
 - an **attack on pricing power**, including outside-industry competitors
 - government price-setting
 - consumer and employer efforts to force lower pricing"
- "Of all of these, the **government policy aspect poses the greatest threat**"
- Credit rating **downgrades outweighed upgrades in 2018**, and that should continue
- Other 2019 trends to watch include:
 - **ongoing political debate** around access and affordability
 - **regulatory efforts** to curtail growth in drug pricing
 - **litigation** surrounding the healthcare industry's role in the opioid epidemic



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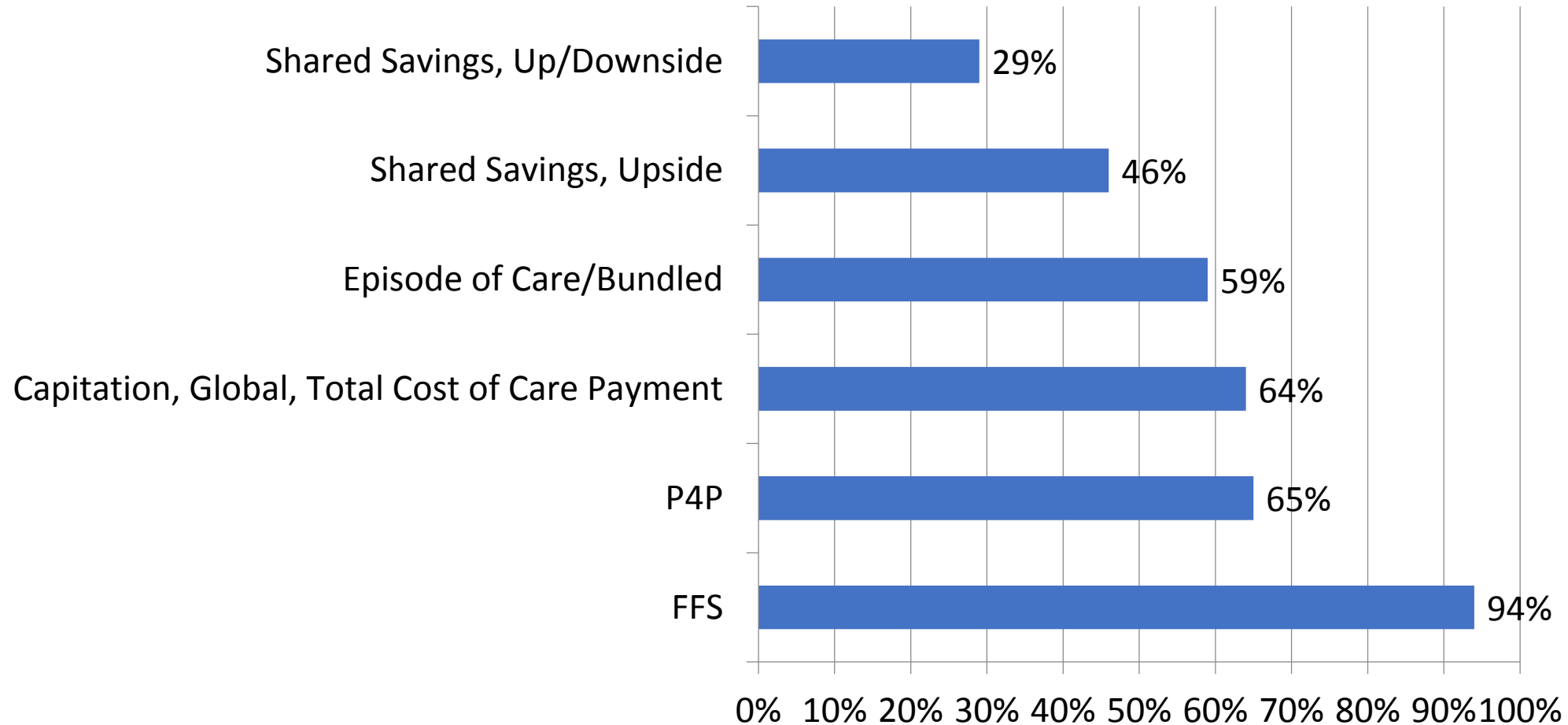
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Poll: What kind of five-year cost improvement target has your institution set?

Inexorable Payment-Shift Trends Accelerating ...Even If the Rate of Change Is Slowing

Payment-Model Penetration

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SOURCE: Nace, "The State of Value-Based Reimbursement and the Transition from Volume to Value," McKesson Health Solutions

The Goal? Payment Innovation

Improving Value and Affordability

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CURRENT MODEL:

Rate increases
not tied to value

Reward unit cost

Inadequate focus on
outcomes

Payment sometimes
aligned with quality
and value

NEW MODEL:

Rate increases tied to
quality, safety, and value

Align ALL payment
with quality, cost,
and value

Reduce cost
without adversely
affecting outcomes

Improve quality

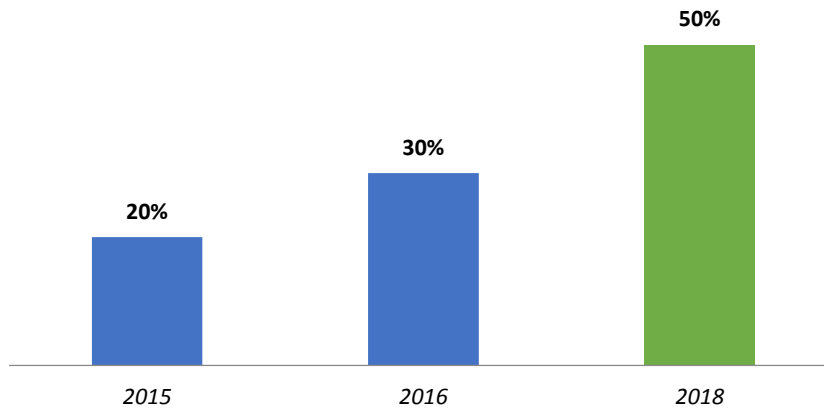
CMS Sets Targets for Value-Based Payments

Payment Targets Demonstrate Commitment to FFS Alternatives

15

Aggressive Targets for Transition to Risk

Percent of Medicare Payments Tied to Risk Models



Examples of Qualifying Risk Models



Medicare Shared Savings Program



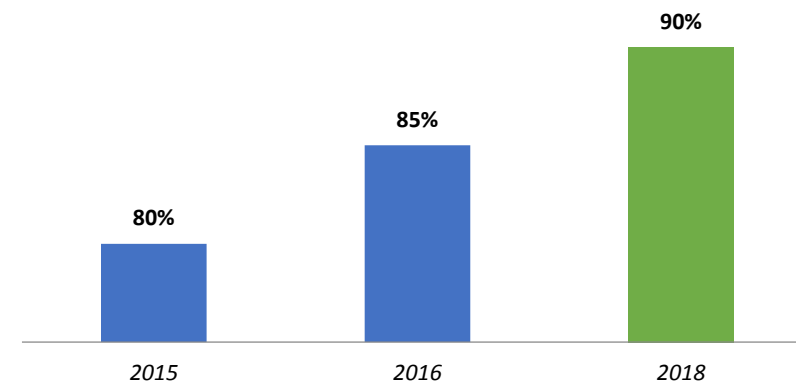
Bundled Payments for Care Improvement Initiative



Patient-Centered Medical Home

FFS Increasingly Tied to Value

Percent of Medicare Payments Tied to Quality



Examples of Quality/Value Programs



Hospital-Acquired Condition Reduction Program



Hospital Value-Based Purchasing Program



Hospital Readmissions Reduction Program



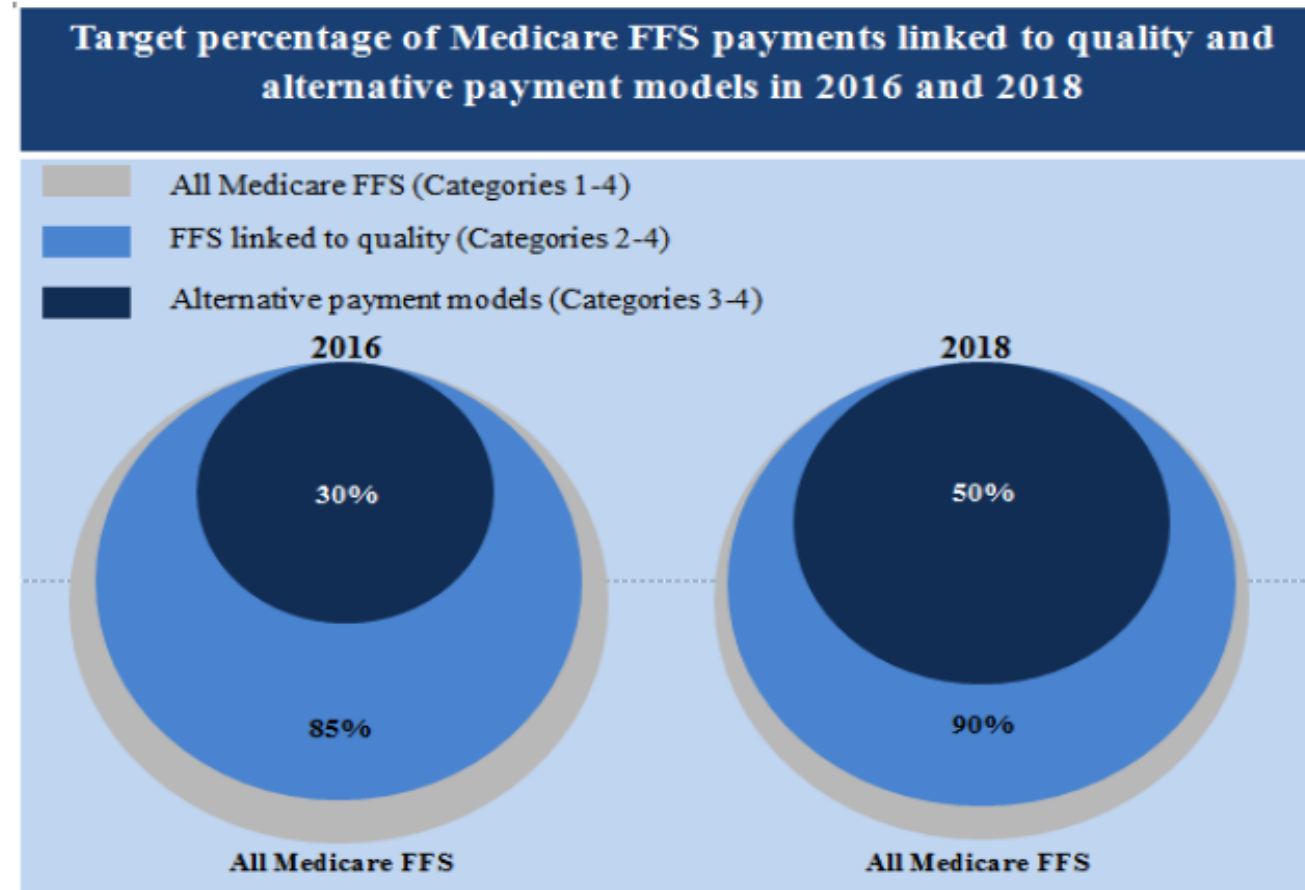
Merit-Based Incentive Payment System

- SOURCE: “Progress Towards Achieving Better Care, Smarter Spending, Healthier People,” [HHS](http://www.hhs.gov/), available at: <http://www.hhs.gov/>; and
- [Health Care Advisory Board](#), interviews and analysis

Population Health

HHS Driving Aggressive Shift to VBP

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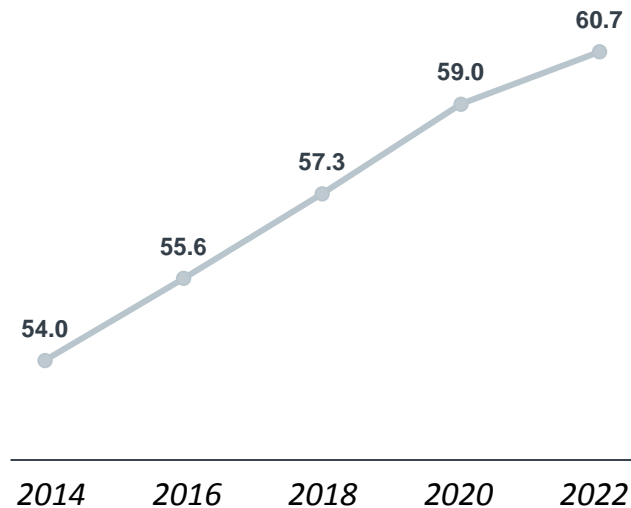


SOURCE: Fortini and Hardaway, "Navigating a Return on Investment to Transition to Value-Based Care," [HFMA Webinar Series](#), Feb 2015

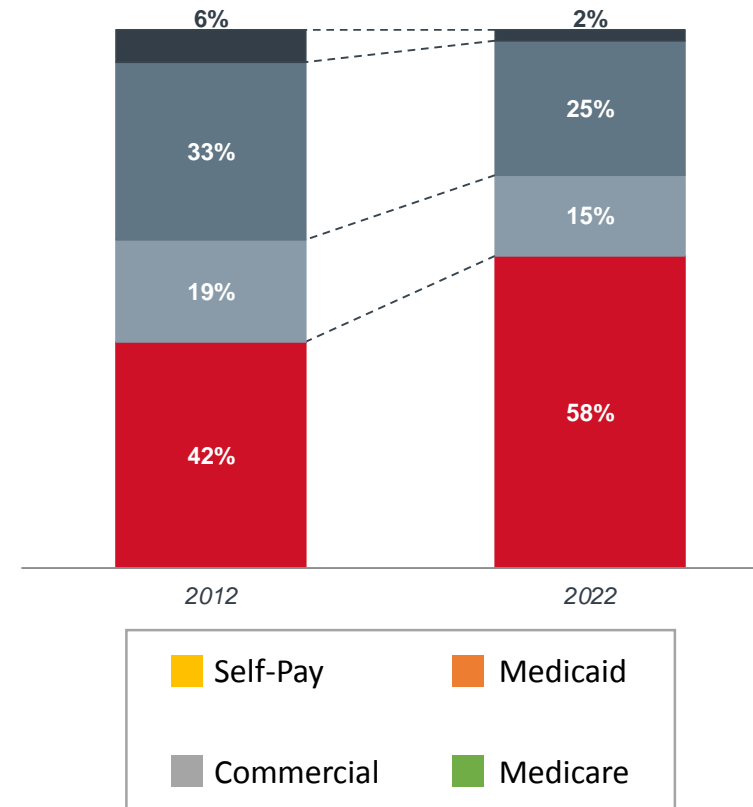
Medicare to Become Majority of Volume by 2022

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**Projected Number of
Medicare Beneficiaries**
Millions of Beneficiaries



**Average Inpatient Case Mix
By Volume**
n = 785 Hospitals

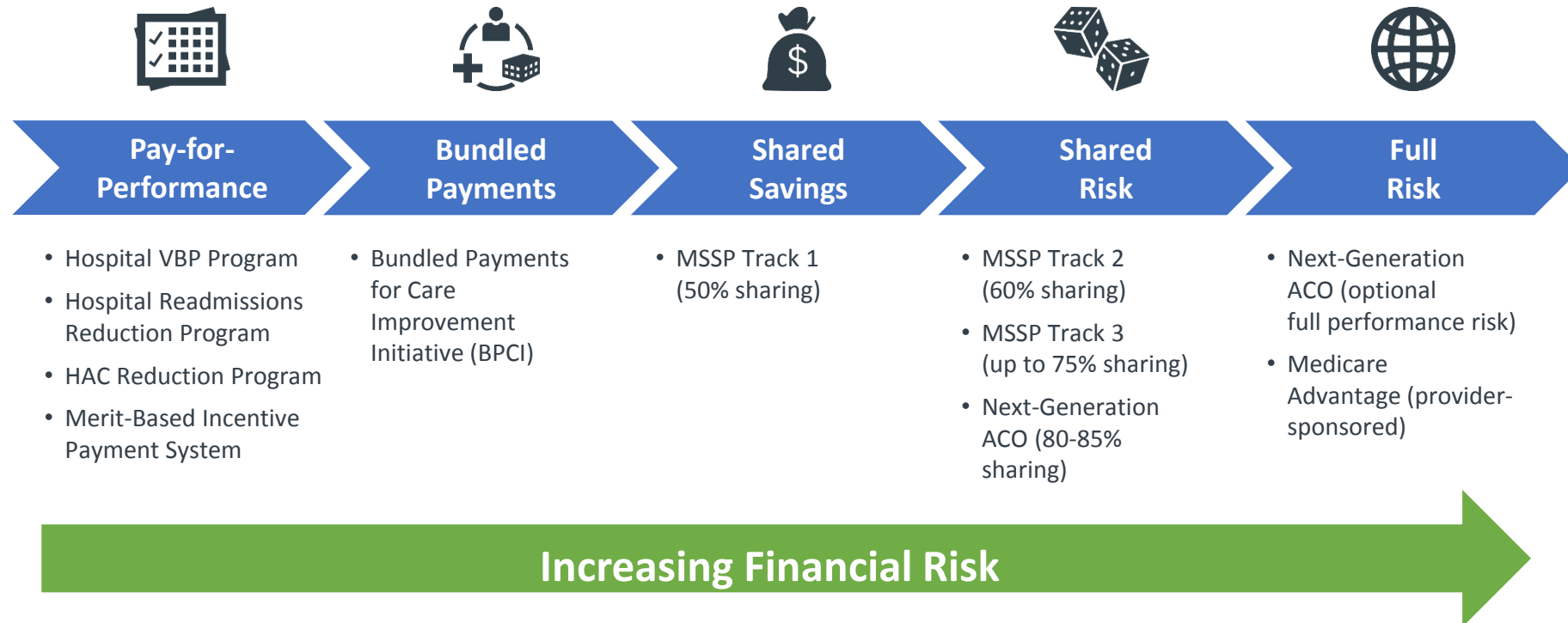


SOURCE: "Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds," [CMS](http://downloads.cms.gov/files/TR2013.pdf), May 31, 2013, available at: <http://downloads.cms.gov/files/TR2013.pdf>; and

Health Care Advisory Board, interviews and analysis

Continuum of Medicare Risk Models

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Transitioning to Fee for Value Medicare Alternative-Payment Models

Future Medicare Payments Will Likely Sort into Groupings

Senate Bill (HR 3590)	
Passed	
~ \$871 B	
31 million	
<ul style="list-style-type: none"> Taxes on "Cadillac" plans Savings from delivery system Fees on industry participants 	
i	
MedPAC with Rate-Setting Authority	<ul style="list-style-type: none"> Includes a MedPAC-like body with rate-setting authority; excludes hospitals through 2019
Value-Based Purchasing	<ul style="list-style-type: none"> Reduces payment to facilities with lower than average quality, providing bonus payments to high-quality facilities; budget neutral
Readmissions Policy	<ul style="list-style-type: none"> Reduces reimbursement for all MS-DRGs based on higher than average readmission rates
Innovative Payment System Pilots	<ul style="list-style-type: none"> Establishes pilots for bundled payments and accountable care organizations
Imaging Services	<ul style="list-style-type: none"> Increases advanced imaging practice expense utilization

Elective / Procedural

- Total Joint Replacement
- **Bundled MC Part A and B**

Chronic / Medical

- CHF, Pulmonary, etc..
- **Episodic Payment to manage**

Emergency

- Major Bowel, etc..
- **Fee for Service**

Payment Shift Affecting MDs Too

Physician-Specific Risk

PHYSICIAN FEE SCHEDULE (PFS) UPDATES



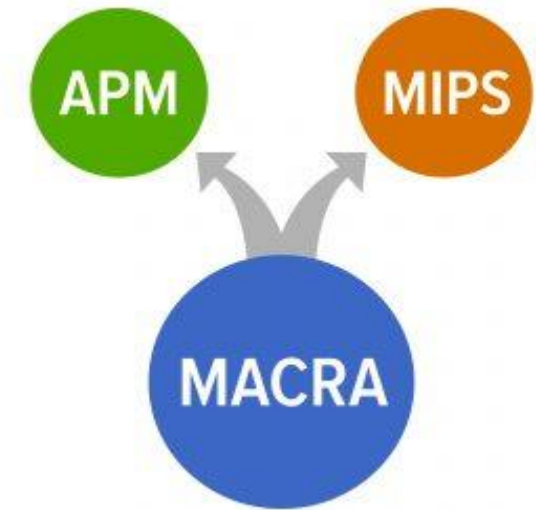
MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS)



Payment Shift Affecting MDs Too

Three Flavors of VBP Currently Impact MDs – Especially Specialists

- In 2015, Congress enacted the Medicare Access and CHIP Reauthorization Act (MACRA)
- MACRA's objective was to create a new system for paying providers who serve Medicare beneficiaries
- The Quality Payment Program (QPP) is designed to move the Medicare physician-payment system away from the traditional FFS model and towards a VBP methodology
- Under MACRA, two different VBP models have been established:
 - Merit-Based Incentive Payment System (MIPS)
 - Alternative Payment Models (APMs)



Payment Shift Affecting MDs Too

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Three Flavors of VBP Currently Impact MDs – Especially Specialists

- MACRA combines parts of earlier incentives program into a single program called the Merit-based Incentive Payment System, or “MIPS”
 - Physician Quality Reporting System (PQRS)
 - Value-based Payment Modifier (VBM)
 - Medicare Electronic Health Record (EHR)
- Why Are Specialist MDs Impacted by Value Based Payment?
 - As VBP programs proliferate, Medicare has targeted specialty practices for attention
 - Specialists care for most of the US’s sickest patients – those with chronic diseases – including cancer, arthritis, heart disease, diabetes, etc. ***These illnesses account for 86% of all U.S. healthcare costs***, or nearly \$3 trillion yearly
 - As a result, specialists are uniquely positioned at the intersection of quality, cost, and patient experience that MACRA was created to address

Payment Shift Affecting MDs Too

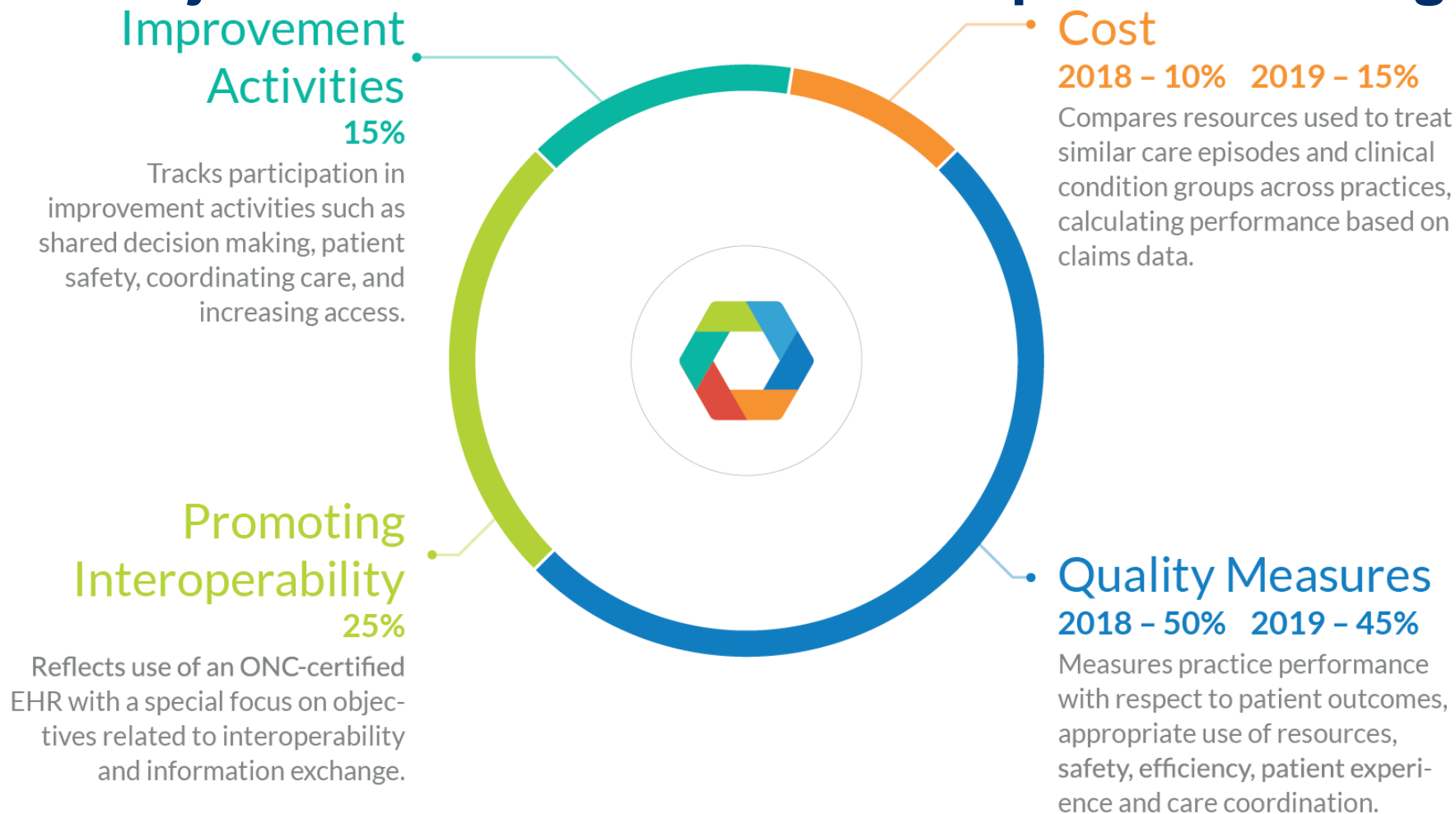
Three Flavors of VBP Currently Impact MDs – Especially Specialists

- MACRA established the Quality Payment Program (QPP) with its two pillars:
 - MIPS: mandatory for all practices except the smallest, lowest volume ones.
 - Alternative Payment Models (APMs). One of these models, the Oncology Care Model, (OCM) focuses on the cancer population
 - ~190 participants selected in mid-2016, now closed to all other practices
 - Qualifying OCM practices must also participate in MIPS, unless they assume downside risk in OCM (none have done so)
- Commercial payers have been taking a variety of approaches to cost / quality
 - Restricting pharmaceutical “buy and bill,” and adding utilization management
 - Implementing care pathways
 - Introducing bundled payments
 - Encouraging medical homes
- Both groups are moving from volume- and unit-based reimbursement to VBP

Payment Shift Affecting MDs Too

Three Flavors of VBP Currently Impact MDs – Especially Specialists

MIPS combines multiple value-based programs to assess overall performance and adjust reimbursement – either positive or negatively

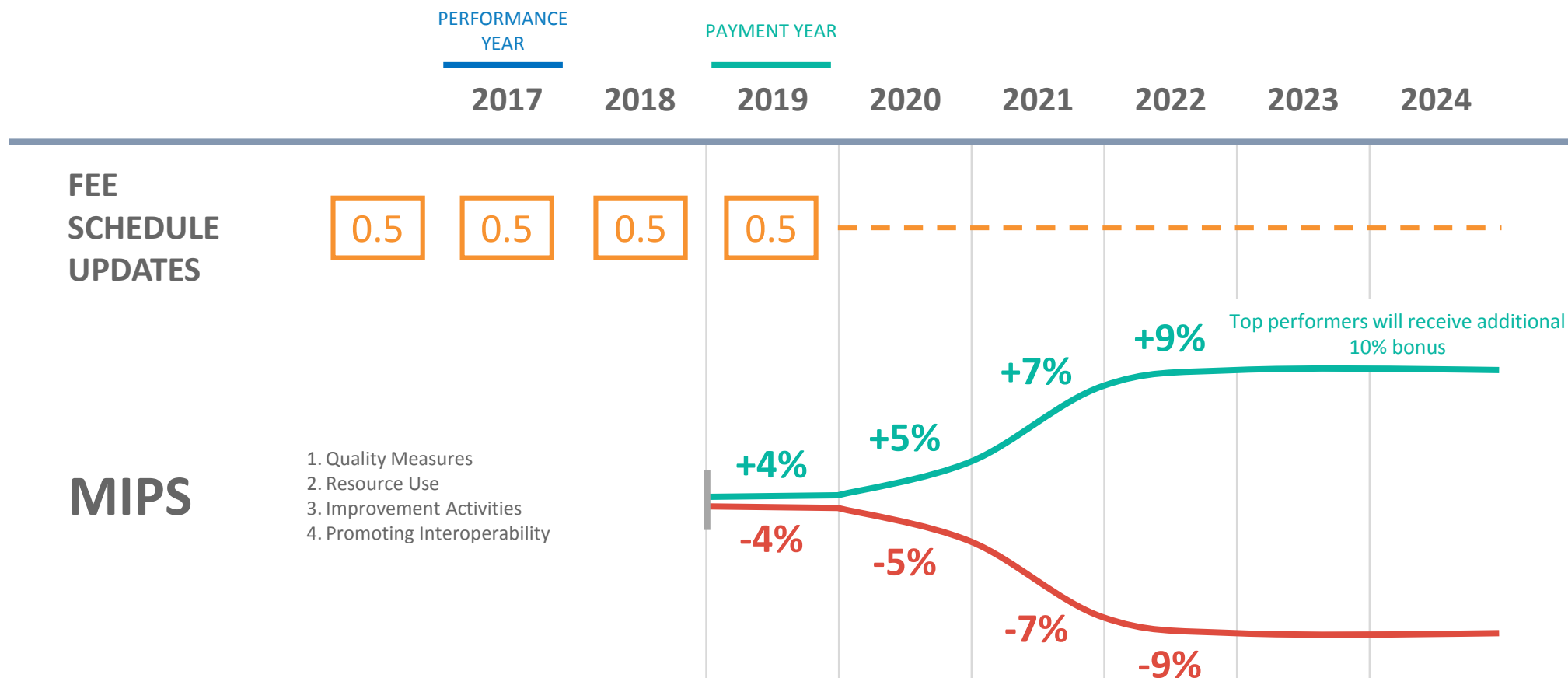


Payment Shift Affecting MDs Too

Three Flavors of VBP Currently Impact MDs – Especially Specialists

MIPS payment adjustments must be budget neutral

Reimbursement is based on a practice's relative score, so while some practices will receive performance incentives, others will incur penalties.

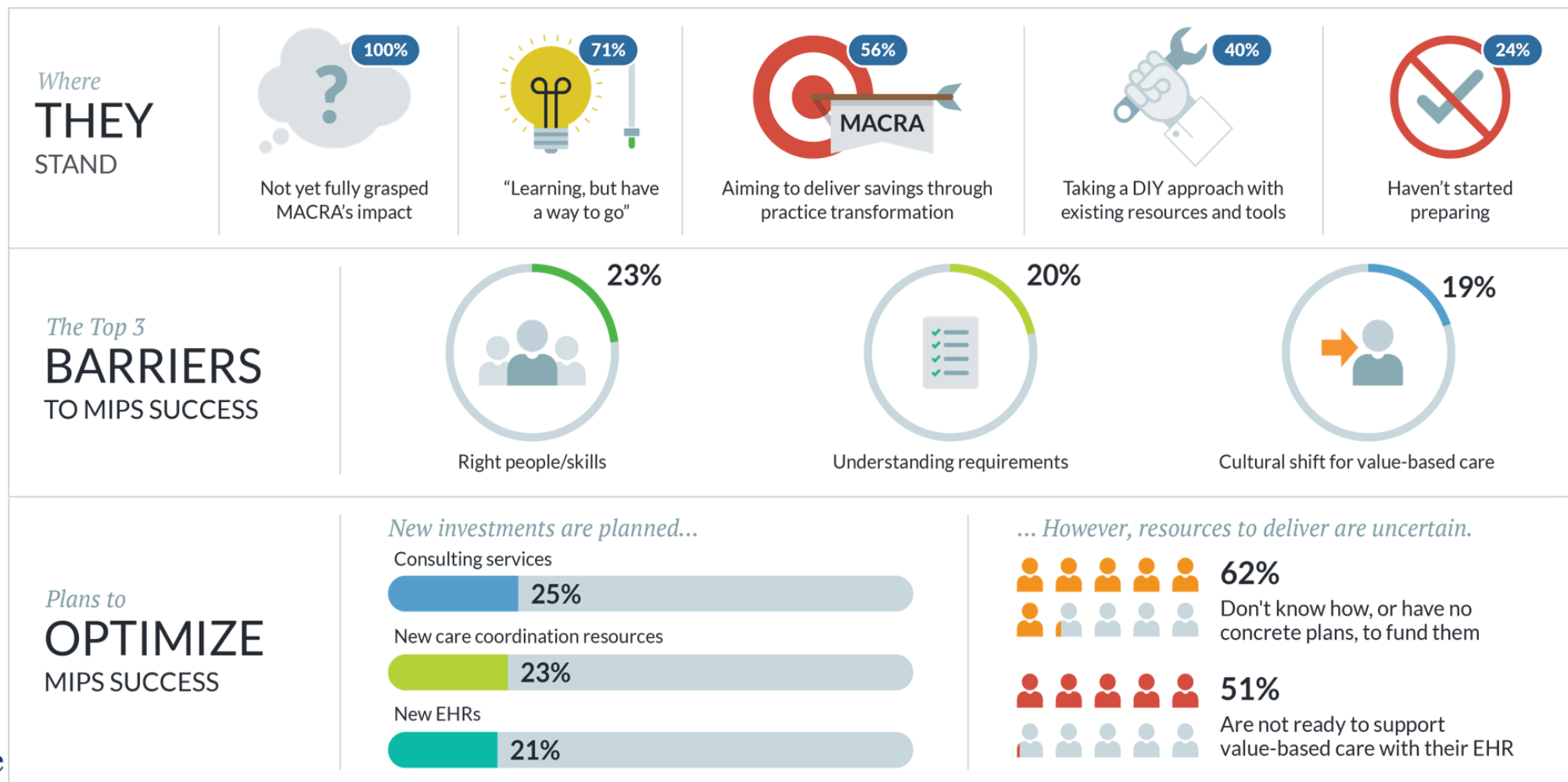


Payment Shift Affecting MDs Too

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Three Flavors of VBP Currently Impact MDs – Especially Specialists

The state of MIPS in specialty care – understanding, but not execution
Some progressed in 2019. Many, though, are taking a “do-it-yourself” path to change



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Poll: What fraction of your revenue is derived from VBP?

Live Content Slide

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Poll: How much do you think VBP will grow in the next three years?

Population Health... We're ALL Part of It

Population Health

Framing the Issue – Key Questions

- How does the marketplace define “Population Health Management?”
 - A **holistic approach** to optimizing healthcare cost and quality livery in a defined population
 - **Uses data** to define patient cohorts, segmenting by disease type, clinical risk, etc.
 - **Delivers targeted interventions** to improve quality and reduce unnecessary cost and utilization
- What are the intended outcomes?
 - Maintain the **highest possible health status** of patient populations
 - Focus on **delivering preventive care** to avoid acute events and reduce preventable utilization such as ED visits or hospitalizations
 - With the rise of precision medicine, ensure patients receive **optimal, individualized treatment**, using evidence-based guidelines and a full understanding of value

Framing the Issue – Hospitals and Health Systems

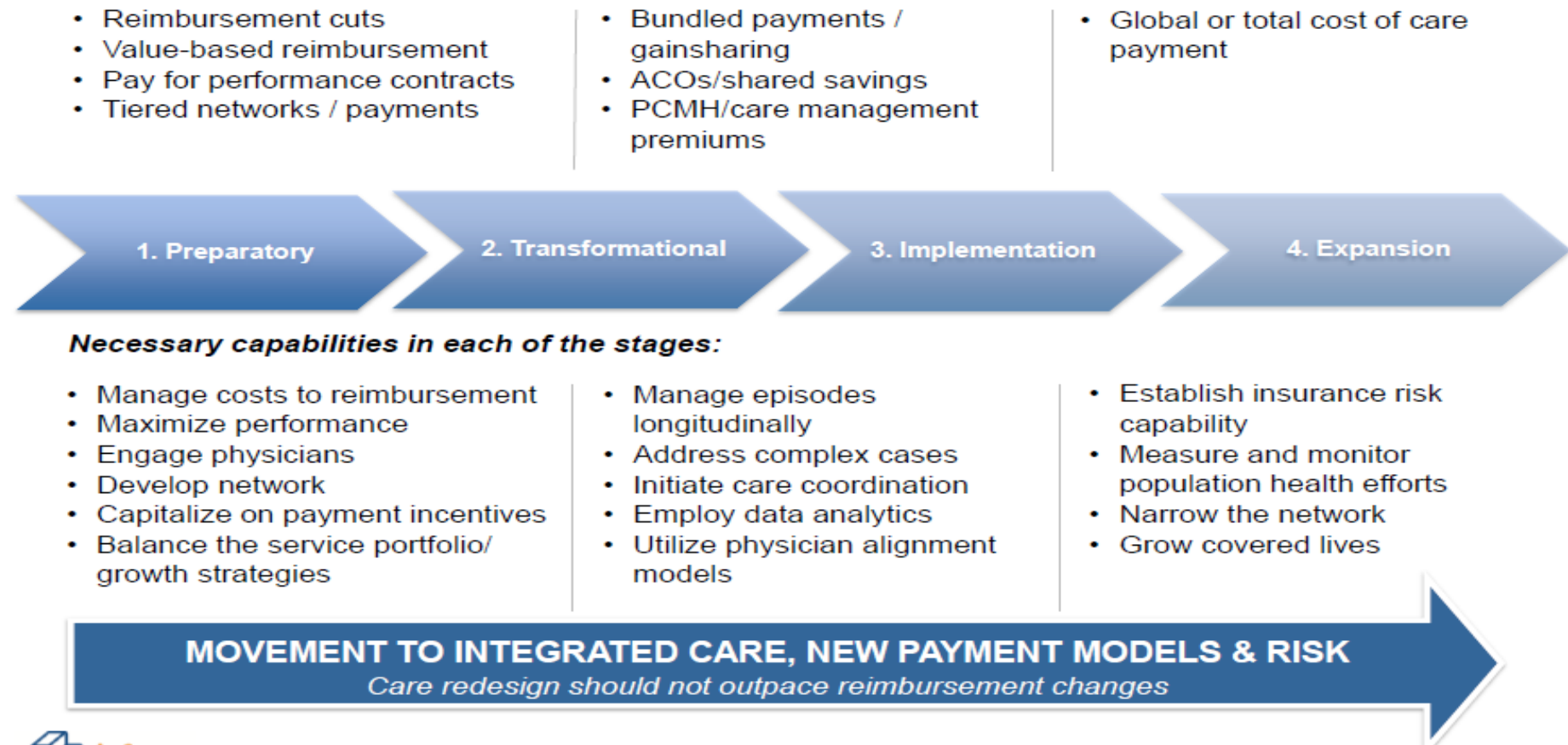
- Government and private payers moving to VBP methods
- VBP includes rewards and penalties for population-based performance
 - Inpatient readmission rates
 - Preventive care for chronic conditions
- VBP requires systems to horizontally-integrate care settings
 - Inpatient and outpatient
 - Rehabilitation and SNF
 - Home and preventive care
- VBP mandates capabilities to manage on a population basis
 - Integrated IT with analytics
 - Integrated clinical networks
 - Care coordination

Population Health

Framing the Issue – Hospitals and Health Systems

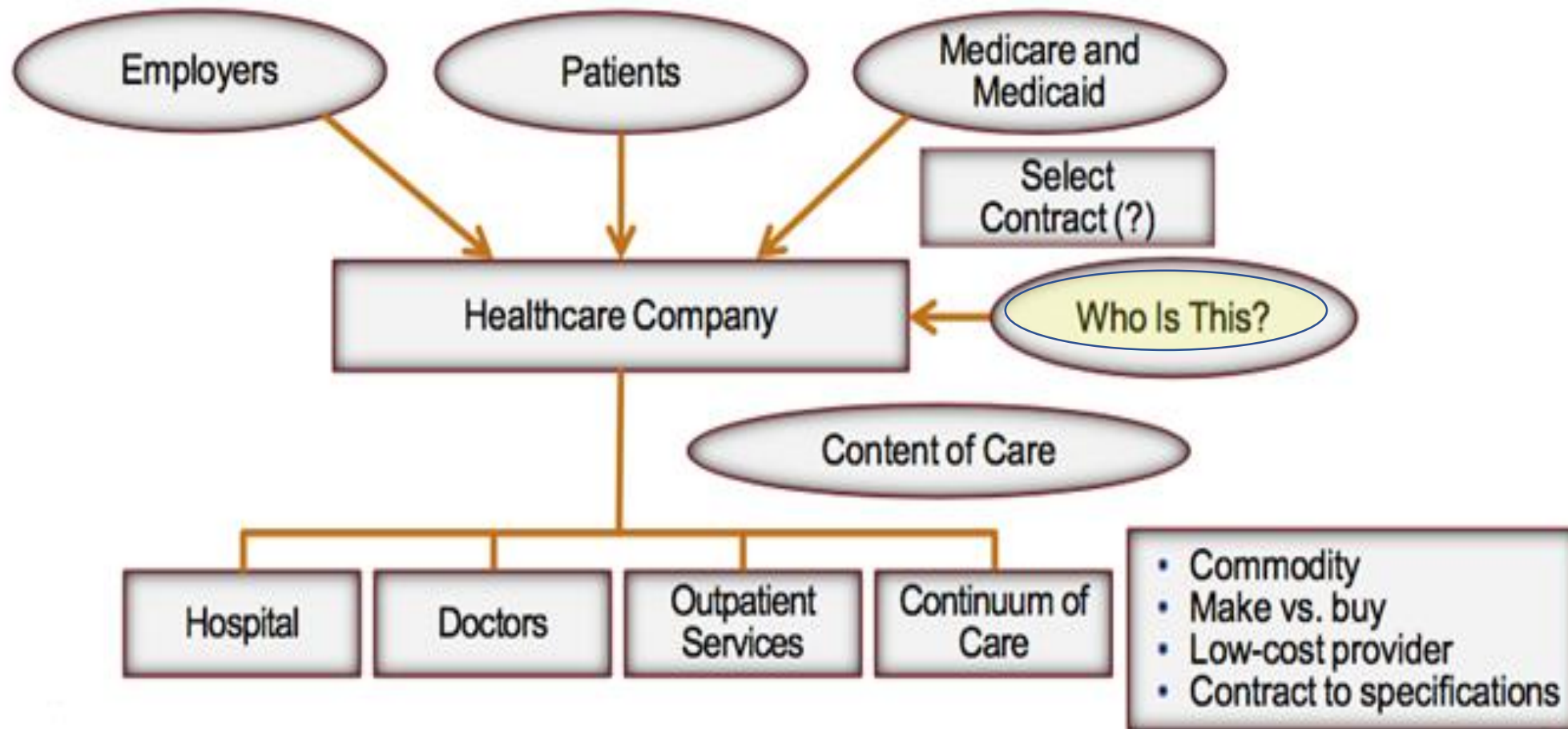
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The journey to population health management



Population Health Healthcare Delivery Model – Hospitals and Health Systems

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Population Health

“The Healthcare Company”

- Drive down utilization, by
 - Removing the underlying causes of utilization
 - Not simply by denying necessary care
- Change financial incentives
 - Compensation structure – FFS --> Bundle --> Capitation
 - Patient engagement – HDHP / Co-pay / Deductible
- Categorize patients by medical needs
 - Case management for chronic and acute
 - Intervention for rising-risk patients
 - Wellness maintenance for general population

Population Health

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Principal “Rising Risk” Factors – i.e., Social Determinants of Health

- Surrounding Culture
- Social Network
- Mental Health
- Financial Factors
- Lifestyle: Diet, Exercise, Tobacco, Alcohol, Drugs, Sexual Practices
- Genetics

Population Health

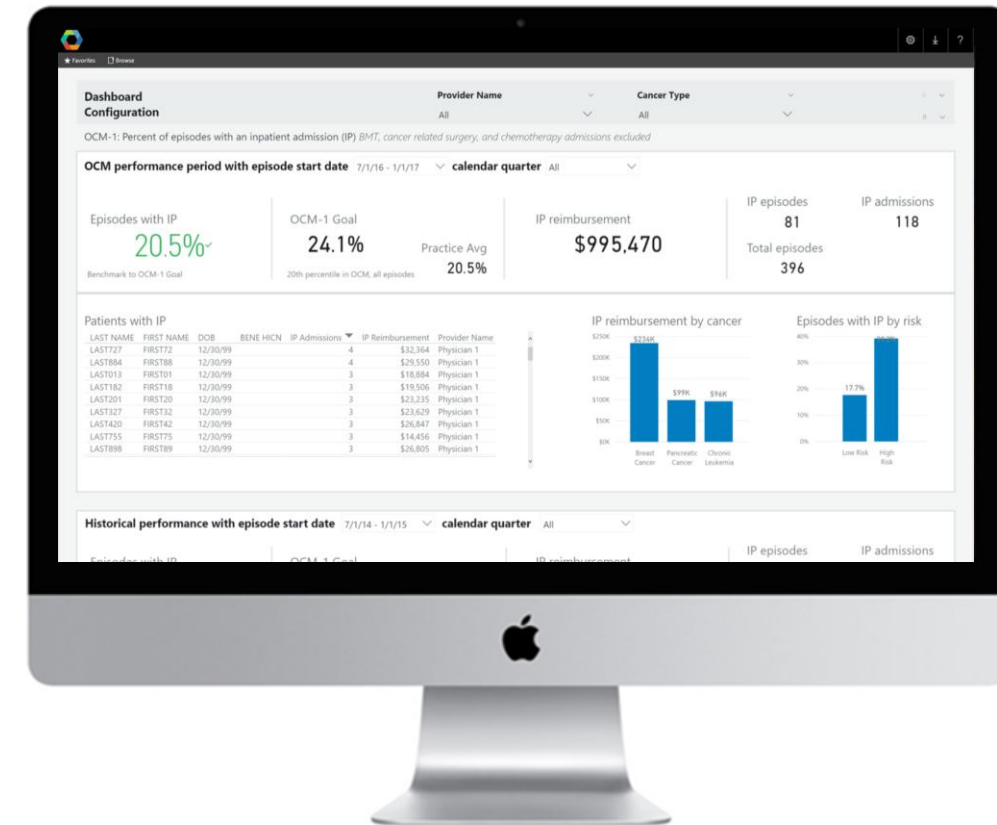
Data Dependency Drives Technology Imperatives

- Patient risk-stratification and scoring
- Quality- and cost-performance analysis
- Care navigation and management
- Continuous Quality Improvement
- Practice transformation

Population Health Technology Imperatives for APM / Oncology Care Management

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- “Data curation” to support analytics, research and reporting
 - Chart-by-chart data extraction
 - Validation and normalization
 - Transcription into discrete fields
- Dashboards and reports showing clinical, financial and population-health metrics and best-practice KPIs
- MIPS and OCM regulatory reporting, including data capture, measure calculation, and submission
- Care management technology and services, including
 - Patient risk stratification
 - Assignment to care managers
 - Clinical assessments and care plan development
 - Workflow prioritization
 - Performance management



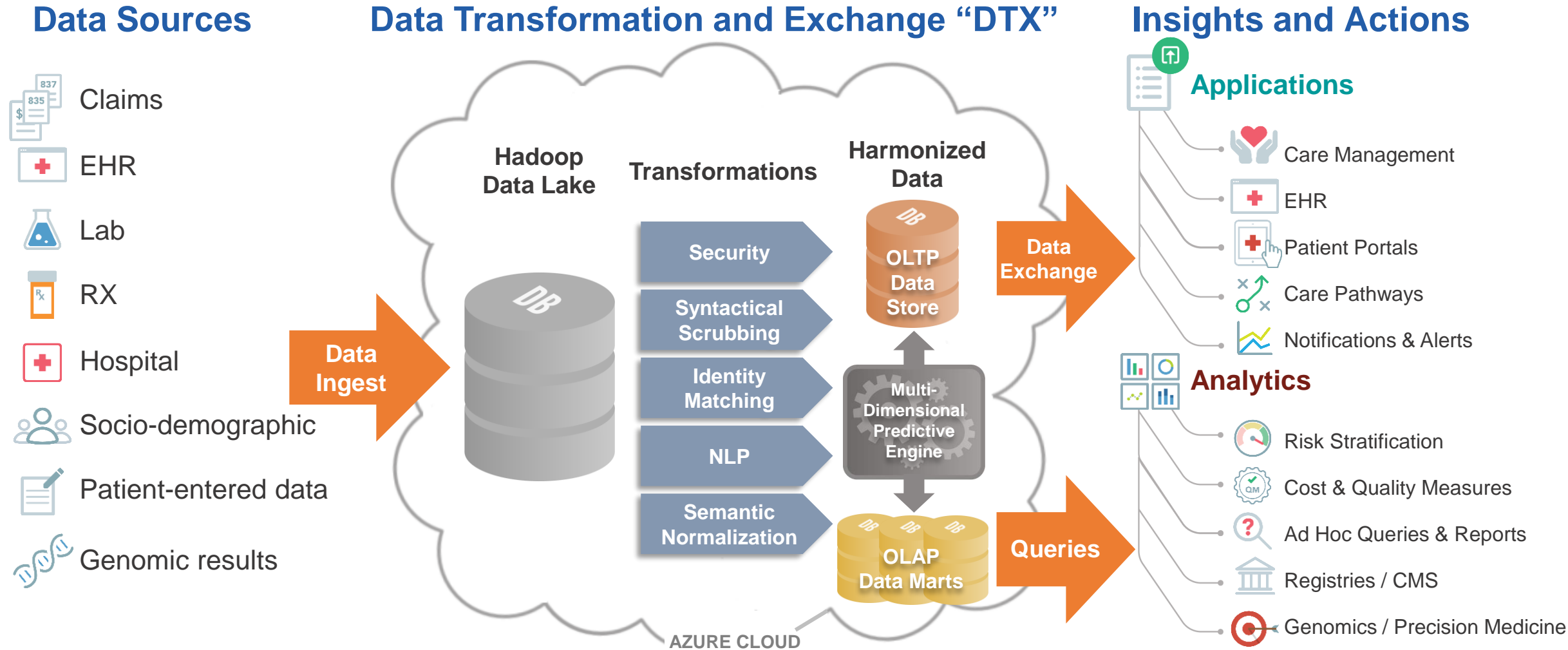
Technology Imperatives for APM / Oncology Care Management

How does it all work?

1	2	3	4
Data Curation	Data Harmonization	Insights	Actions
“Ingest” and integrate real-world data from claims, EHRs, ADT/RCM systems, pharmacy systems, sociodemographic databases, and genomics profiles	“Syntactically scrub” and map data to a common data model (CDM), then “semantically normalize” it to create a patient- and provider-centric, longitudinal view	Analyze data with algorithms – undergirded by medical economics analysis – to identify pro-forma impact of potential treatment options on the cost and quality of care	Leverage these insights to drive workflows (e.g. care-management pathways), support clinical decision making, and improve the cost and quality of care

Population Health Technology Imperatives for APM / Oncology Care Management

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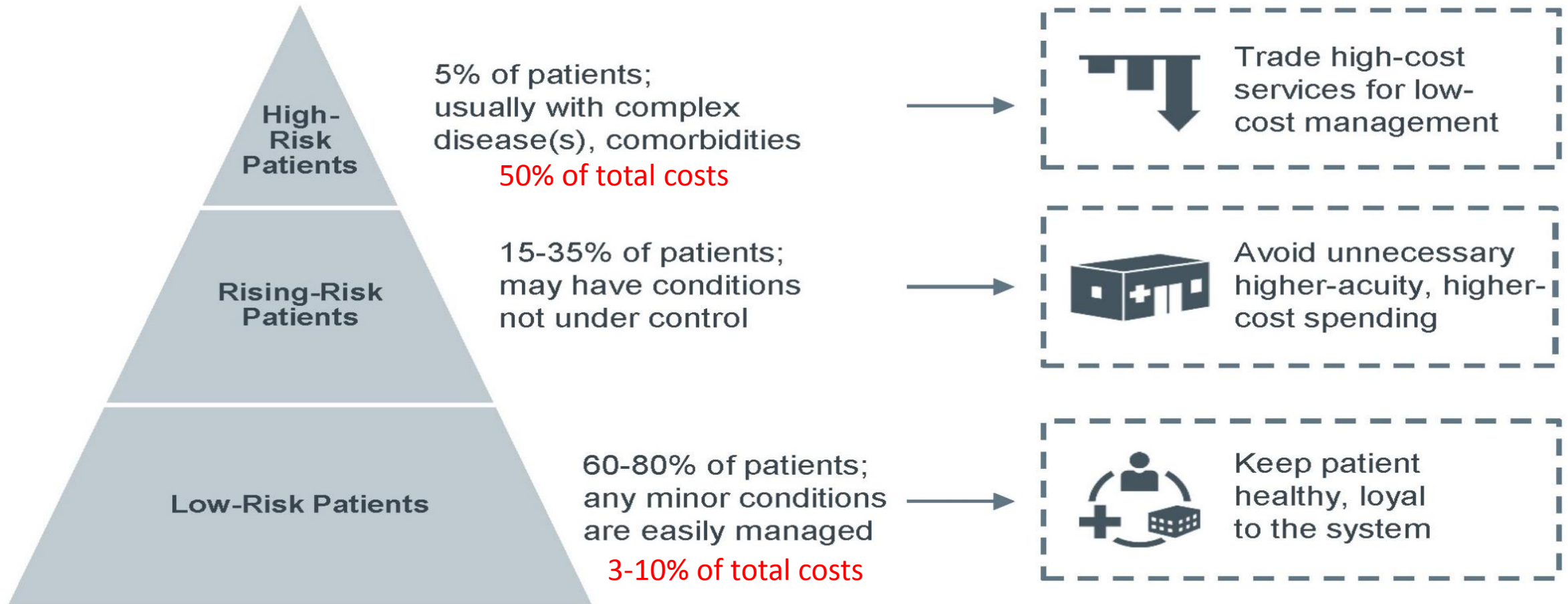


Ingest data from disparate systems, build complete patient data sets via DTX, use analytics to understand patients, then target their care based on clinical best practices

Population Health

Patient Segmentation is the “Secret Sauce”

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Population Health

The Bottom Line

- Ultimate goal is to improve the health of an entire population – and make money doing so
- What does it take?
 - Predictive-scoring methodologies
 - Care coordination – through the whole continuum
 - Analytics – service line, DRG, physician, and cost vs. outcome
- What does it do?
 - Engages patients
 - Promotes prevention
 - Emphasizes compliance

State of Cost Accounting

State of Cost Accounting

The State of the Art – or Lack Thereof

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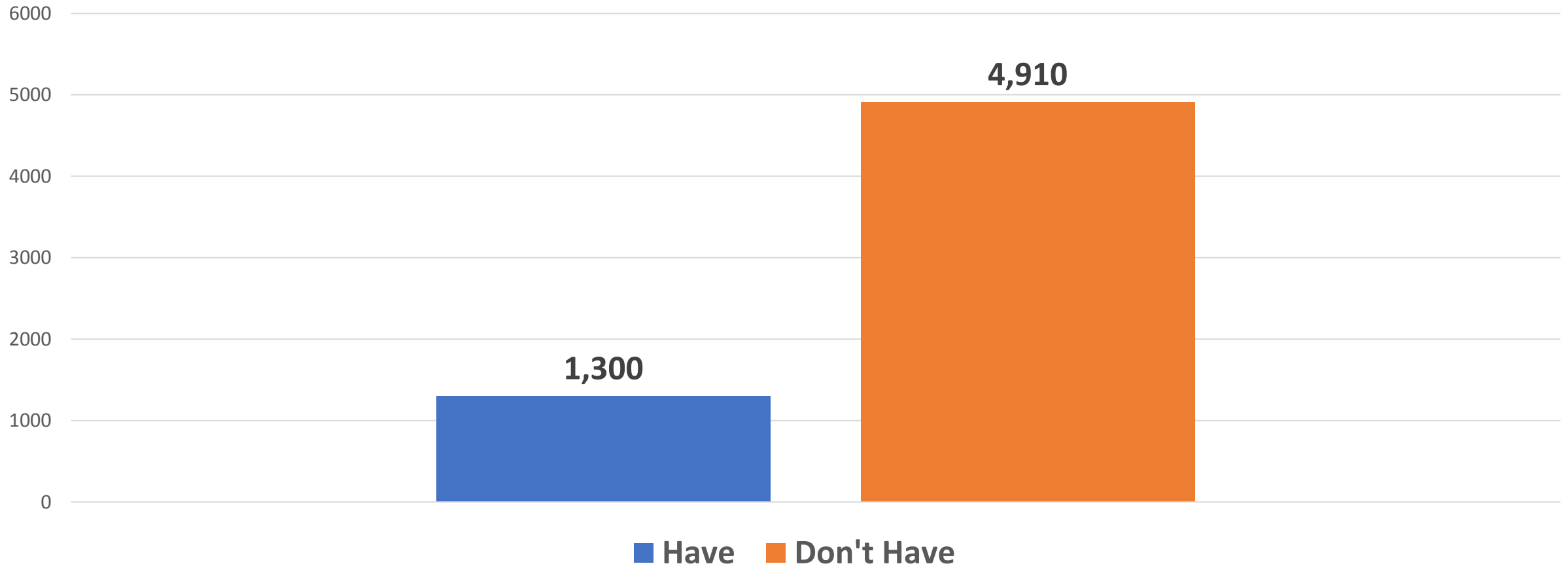
“To put it bluntly, there is almost a **complete lack of understanding** of how much it costs to deliver patient care, much less how these costs compare with the outcomes achieved. Instead of focusing on the costs of treating individual patients with specific medical conditions over their full cycle of care, providers aggregate and analyze costs at the specialty or service-department level.”

SOURCE: Kaplan, and Porter, “The Big Idea: How to Solve the Cost Crisis in Health Care,” Harvard Business Review, Sep 2011

State of Cost Accounting

Prevalence of “Sophisticated” Costing Systems in Hospitals

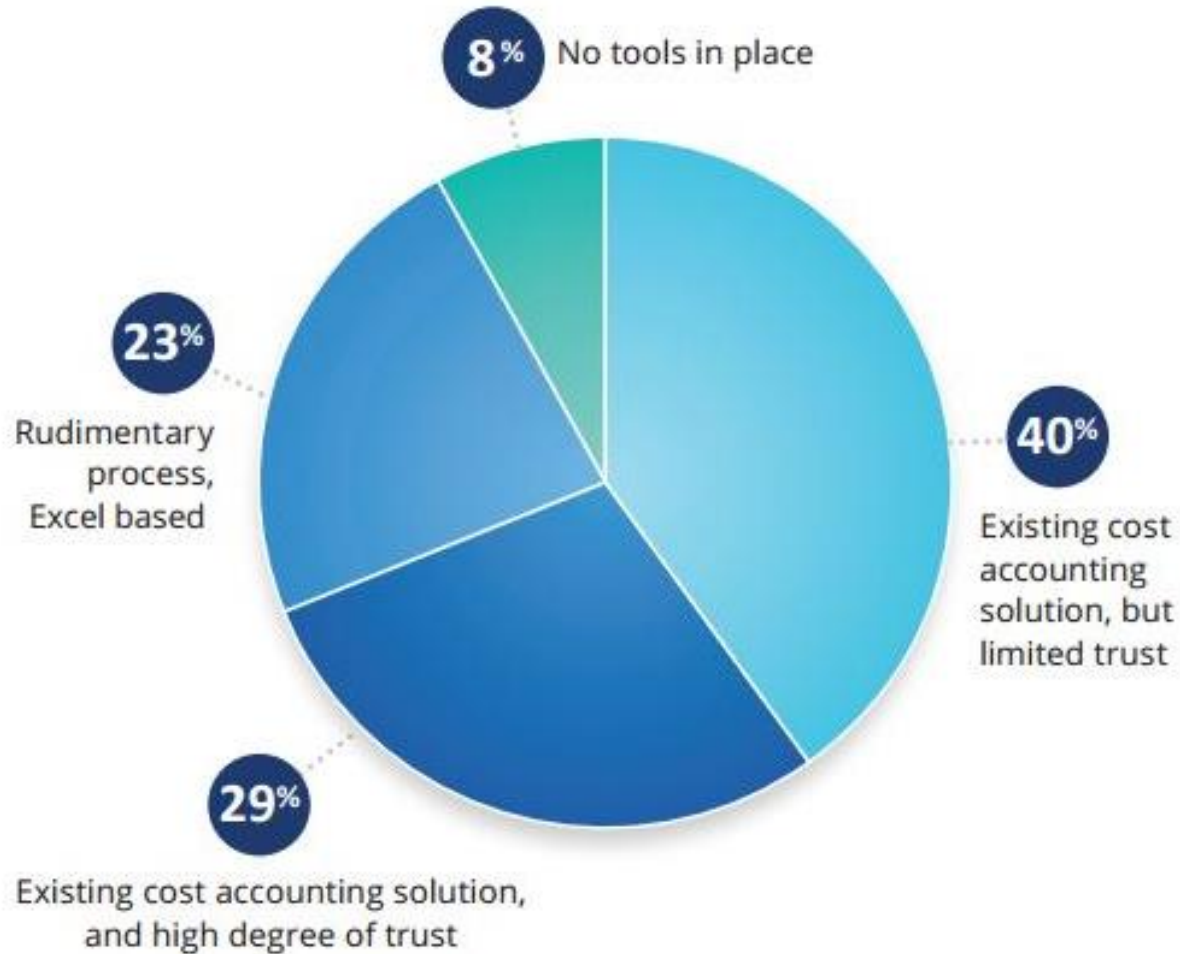
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State of Cost Accounting

Costing-System Effectiveness

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71% of executives lack a high degree of confidence in their costing solutions!

State of Cost Accounting

Costing-System Effectiveness

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- Many leaders continue to rely on Ratio of Cost to Charges (RCC)
- 90% lack accurate, comprehensive or actionable information on cost of care!

“Without understanding the true costs of care for patient conditions, much less how costs are related to outcomes, **health organizations are flying blind** in deciding how to improve processes and redesign care.”

Live Content Slide

When playing as a slideshow, this slide will display live content

Poll: Our costing system is predominantly

Live Content Slide

When playing as a slideshow, this slide will display live content

Poll: Our costing system is

Methodology Matters

Different Method = Different Results

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Charge Code	RVU	RCC	Microcost
Lab Test2	6.45	6.15	9.25
Lab Test4	14.98	22.47	17.65
Lab Test7	16.55	31.50	45.22
Lab Test11	14.85	32.55	23.54
Rad Proc12	15.85	7.83	18.11
Rad Proc20	108.09	133.88	95.45
Rad Proc32	214.78	365.54	185.77
OR Svc 2	110.43	176.93	98.23
Billable Supply2	40.47	48.80	35.16
Billable Supply4	150.33	61.15	130.12
Billable Supply10	17.34	59.49	65.25
Billable Supply11	150.33	149.38	125

Methodology Matters – Bad Decisions Based on Bad Data

Example #1: Schon Klinik

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- Schon Klinik downsized its knee-replacement rehab unit, because its costing system reported knee rehab was not profitable
- A review of the costing system showed that costs were being assigned based on length-of-stay – not resource intensity
- Knee-rehab patients had long stays but used few resources
- A revision of the cost model showed knee rehab was profitable
- Schon Klinik reversed its previous position and began to expand its knee-replacement rehab program

Methodology Matters – Bad Decisions Based on Bad Data

Example #2: Barnabas Health

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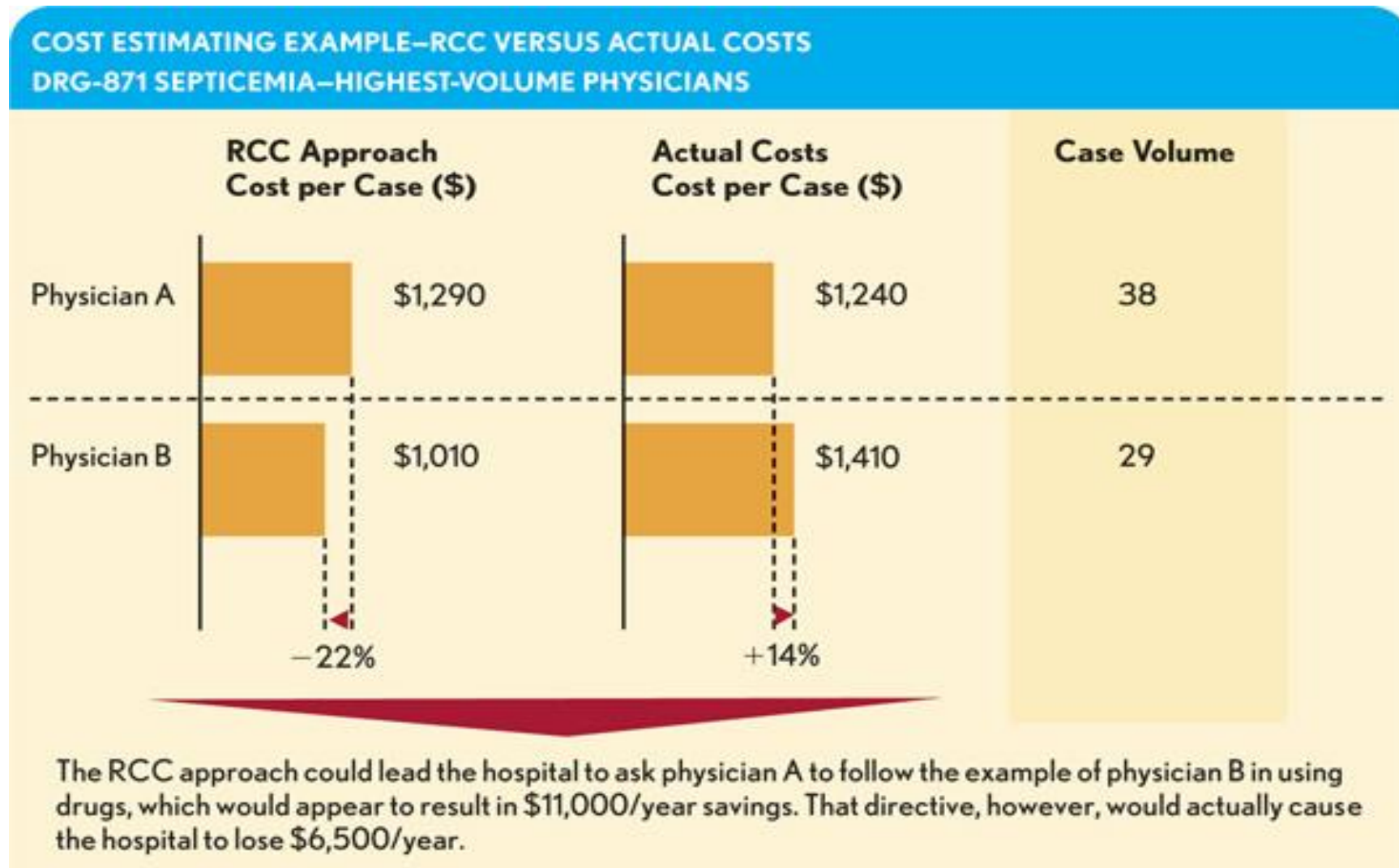
- Barnabas Health's costing system initially indicated one of its EDs was operating at a loss
- With this information, execs chose not to expand the ED or invest in additional FTEs or equipment upgrades, even as volumes grew
- Subsequently, after revising the costing model, evidence showed the ED Treat and Release program was profitable
- Management went back and invested in program to reduce LWBS and increase overall throughput



Methodology Matters

Bad Decisions Based on Bad Data

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Methodology Matters

Cost Accounting and the Law

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If you are a CPA, you are bound by your state board's Code of Ethics, which likely requires...

- **RULE 102** *In the performance of any professional service, a member ... shall not knowingly misrepresent facts...*
- **RULE 201** *Exercise due professional care in the performance of professional services...* Obtain sufficient relevant data to afford a reasonable basis for conclusions or recommendations *in relation to any professional services performed*
- **See also:** *Article III – Integrity: Sections 2 and 3, Code of Professional Conduct*

Methodology Matters

Does Your Method Matter?

- Using the wrong costing model may have disastrous consequences – personally or organizationally
- If / when providers misunderstand their costs, they can't link costs to process improvements, or to outcomes
- This prevents organizations from making systemic – and sustainable – cost reductions

Methodology Matters

Are You Using the Optimal Methodology?

1. Ratio of cost-to-charge costing – RCC Costing
2. Relative value unit (RVU) costing – Single-RVU costing
3. Multiple-RVU costing
4. Micro-costing
5. Actual costing
6. “Activity Based Costing” – a philosophy, not a method

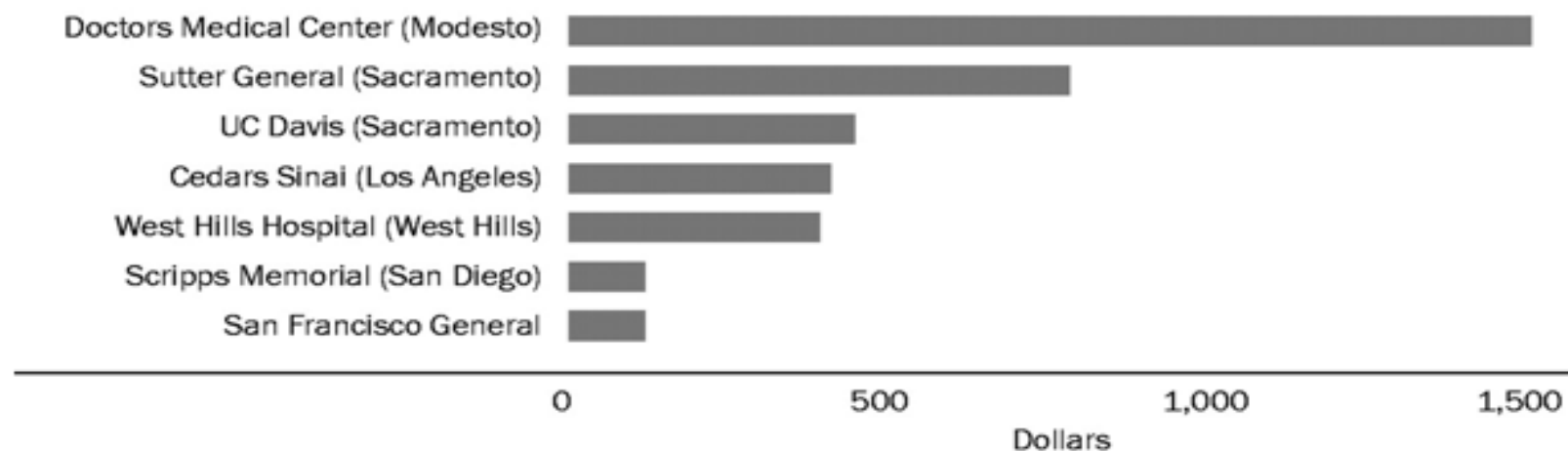
Methodology Matters

Ratio of Cost to Charges – RCC

Do costs really follow charges?
Are all markups the same?

EXHIBIT 1

Charges For A Chest X-Ray (Two Views, Basic) At Selected California Hospitals, 2004



SOURCE: L. Lagnado, "California Hospitals Open Books, Showing Huge Price Differences," *Wall Street Journal*, 27 December 2004.

Reinhardt U E Health Aff 2006;25:57-69

Methodology Matters

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Pricing Strategy Limits RCC Costing

- Charges do not behave the same as costs
- High-markup charge codes overstate costs
- Low-markup charge codes understate costs
- RCC only works when you have a consistent markup
- How do tiered-price items fare under RCC?
- How do items that are market-price-sensitive fare under RCC?

Methodology Matters

A Better Approach – Beware RCC

- More than 60% of hospitals use RCC to estimate costs, because true cost accounting is viewed as too expensive
- But, using RCC can lead to serious problems
- A study of 184 community hospitals showed using RCC led 85% of them to over-estimate orthopedic profitability
- Average over-estimate amounted to \$1.2M per hospital
- Reliance on faulty cost data to guide investments – whether under- or over-investment – can produce bad outcomes
- Providers should focus on improving cost estimating in areas where MDs have the biggest impact on operating expenses – namely, drugs and surgical implantables

Methodology Matters

Relative Value Unit Costing – RVUs

Single-RVU Approach

- The RVU is a proxy for the relative intensity of resource consumption for a department's services
- RVUs' importance is not in their point values, but in their point values in relation to the point values of all other services / RVUs
- RVUs effectively absorb variances

Multiple-RVU Approach

- Uses a different RVU factor for each “cost bucket” (labor, equipment, supplies, etc.)
- Provides greater accuracy than single RVUs

Methodology Matters

Micro-Costing

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- Creates a list of all cost components in a product or service, based on
 - Best practice
 - Actual usage
 - Frequency-adjusted usage
- The cost of each component is still an average, and is not the actual resource consumption for any specific patient
- Micro-cost methods include three approaches:
 - Direct observation
 - Preparation of pseudo-bills
 - Estimation

Methodology Matters

Micro-Costing

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- Used when cross-contamination of costs between services is unsatisfactory, and variances need to be monitored
- Needed when an intervention changes resource-use patterns in a way that is not reflected by the
 - DRG
 - Patient type
 - Procedure code
- May be between 65% and 90% accurate, depending on how consistently the organization delivers the service, and how up-to-date the component list happens to be

Methodology Matters

Actual Costing

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- Captures and reports specific resources / services consumed by a patient
- Often requires an advanced computer system capable of real-time service-event logging
 - Capturing the amount of time a nurse actually spends with a patient
 - Tracking a specific supply from purchase order to use by a patient
- Assumed to be 100% accurate and used as the standard of comparison for the other methods
- Most resource-intensive and costly of all costing methodologies

Methodology Matters

Activity-Based Costing – A Philosophy, Not a “Method”

63

Steps required

- Identify relevant activities
- Determine each activity's direct and indirect costs
- Determine the cost drivers for the activity
- **Collect activity data for each service**
- Calculate the total cost of the service by aggregating the activity costs

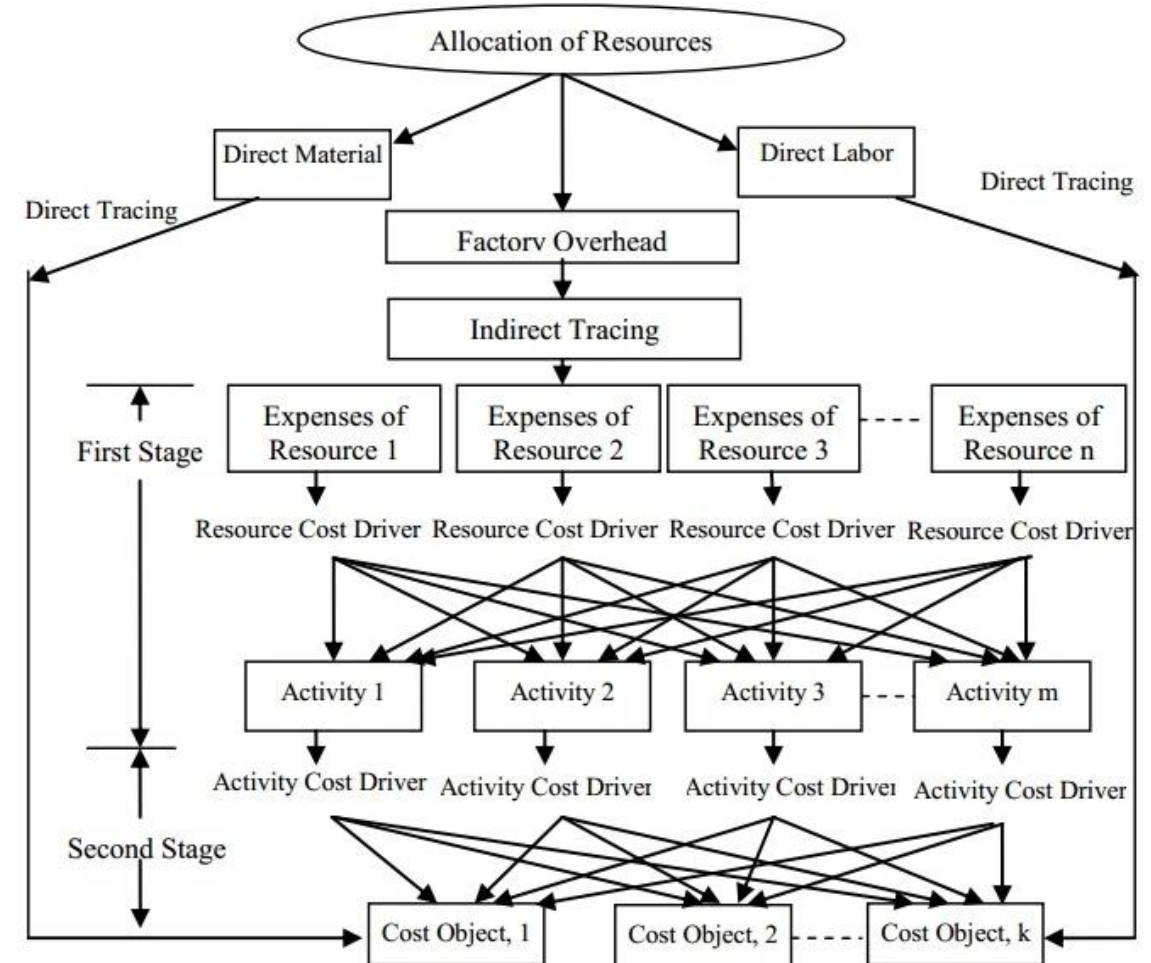


Fig. 1. Major elements of the conventional ABC system

SOURCE: Gapenski, "Healthcare Finance – 4th Edition," Health Administration Press, 2008

Namazi, Iranian Journal of Management Studies, Vol 9, No 3, Summer 2016, pg 4

Methodology Matters

Assessing Organizational Costing Capability

Select the Right Tool for the Job!



Assessing Costing Capability

Assessing Costing Capability

Assessing Organizational Costing Capability

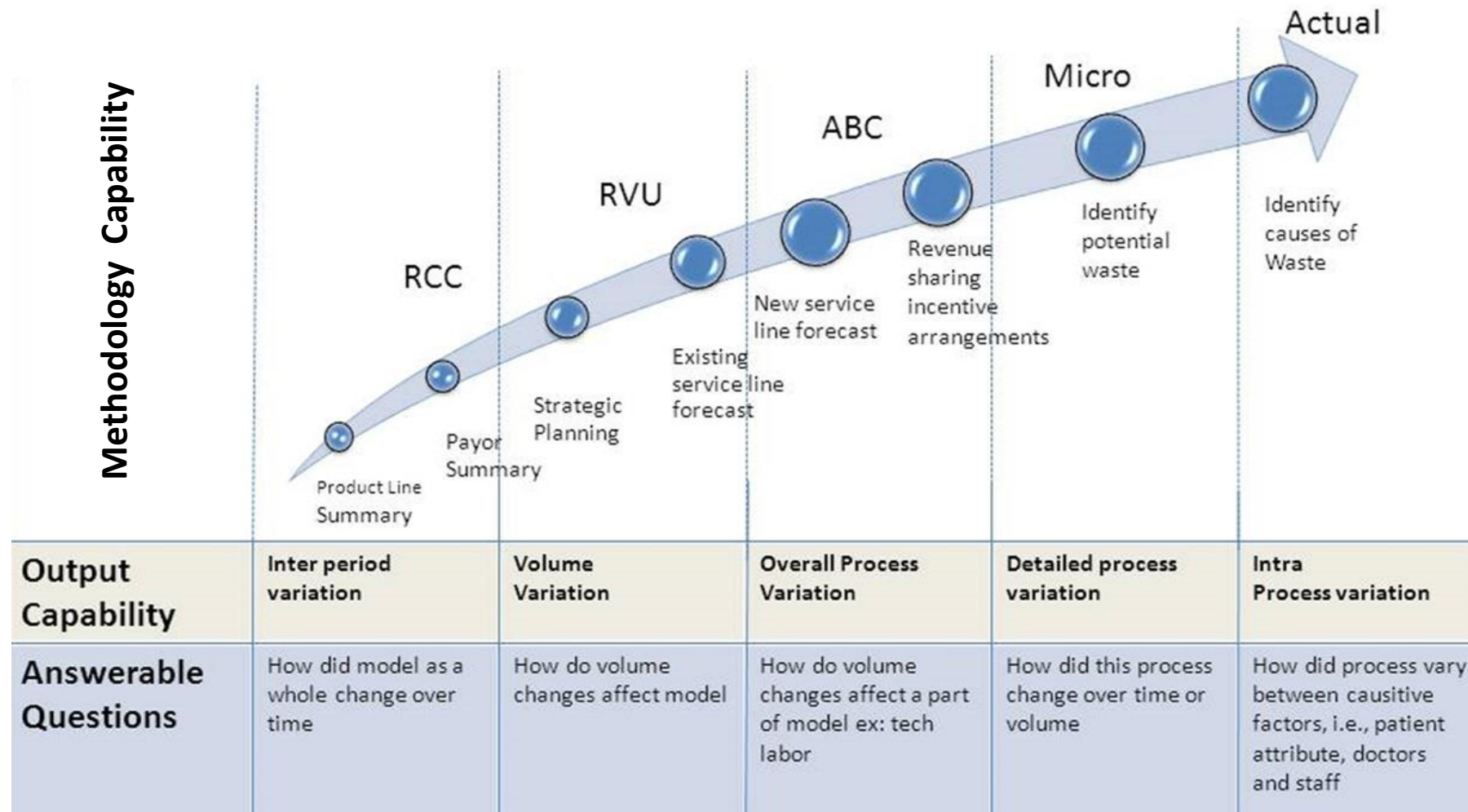
66

Evaluative Tool	Assessment Methodology
Costing Maturity Model	Correlates Data Usage and Available Outputs to Method Capability
Precision Risk Model	More-refined approach, matching management usage to cost method precision. Computes “Accuracy Index” for management discussion
HFMA-Strata L7 Cost-Adoption Model	Rates costing programs by scope and comprehensiveness, compared to industry “Best Practices.” Does not consider how management uses the data.

Assessing Costing Capability

Costing Maturity Model

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Assessing Costing Capability

Precision-Risk Model – What Is It?

- Precision Risk Model is based on the belief that:
“For every management decision, there is as minimum level of precision required to have reasonable assurance of arriving at a correct conclusion”
- **Precision risk** is the risk that the cost accounting process will fail to provide the necessary precision to adequately inform management regarding a particular decision

Assessing Costing Capability

Precision-Risk Model – What Is It?

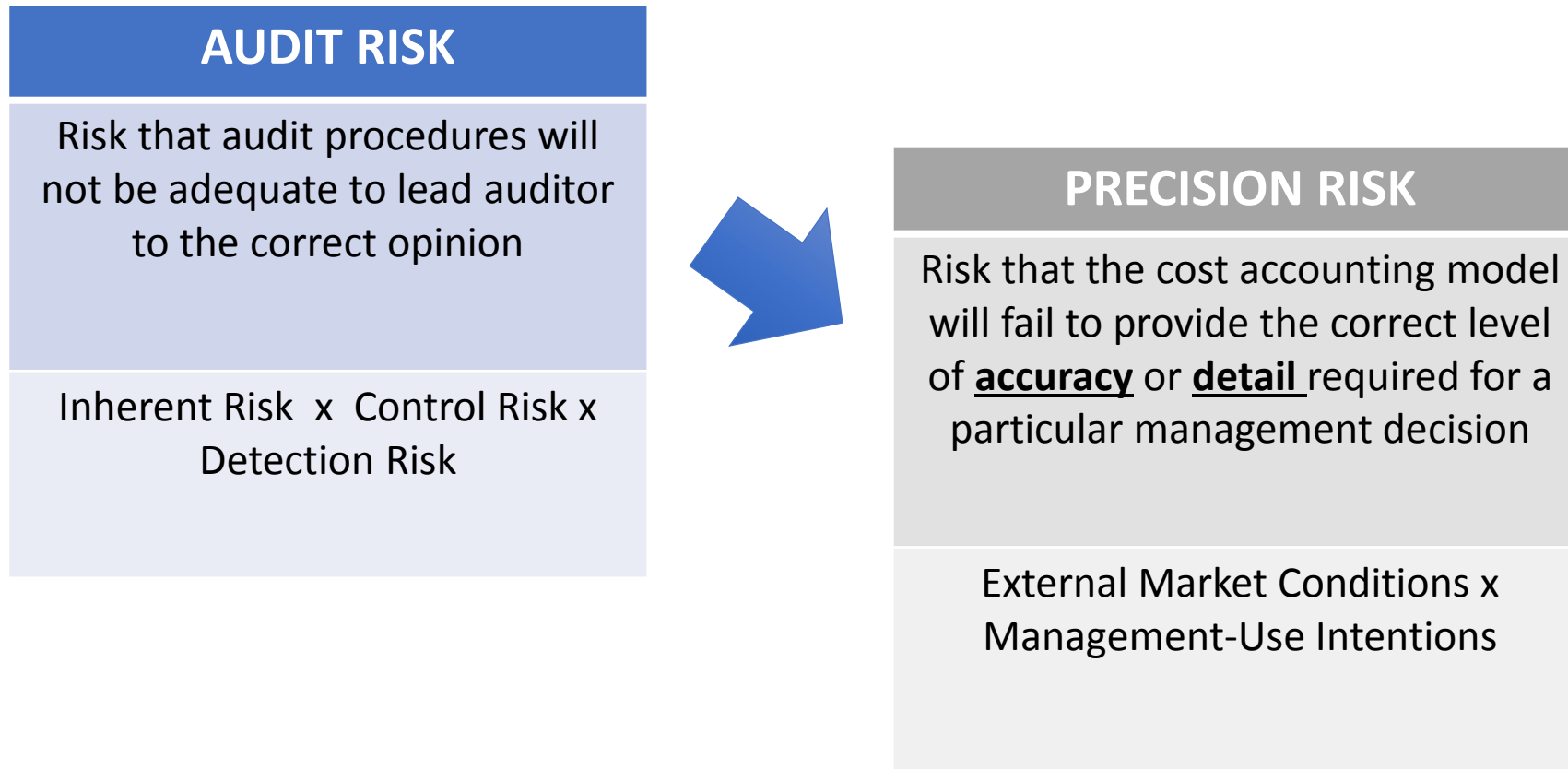
69

- A framework for matching the “precision” of your costing system data to sophistication of organization's cost-data consumption
- Precision refers to the costing data attributes of “**accuracy**” and “**granularity**” or level of detail that is available
- **Accuracy** is determined by how closely the cost model correlates to the “true” cost
- **Granularity** – refers to the number of meaningful data points the model can produce, incorporating “cost buckets” and “bill of materials”

Assessing Costing Capability

Precision-Risk Model – Audit Risk | Precision Risk

70



Assessing Costing Capability

Typical Precision of Various Models

	RCC	RVU	Multi-RVU	Micro	Realtime
ACCURACY	35%	65%	85%	90%	100%
DETAIL	<ul style="list-style-type: none"> Fixed-Variable is not reflected accurately at procedure level Can't tell which specific elements of cost are used in a procedure 	<ul style="list-style-type: none"> Doesn't reflect unique cost of service at "bucket level" Can't tell efficiency or productivity variances from changes in input costs Can't tell which specific elements of cost are used in a procedure 	<ul style="list-style-type: none"> Can reflect unique costs at "bucket level" but still absorbs efficiency Can't tell which specific elements of cost are used in a procedure 	<ul style="list-style-type: none"> Reflects unique costs at "bucket level" as a "standard" – not patient specific Can link detailed cost elements 	<ul style="list-style-type: none"> Captures actual quantity of labor and supplies used by patient Links back to actual costs

Assessing Costing Capability

Computing an Accuracy Index

Sample Cost Accuracy Index

	Yrs Since Last Study		
Model	1	2	3
Simple RCC	35%	30%	25%
Simple RVU	65%	60%	55%
Multiple RVU	85%	80%	75%
Microcost	90%	85%	80%
Realtime Capture	100%	100%	100%

Method	Yrs since Study	Revenue	Weighted Rev
Simple RVU	2	1,540,125	924,075.00
Microcost	3	52,800	42,240.00
Simple RCC	2	439,200	131,760.00
Realtime Capture	1	624,000	624,000.00
		2,656,125	1,722,075.00
Accuracy Index			65%

Assessing Costing Capability

Management-Use Needs – External Market Conditions

Factor	Low Precision	High Precision
Market composition	Solo provider	Multiple hospitals Freestanding providers Entrepreneurial physicians
Treatment focus	Treat-and-serve or transfer	Regional referral or specialty
Managed care penetration	Up to 10%	20% or more with anticipated growth
Payment models	Charges, discounted charges	Case rates, capitation carveouts, bundling

Assessing Costing Capability

Management-Use Needs – Reporting

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Type of Output	Ratio Cost to Charge	Relative Value Unit	ABC	Micro- Standards	Actual Costing	Issues
Product Line Summary - > 6 mo	Yes	Yes	Yes	Yes	Yes	Aggregation of large number of accounts increases accuracy
Product Line Summary < 6 mo			Maybe	Yes	Yes	Short time periods accentuate variances
Payer Summary > 6 mo	Yes	Yes	Yes	Yes	Yes	Aggregation of large number of accounts increases accuracy
Payer Summary < 6 mo			Maybe	Yes	Yes	Short time periods accentuate variances
General Strategic Planning	Yes	Yes	Yes	Yes	Yes	Aggregation of large number of accounts increases accuracy
Existing Service Budget/Forecast				Yes	Yes	Absorption of waste in cost
New Service Budget/Forecast				Yes	Yes	Not enough detail
Bonus/Incentive/Revenue Split Agreements				Yes	Yes	Not accurate enough
Manage Productivity, Efficiency, Waste				Yes	Yes	Not accurate enough, inadequate detail
Make or Buy			Maybe	Yes	Yes	Not accurate enough
Evaluating Care Choices			Maybe	Yes	Yes	Not accurate enough

Assessing Costing Capability

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Precision-Risk Model – Communicating with Management

- Evaluate external market and internal data needs
- Evaluate costing system “Precision”
 - **Accuracy** – How closely the output reflects the true cost of the item
 - **Detail** – the number of meaningful data points the model can produce – incorporating the concept of “buckets” but extending to the bill of materials
- Use the **Precision Risk Model** and **Accuracy Index** to educate and inform stakeholders about tradeoffs and to obtain their buy-in
- Use disclosure footnotes on every report to remind management of the system’s precision and to point out appropriateness issues specific to each project or report (see Appendix 3)

Assessing Costing Capability

HFMA-Strata L7 Cost-Accounting Adoption Model

76

L7	The HFMA-Strata L7 Cost Accounting Adoption Model™	
	ACCURATE: Components of Cost Model	Comprehensive: Scope of Costing
7	Levels 1-6 + Comprehensive and Automated Use of Patient-Specific Time Stamp Detail in Highest Labor Expense Areas	All Services Provided to Patients and Members within and External to Your Organization
6	Levels 1-5 + Payor Discount Programs (e.g.: 340B) Reflected in Drug and Supply Cost + Comprehensive Use of Activity Codes Identifying Variation not Captured by the Charge Master for Clinical and Support Areas + Cost attributed to External Claims for Bundles/MSSP/ACO programs Based on Methodologies Described in Previous Levels	All Services Provided to Patients and Members within and External to Your Organization
5	Levels 1-4 + Professional Labor Cost Specific to Patient's Attributing Physician Compensation + Patient-Specific Acquisition Costing for Non-Chargeable Supplies at Item Level in All Major Surgical and Procedural Locations + Cost for Facility Owned Post-Acute Care Setting Based on Methodologies Described in Previous Levels	Hospitals + Physician Groups + Limited Post-Acute Care Costing
4	Levels 1-3 + Patient-Specific Acquisition Costing for Chargeable Supplies at Item Level in All Major Surgical and Procedural Locations + Patient-Specific Acquisition Costing for Drugs at NDC Level + Surgical Labor Cost Driven by Patient-Specific Time Stamp Detail + Limited Use of Activity Codes Identifying Variation Not Captured by the Charge Master for Clinical and Support Areas + Cost for Professional Services Based on Modifier Adjusted RVUs and Group Compensation Expenses.	Hospitals + Physician Groups
3	Levels 1-2 + Monthly RVU Development for New Charge Codes + Operational Ownership of RVU Maintenance w/ in Cost Accounting System + Patient-Specific Acquisition Costing for Chargeable Supplies at Item Level for One Major Surgical or Procedural Location + Cost for Professional Services Based on RCC or Outdated RVUs	Hospitals + Physician Groups
2	Level 1 + Annual RVU Update and Development Process + Limited use of Non-Patient-Specific Acquisition Cost or Markups for Supplies and Drugs + Detailed Cost Components for Supply and Labor + Variability Defined at the Account and Job Code Level	Limited to Hospitals
1	Outdated or Industry Defined RVUs for Labor + RVUs for Supplies + Simultaneous Overhead Allocation + Cost is Maintained on a Monthly Basis	Limited to Hospitals
0	Use a Basic RCC Methodology for Labor, Drug, and Supply Expenses	Limited to Hospitals

SOURCE: Healthcare Financial Management Association, "Healthcare's First Cost Accounting Adoption Model Launched by HFMA and Strata Decision Technology," [HFMA Press Center](#), Feb 2019

Assessing Costing Capability

Evaluating Your Organization's "Best Practice"

77

Any Number Can Fit on a Piece of Paper – But What's Behind It Determines if It Will Get the Job Done!

A 002059 The Bank of Tokyo-Mitsubishi UFJ, Ltd.
HEAD OFFICE TOKYO OCTOBER 13, 2008 REF. NO. C01-3452850
USD \$9,000,000,000.00*****
PAY AGAINST THIS
CHECK TO THE ORDER OF MORGAN STANLEY*****
USD \$9,000,000,000.00
TO
BANK OF TOKYO MITSUBISHI UFJ LTD
NEW YORK
The Bank of Tokyo-Mitsubishi UFJ, Ltd.
HEAD OFFICE TOKYO
AUTHORIZED SIGNATURE

Cost-Data Validity

Cost-Data Validity

Should Cost Data Balance to the G/L?

- Reconciling to the G/L does nothing to prove that any figure assigned to a particular cost element is reasonable
- It only shows whether any expenses were lost between the G/L and element-level costs

Cost-Data Validity

Evaluating Validity

82

Compare a sample of system-generated costs to manually-computed costs

ERROR PERCENTAGE CALCULATION				
E	F	G	H	I
Procedure	System Generated	Known	Difference	Error Percentage
A	40.47	35.16	5.31	15%
B	150.33	130.12	20.21	16%
C	17.34	65.25	-47.91	73%
D	150.33	125	25.33	20%
	Average Error Percentage			31%

Published in *hfm* magazine, March 2019 (hfma.org/hfm).

Cost-Data Validity

Evaluating Validity

Compute a system-wide “error rate”

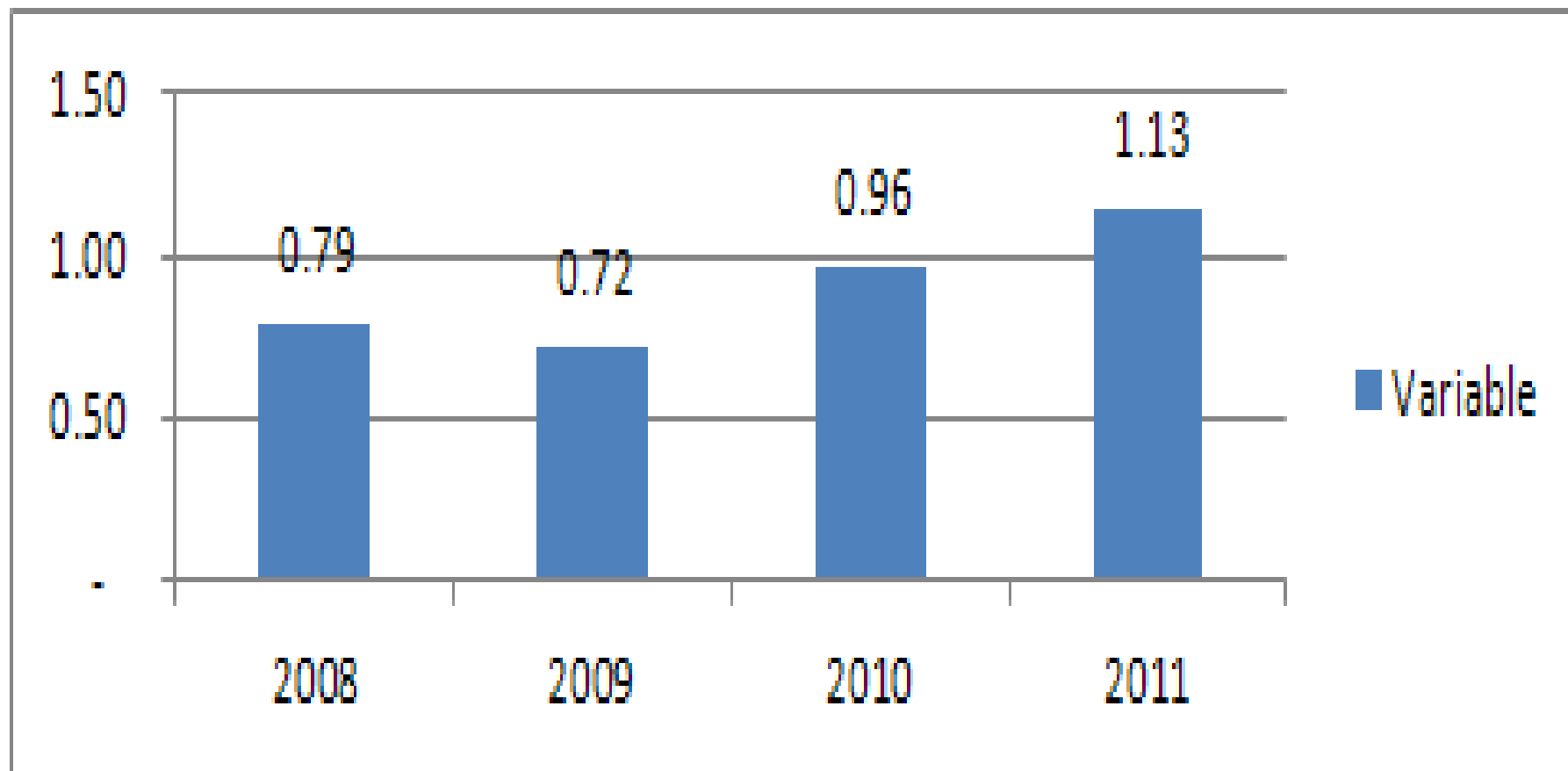
WEIGHTED-ERROR CALCULATION						
E	F	G	H	I	J	K
Procedure	System Generated	Known	Difference	Error Percentage	Volume	Weighted-Error Percentage
A	40.47	35.16	5.31	15%	99	14.95
B	150.33	130.12	20.21	16%	100	15.53
C	17.34	65.25	- 47.91	73%	10	7.34
D	150.33	125	25.33	20%	220	44.58
	Average Error Percentage			31%	429	82.40
	Volume Weighted Error					19%

Published in hfm magazine, March 2019 (hfma.org/hfm).

Cost-Data Validity

Evaluating Year-to-Year Changes vs Known Facts

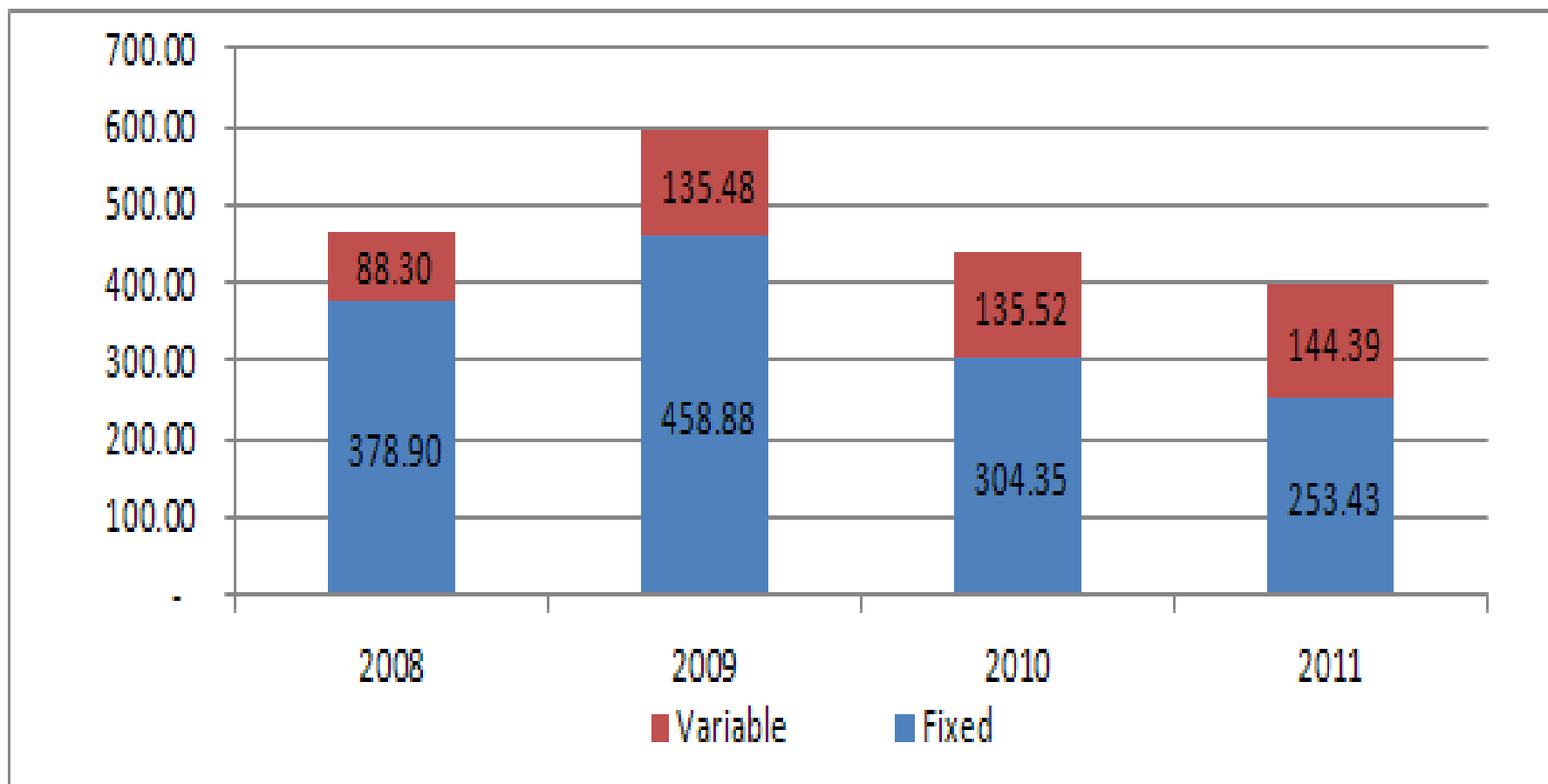
Epinephrine 1:1000 30 ML



Did costs change because of operational improvements or was change due to random / unrelated events?

Cost-Data Validity

Reconcile Year-to-Year Changes – CPT 70553



Cost-Data Validity

Six Keys to Improving Validity

1. Upgrade your costing algorithm to a more precise one
2. Mix and match algorithms by cost center
3. Incorporate new data sources – ex: acuity, EHR

COMPARATIVE ACCURACY OF FOUR COSTING METHODS	
Methodology	Accuracy
Ratio of Cost to Charges	35%-40%
Single Relative Value Unit (RVU)	65%-80%
Multiple RVUs	80%-85%
Micro-Costing	85%-90%

Published in *hfm* magazine, November 2018 (hfma.org/hfm).

Cost-Data Validity

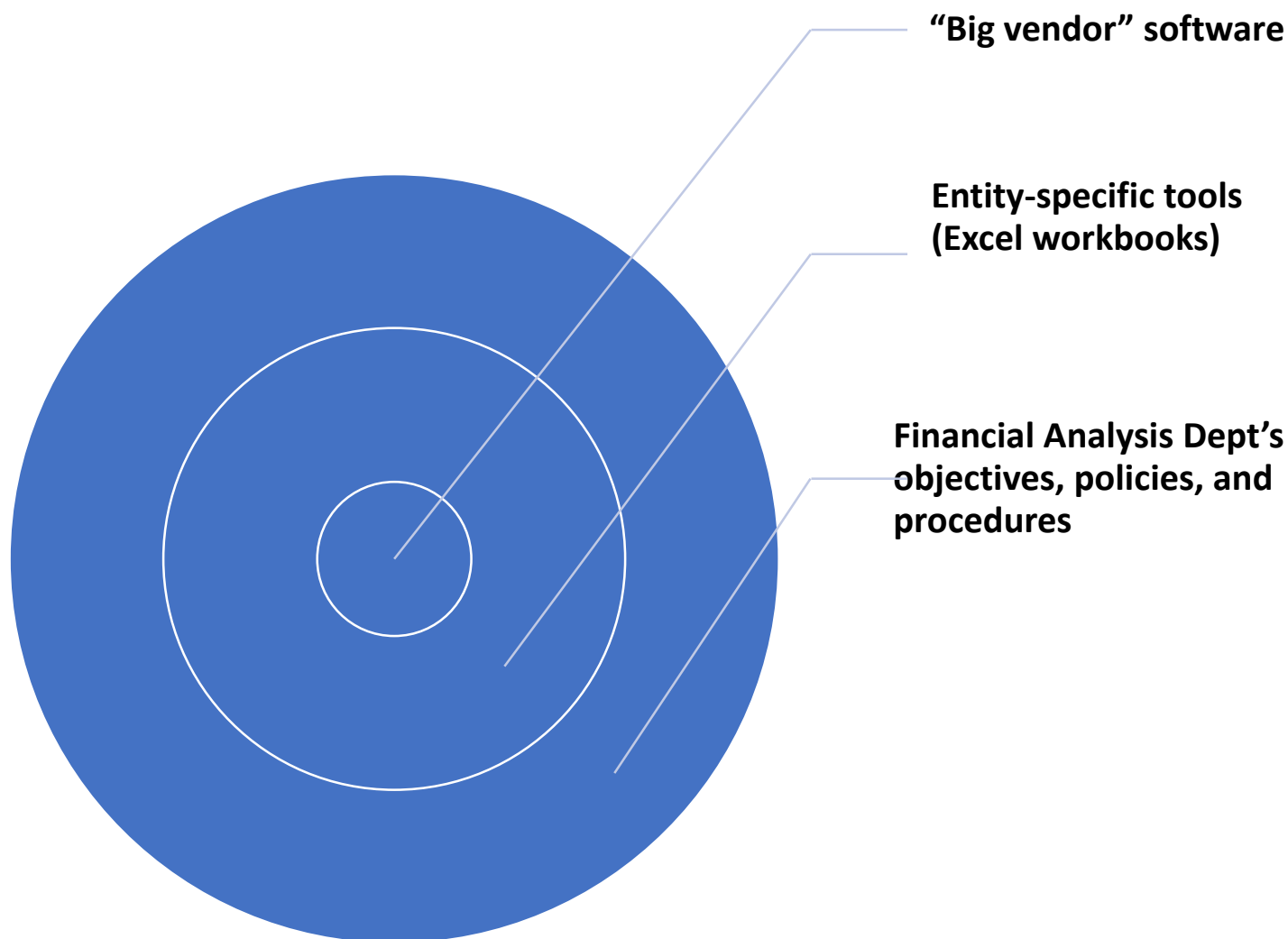
Six Keys to Improving Validity

87

4. Incorporate new cost objects as CDM becomes less useful
5. Monitor charge-capture processes
6. Isolate and remove variation caused by “measurement error,” i.e., isolate expense changes that are unrelated to volume changes
 - a) Accounting policies
 - i. Annual inventory adjustments
 - ii. Expensing inventory refreshes to par levels
 - iii. Timing between actual use and recording expense
 - b) “bucket mapping” algorithms

Cost-Data Validity

Required Elements for “Baking In” Reliability and Comparability



Cost-Data Validity

Required Elements for “Baking In” Reliability and Comparability

Departmental Policies and Process Goals

1. Costing Mechanics – Standardize Data Collection Process
2. Standardize Documentation – Create permanent reference
3. Clean up Source Data Sets

Cost-Data Validity

Required Elements for “Baking In” Reliability and Comparability

Validate Procedure Times – Range of Input Values Affects Projection Confidence

If we are projecting 100 births next year, what is the probable amount of revenue under the following scenarios?

- **Case A:** All births last year ran between \$12,000 and \$15,000
- **Case B:** Range of charges ran from \$5,000 to \$35,000

The larger the range of input values, the wider the range of outcomes, and consequently the lower our confidence in any one number

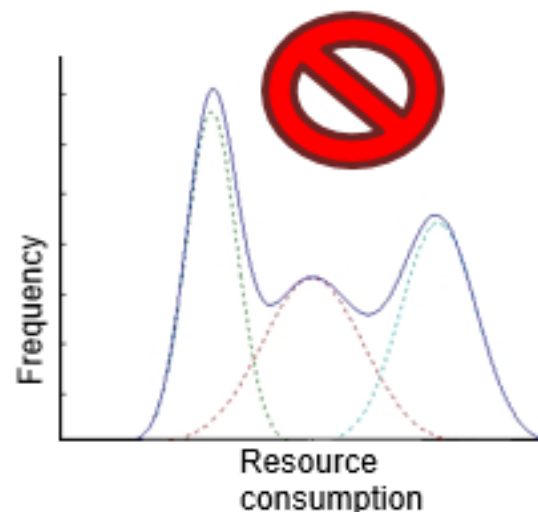
Cost-Data Validity

Required Elements for “Baking In” Reliability and Comparability

Analyze Procedures' Labor Times



Acceptable: Blue has best predictive value. Yellow has least predictive value



Problem: Blue line indicates there are 3 distinct cost drivers – cannot combine into a single charge code with any predictive value.

The larger the spread of the curve, the more samples you will need to take

Understanding and Managing Variation

Understanding and Managing Variation

Clinical Variation – The Next Layer of Savings

94

Our organization is performing at the top quartile or decile on most labor and supply chain metrics. The next layer of costs will need to come from reducing clinical variation and changing work flow processes...

Understanding and Managing Variation

Clinical Variation – The Next Layer of Savings

95

The typical organization has, conservatively, \$20-30M of estimated actionable care-variation margin-improvement opportunities per \$1 Billion of net revenue....

Understanding and Managing Variation

Variance vs. Variation

96

- **Variance** = The difference between two simple numbers; i.e., Current-Month Cash Balance minus Previous-Month Cash Balance
- **Variation** = Applies to populations with underlying diversity: Useful for comparing averages. Minimum attributes include
 - Mean
 - Standard deviation

Understanding and Managing Variation

Common Report Format

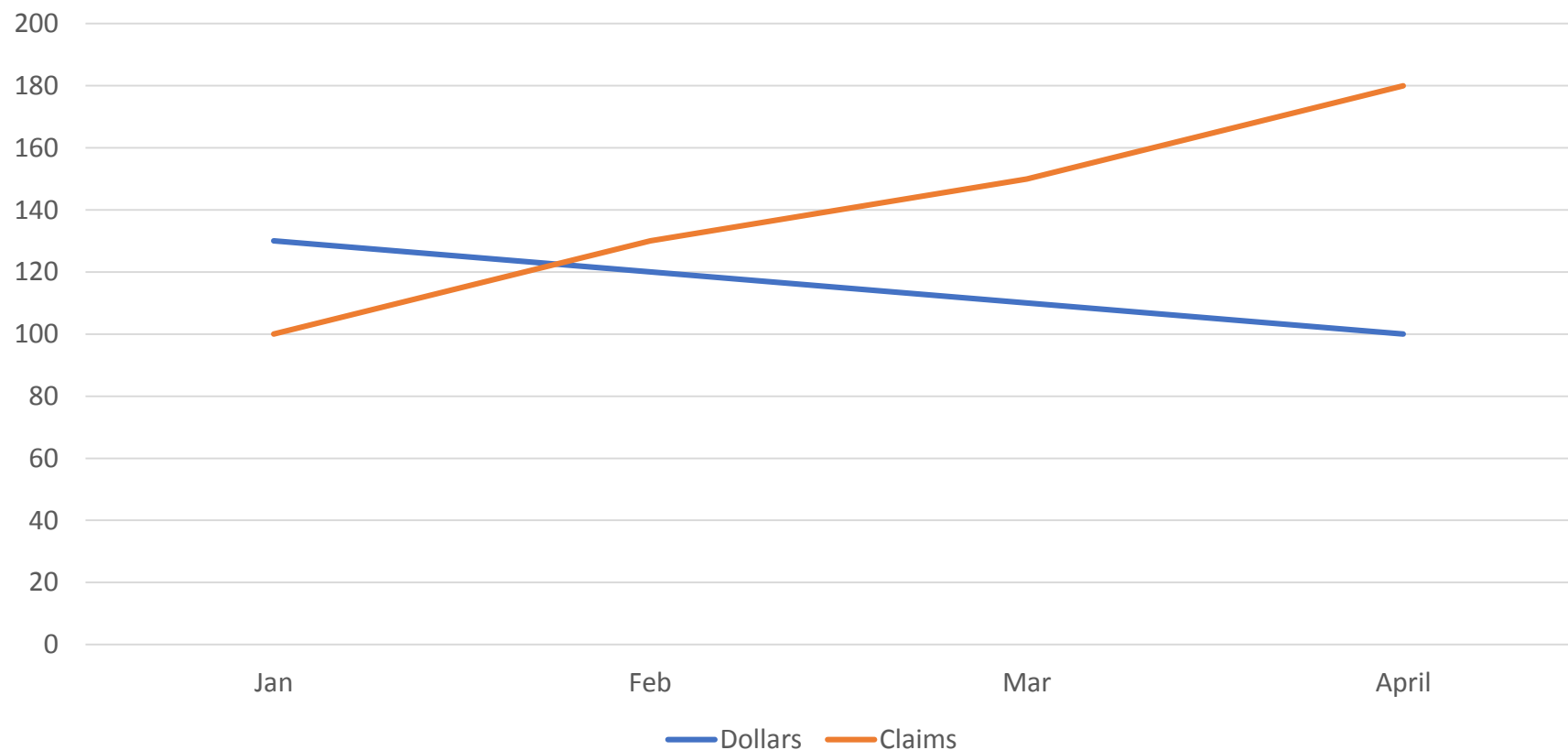
97

PERIOD: 01-31 JUL 2012	DR. JONES' PATIENTS	DR. SMITH'S PATIENTS	VARIANCE AMOUNT	VARIANCE PERCENT
FIXED COST	\$10,123	\$11,242	(\$1,119)	(11.1%)
VARIABLE COST	\$9,342	\$2,200	\$7,142	76.5%

*Most financial systems report
averages and variances in
dollars, not item counts, and
do not consider variation*

Understanding and Managing Variation

Process Improvement – Use Item Counts (#s)

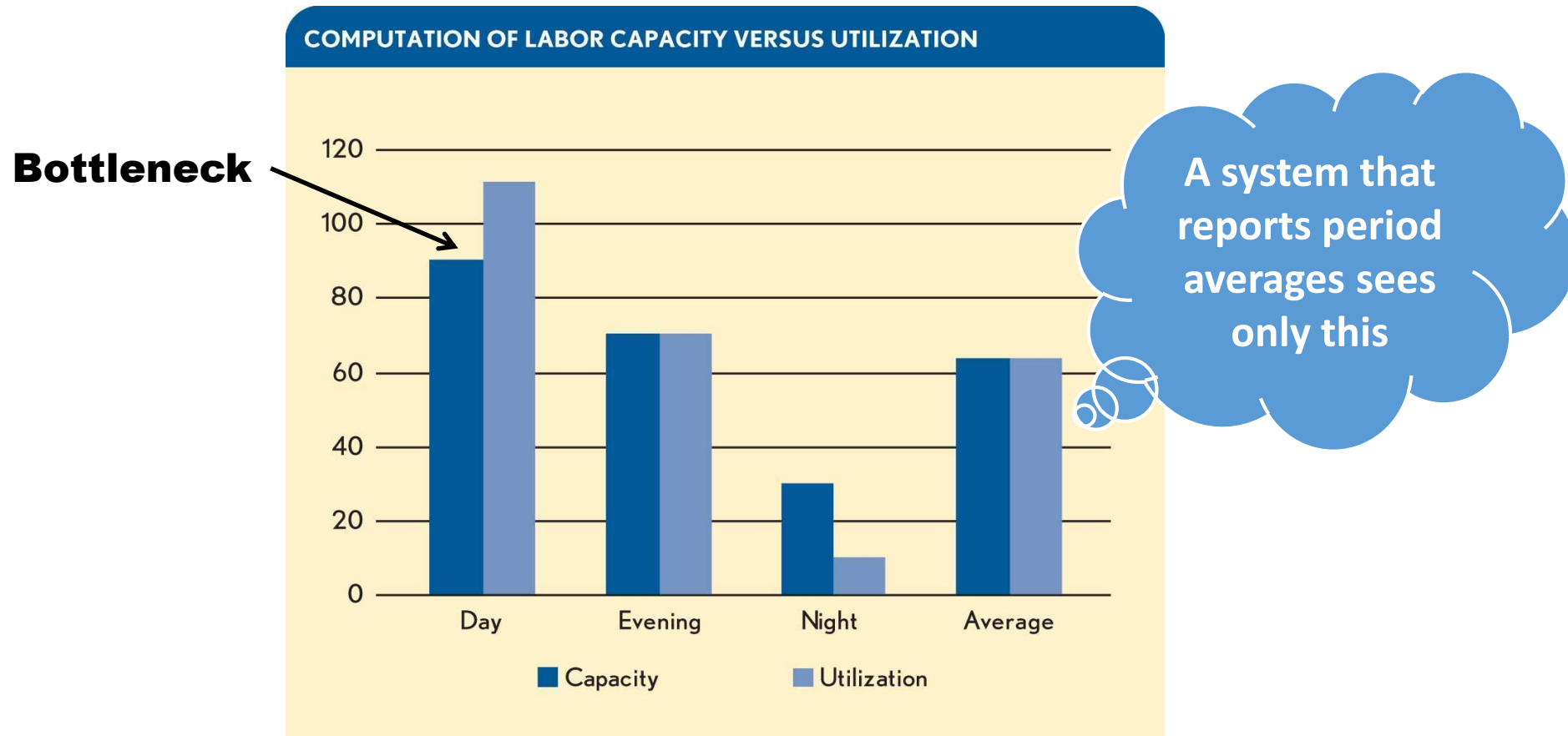


By focusing only on dollars, this hospital missed a growing DNFB backlog

Understanding and Managing Variation

The Problem with Averages

99

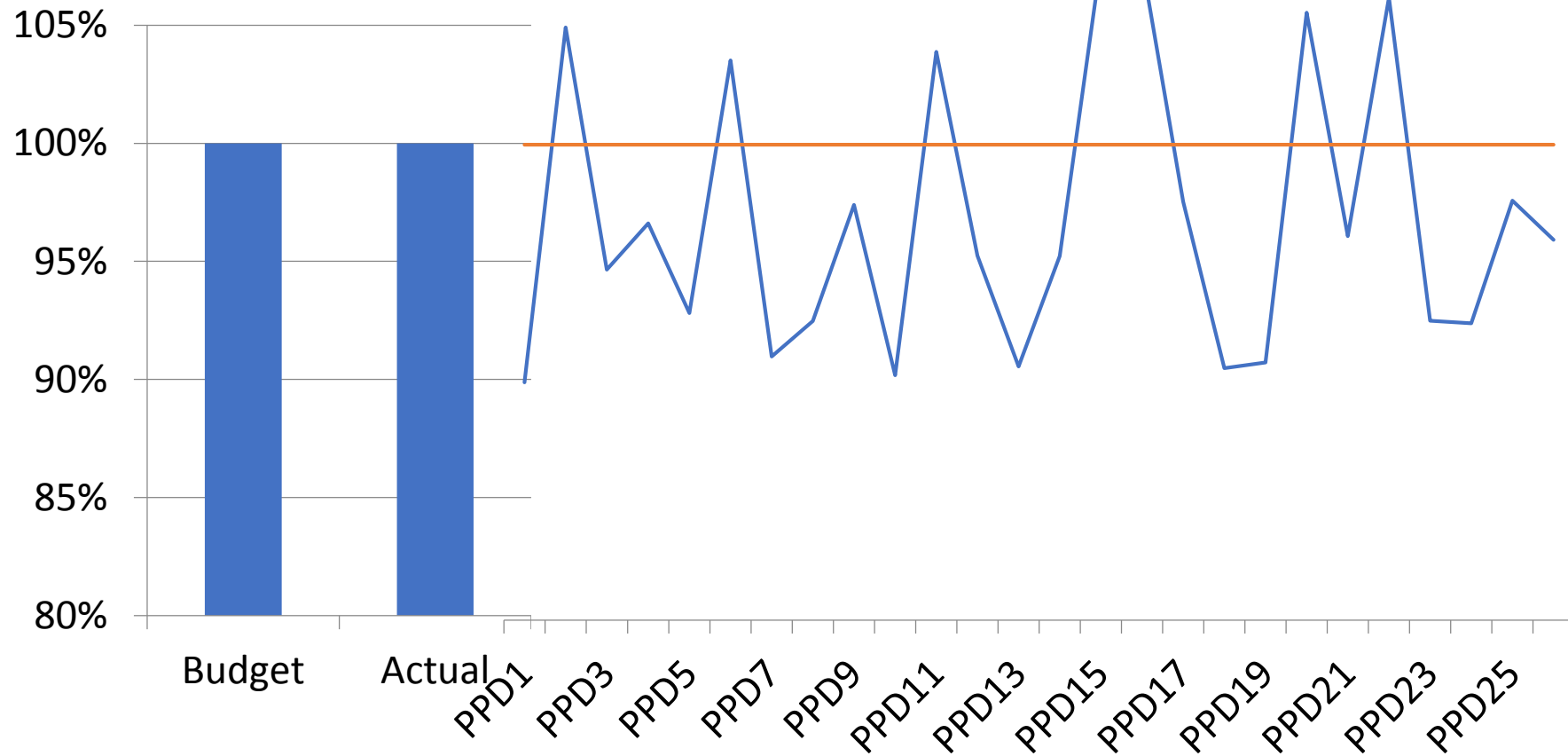


By measuring utilization variation, this hospital found over \$1 million in savings!

Understanding and Managing Variation

Averages Hide Important Facts

100



Understanding and Managing Variation

101

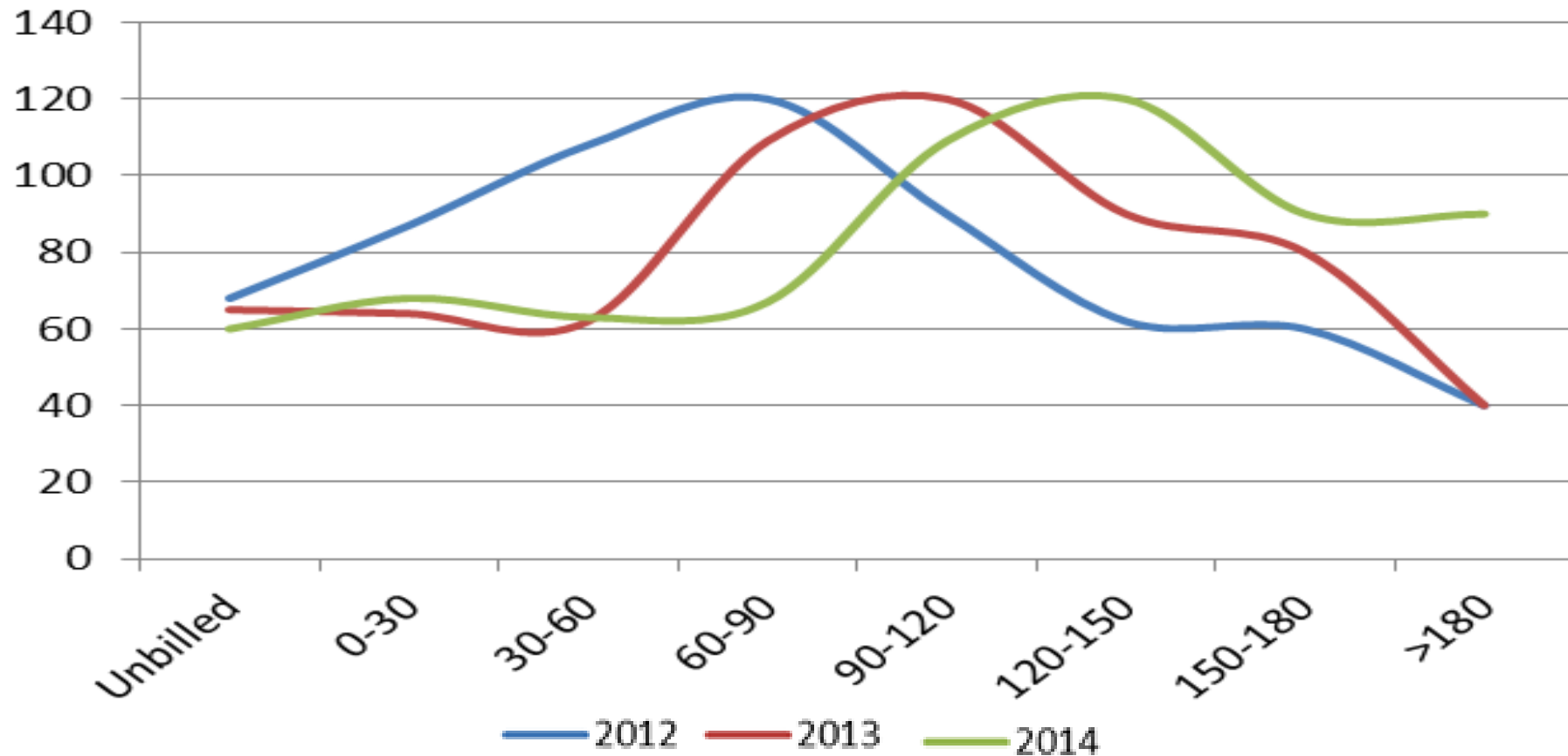
Table vs. Histogram – In 30 Seconds, What's Going On Here?

AR Aging Distribution								
	Unbilled	0-30	31-60	61-90	91-120	120-150	151-180	>180
2012	28.9	15.3	14.2	18.3	17.4	35.7	21.8	33.1
2013	28.90	15.30	14.21	18.30	17.41	35.71	21.81	33.10
2014	20.4	8	14.2	29.6	28.8	39.8	41.7	14.8

Understanding and Managing Variation

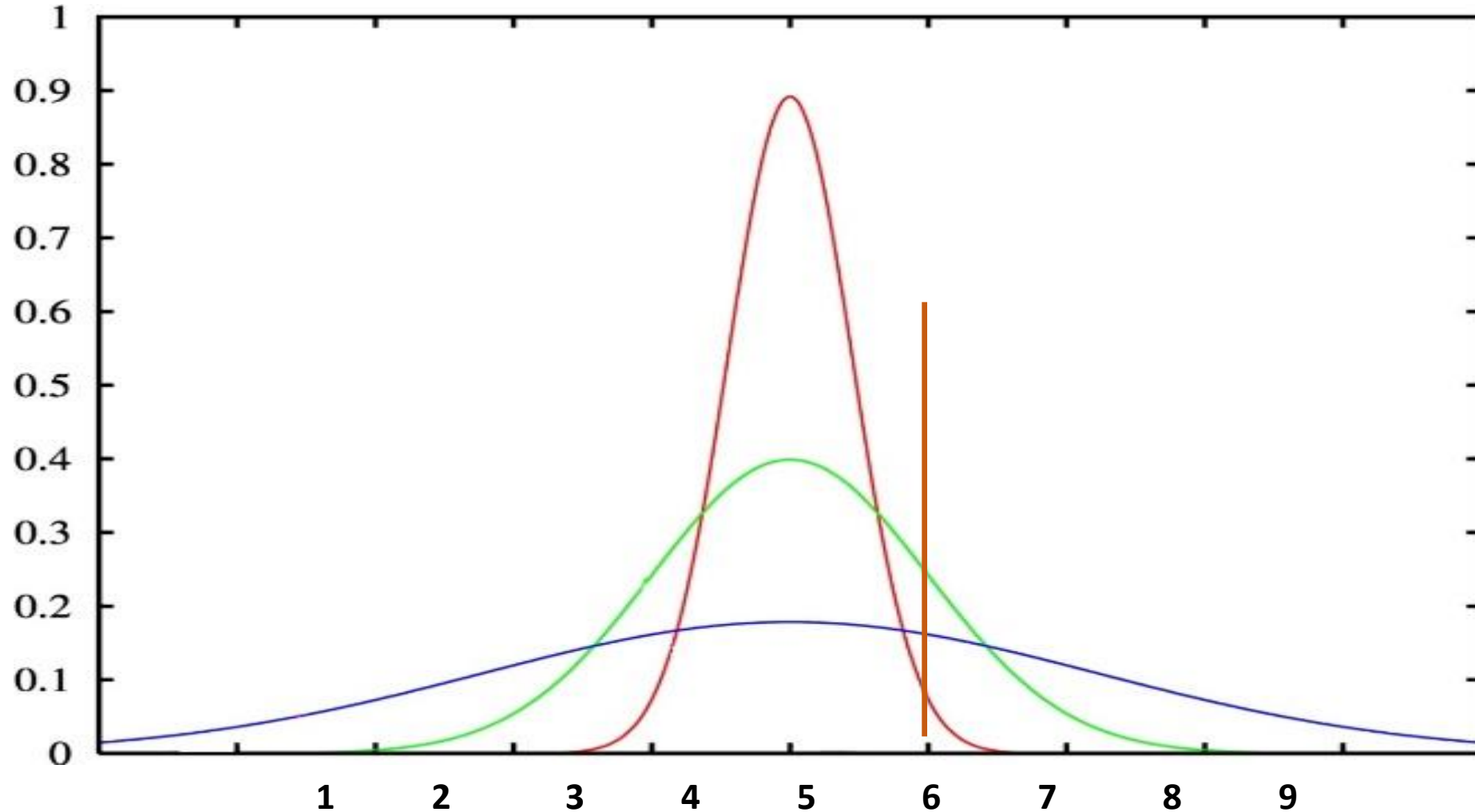
Table vs. Histogram – What Can You See Now?

AR Distribution



Understanding and Managing Variation

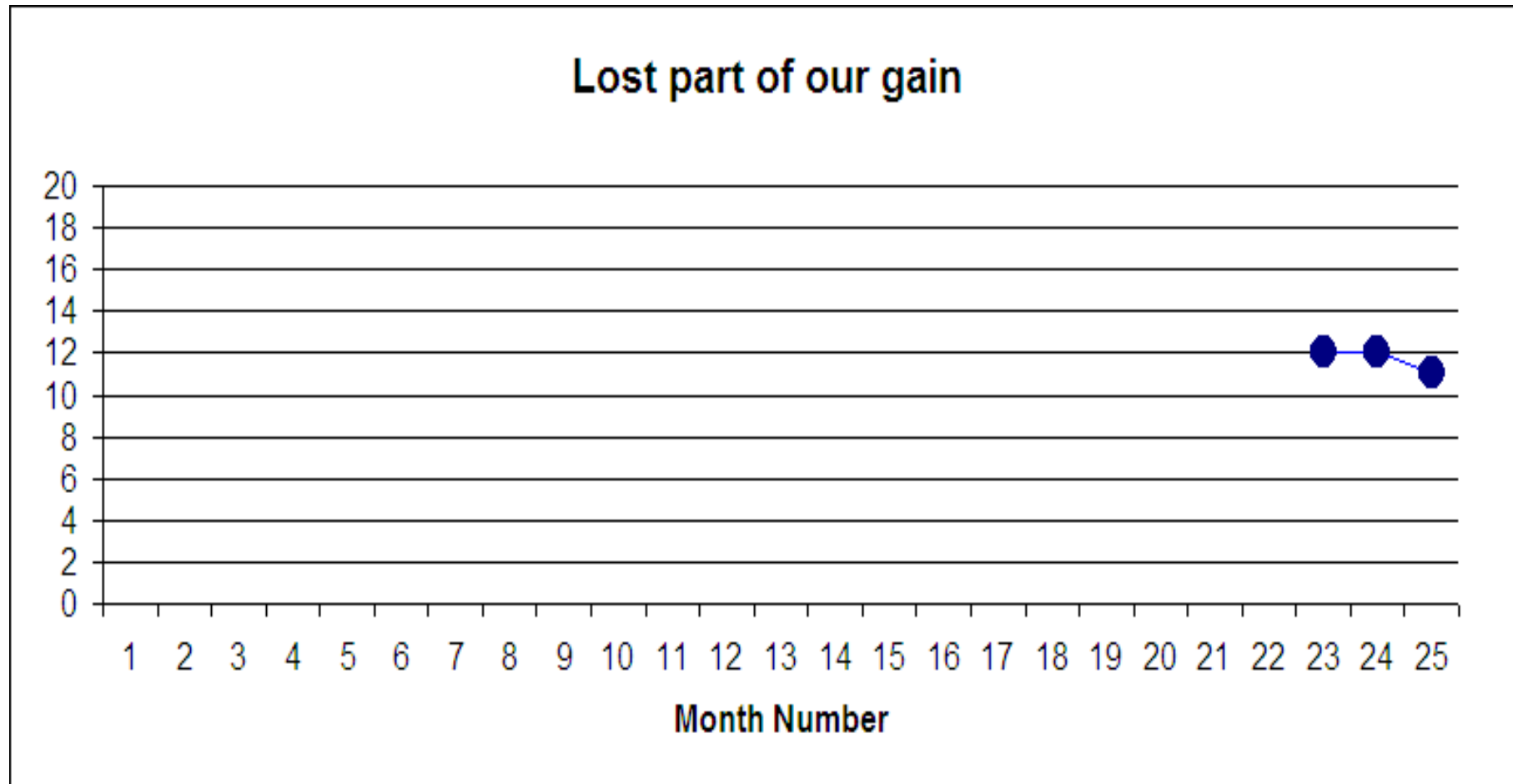
Variation – “*The Voice of the Process*”



Understanding and Managing Variation

Some Important Value

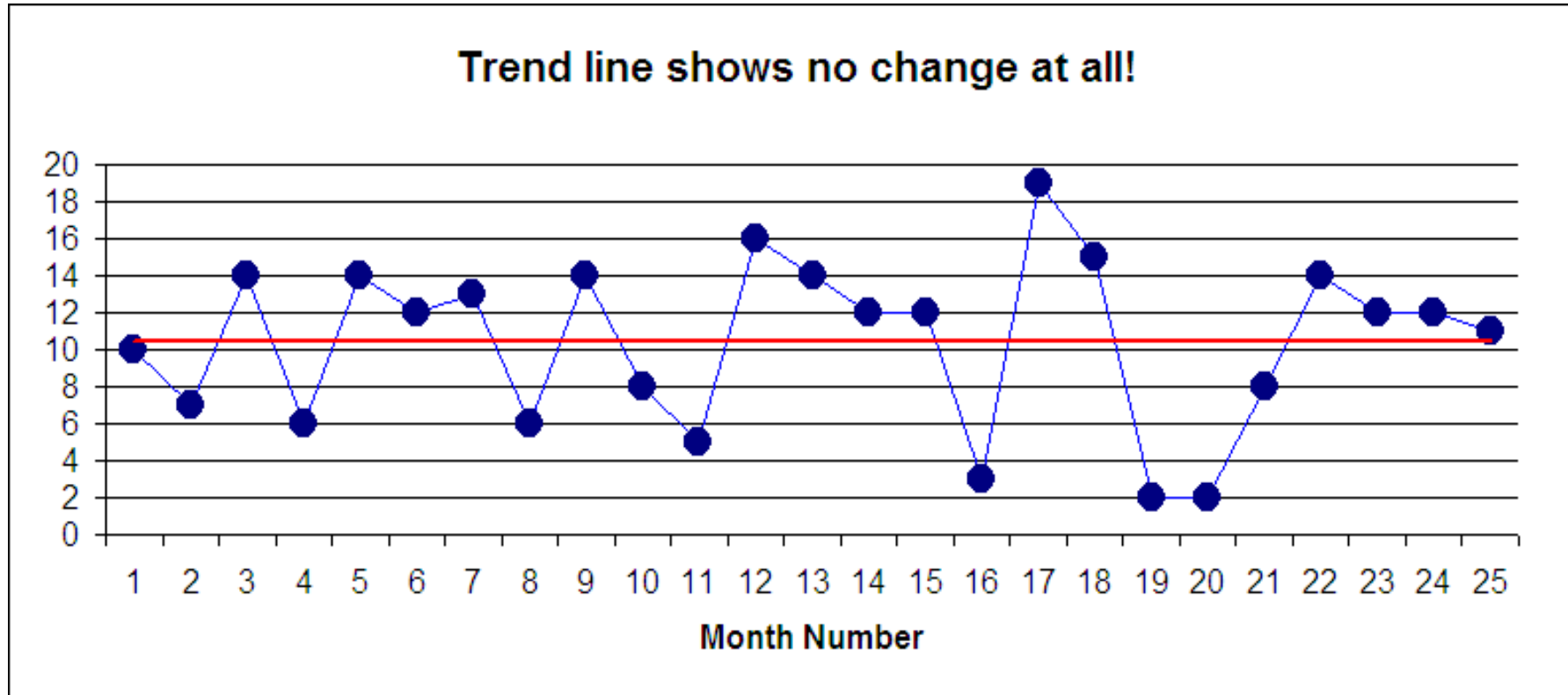
104



Understanding and Managing Variation

Some Important Value

105

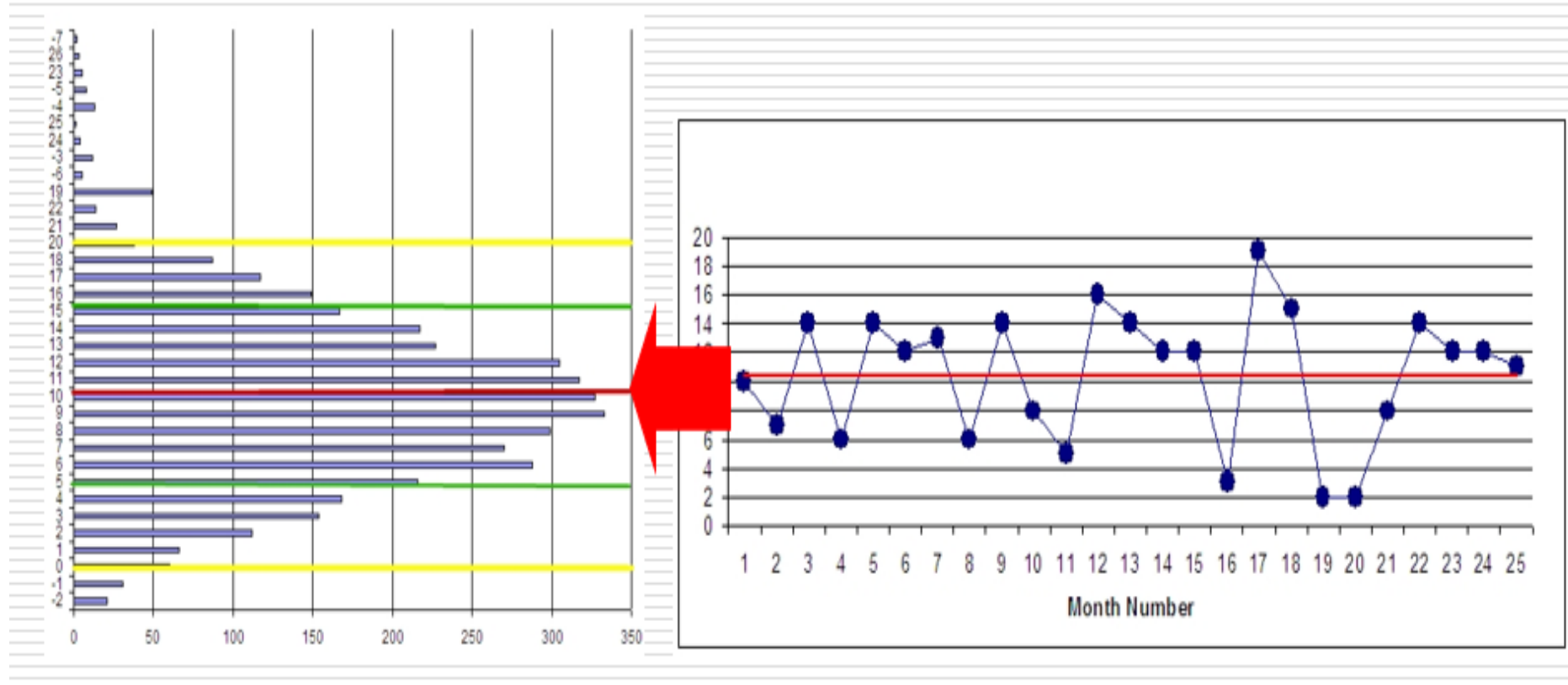


Just how meaningful was our conclusion, from looking at only two or three measurement points?

Understanding and Managing Variation

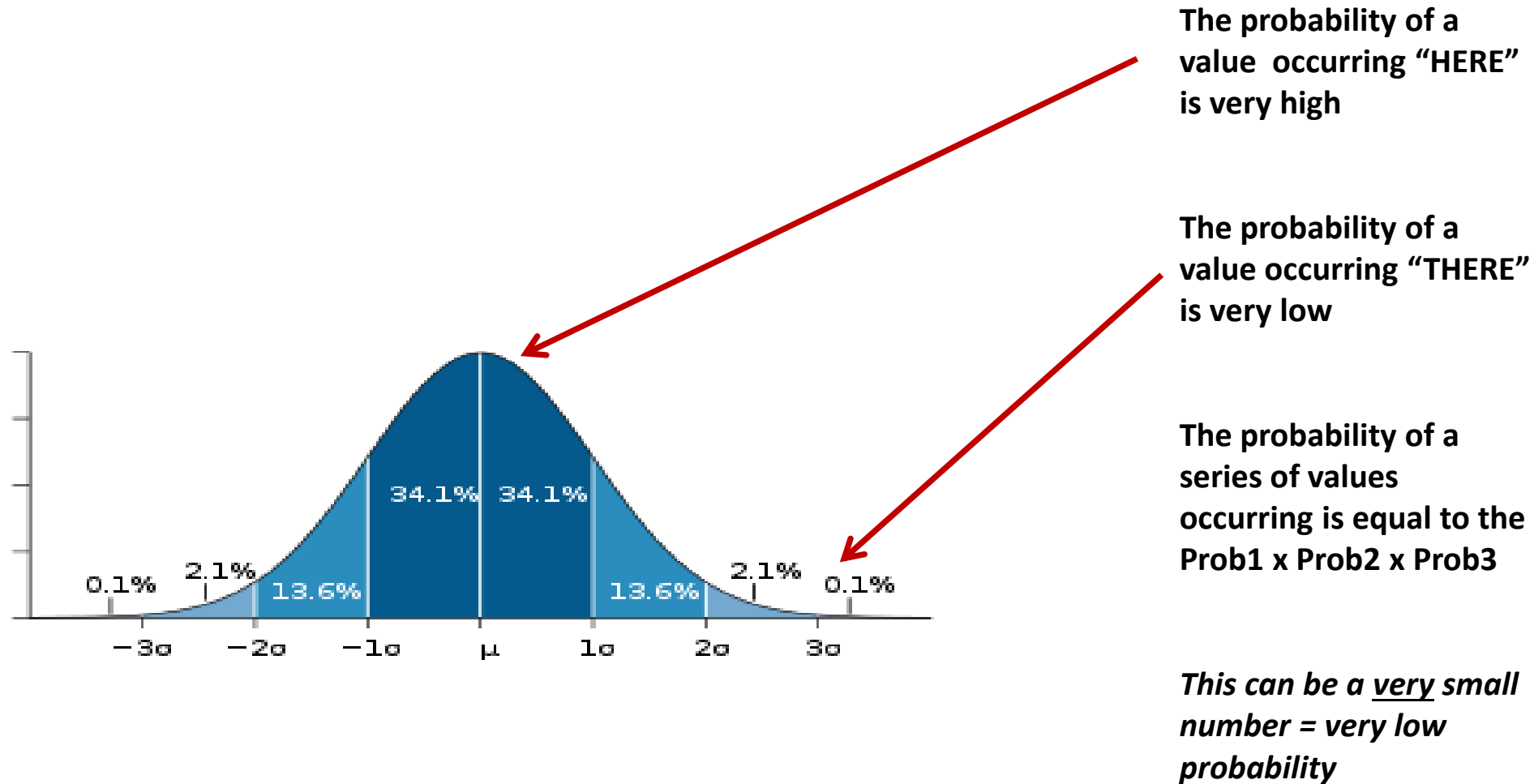
Relating Variance to Variation

Plot data points by frequency



Understanding and Managing Variation

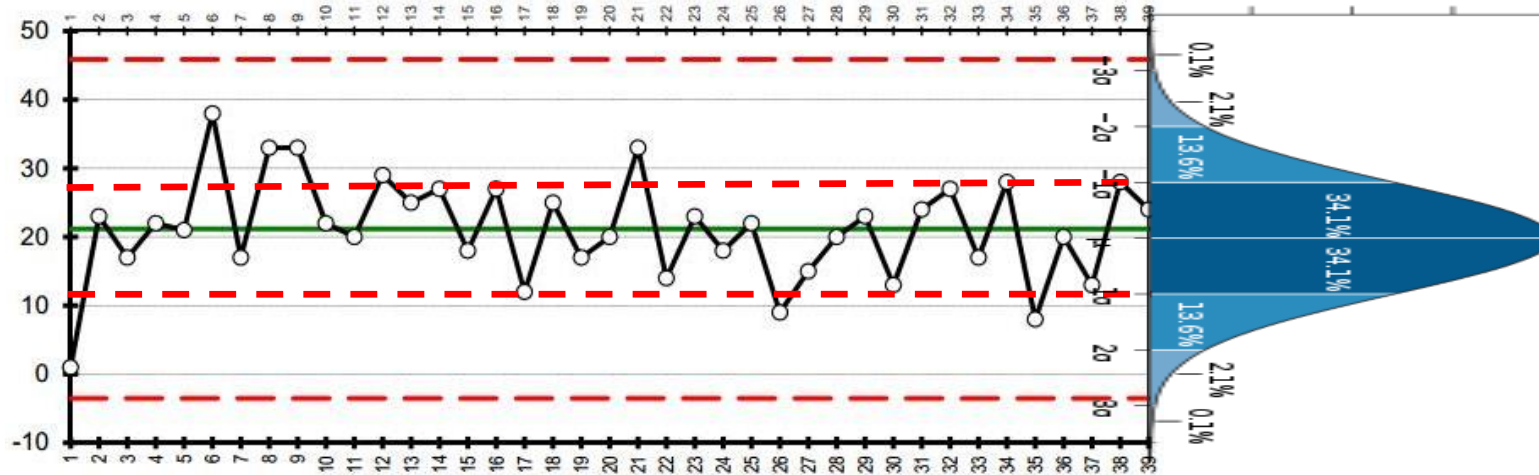
Using Probabilities to Analyze Processes



Finding “Meaningful Change” in Control Charts

Seek Out “Improbable Occurrences”

108



- 6 successive increases or decreases
- 8 consecutive points on either side of the centerline
- Any point outside 3 standard deviations
- Same-side variations
 - 2 of 3 points outside 2 standard deviations
 - 4 of 5 points outside 1 standard deviation

Understanding and Managing Variation

Applying Statistical Process Control to Finance

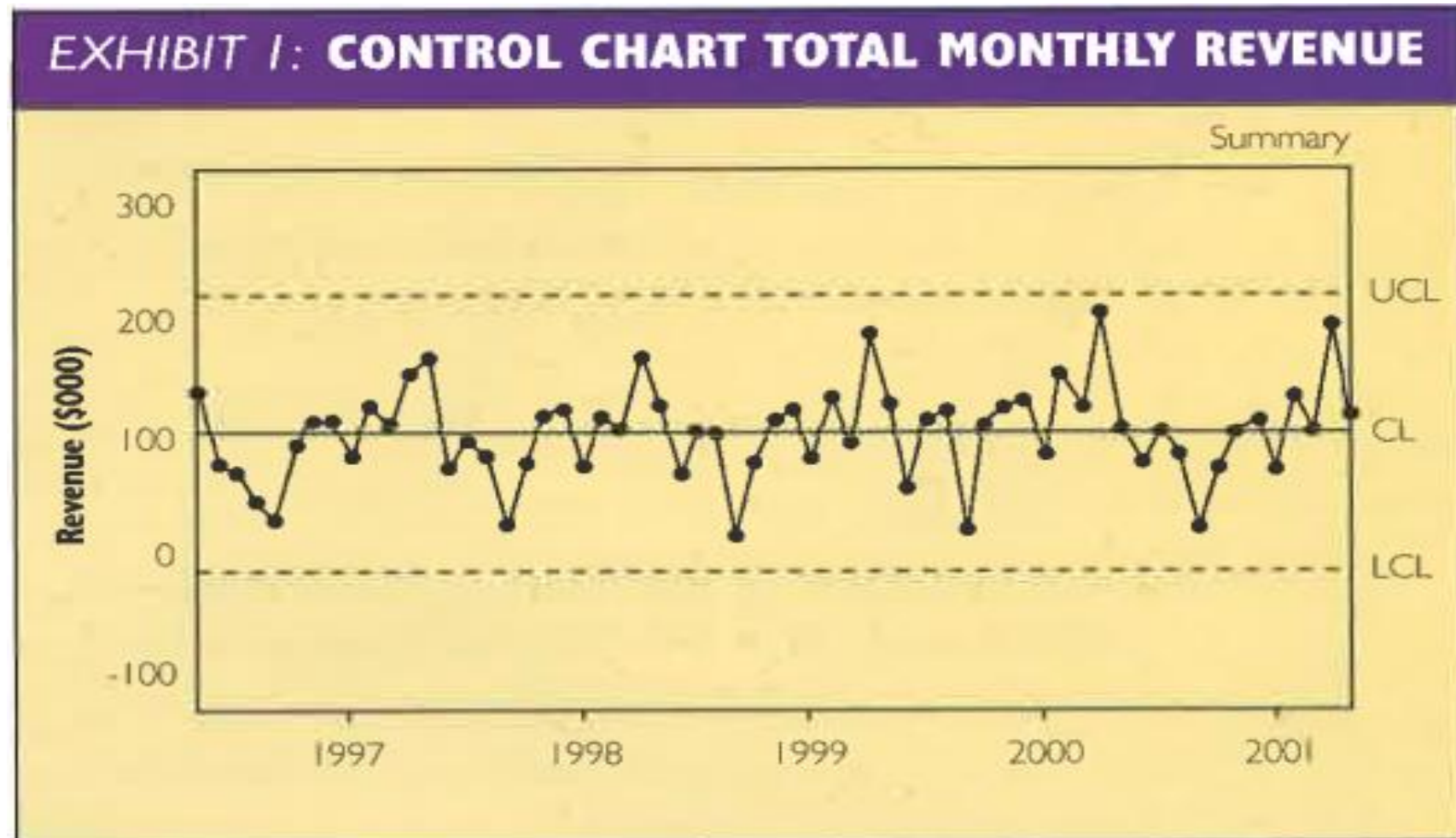
109

- University of Alberta Department of Dentistry
- Control charts used to validate monthly financials
- Saved time, by focusing on exceptions
- Exceptions were defined by the historical variation, not just the absolute variation

Understanding and Managing Variation

University of Alberta – Department of Dentistry Revenue

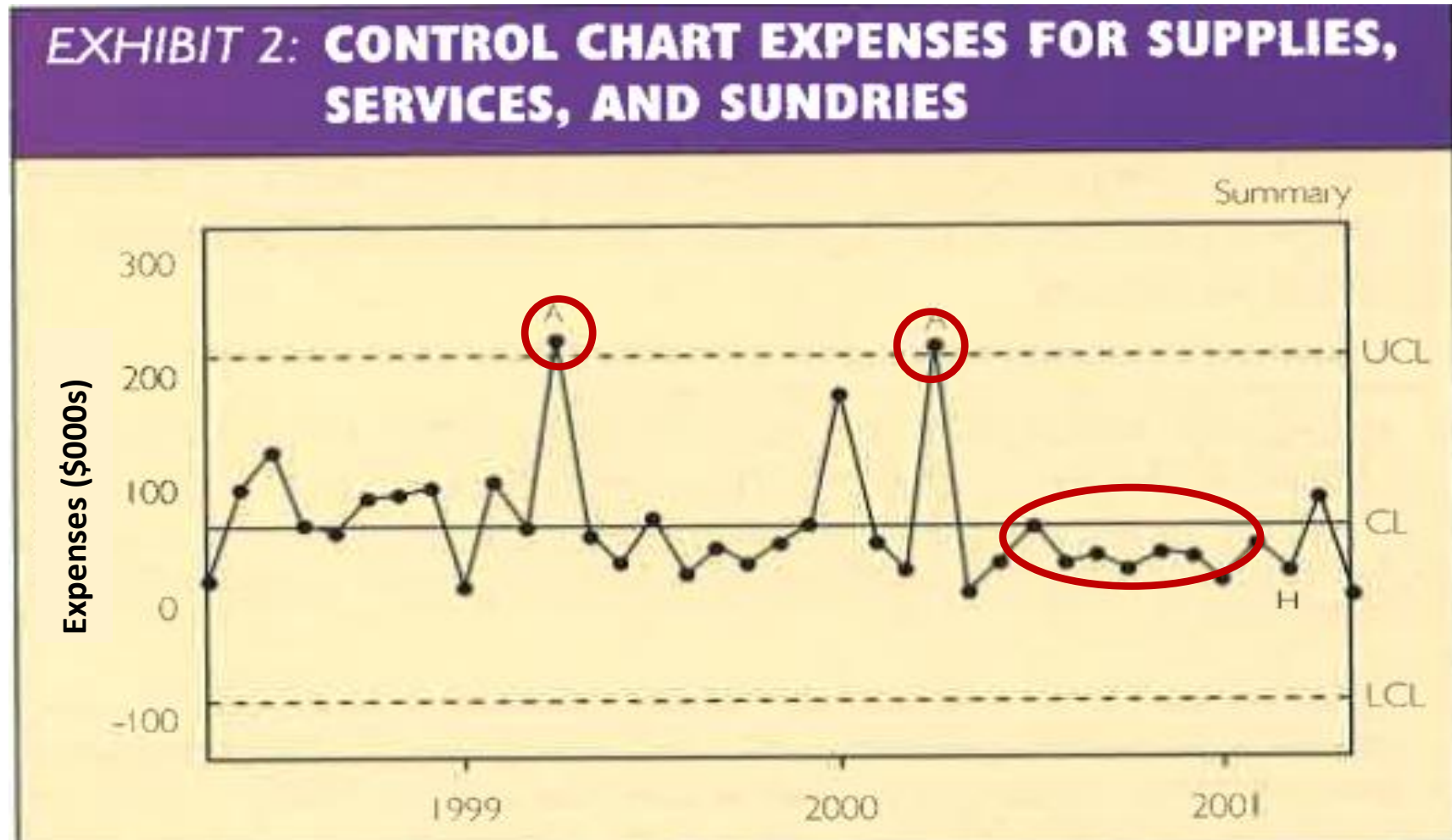
110



Understanding and Managing Variation

University of Alberta – Department of Dentistry Expenses

111



Group Exercise

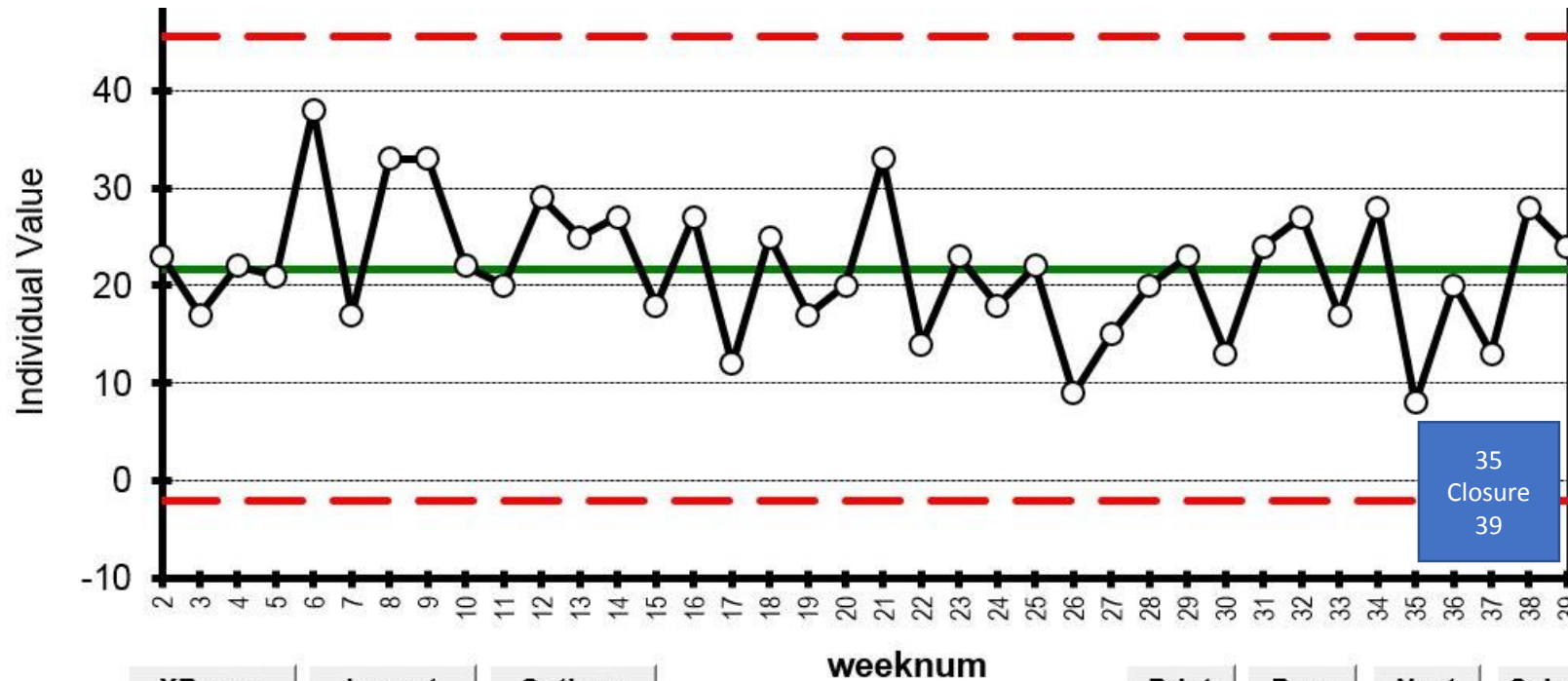
Applying Chart-Interpretation Rules

- Did surgical volume change due to room closure?
- See “BPChart_v20074-04.xlsm”
- Refer to handout for group reference if laptop unavailable

Group Exercise – Applying Chart-Interpretation Rules

Surgical Cases By Week

113



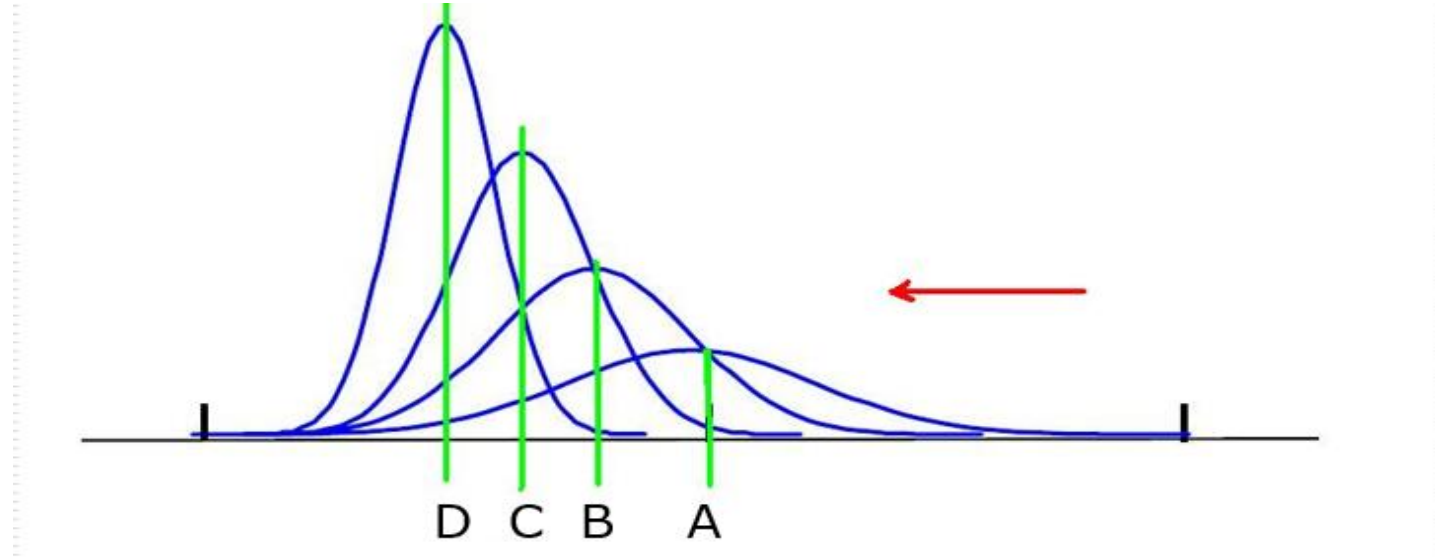
No Special Cause Detected

Avg of Data Shown 21.71053
Median Data Shown 22
Sigma for Limits 7.931
Base for Limits Average MR

Chart Type: Chart for Individuals
Centerline: 21.71 Process Limits: Lower: -2.082 Upper: 45.50
A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Understanding and Managing Variation

Tying Variation Analysis to Performance Improvement



- Basic principle is that performance-improvement efforts should reduce variation
- Emphasis should focus on the outliers
- Reduced variation leads to a lower average

Understanding and Managing Variation

Does Reducing Variation Save Money?

DISEASE PATH	NO ORDER SET	ORDER SET
Chest Pain	120%	79.5%
Pneumonia	105%	95.7%
Heart Failure	101.3%	98.4%
Sepsis	110.7%	83.9%
GI Hemorrhage	94.2%	109.7%
COPD	95.1%	110.9%
TOTALS	108.3%	90.4%

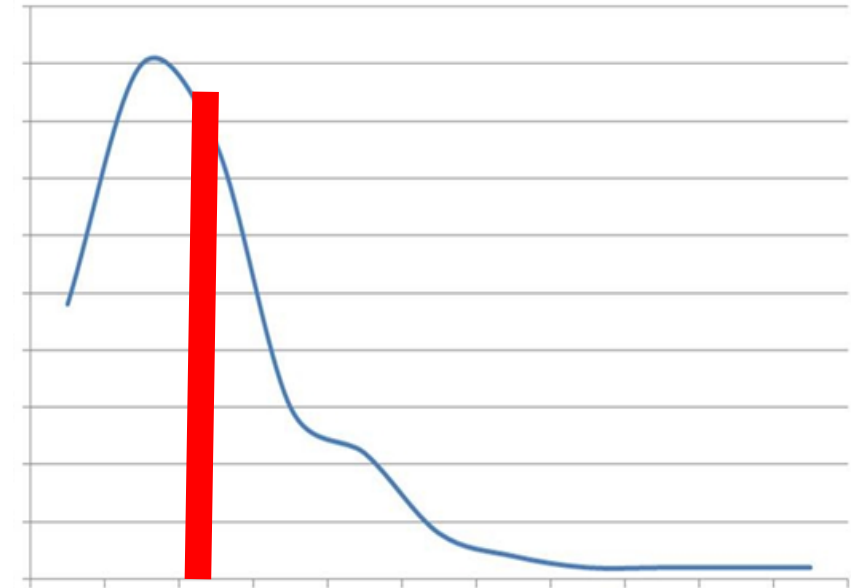
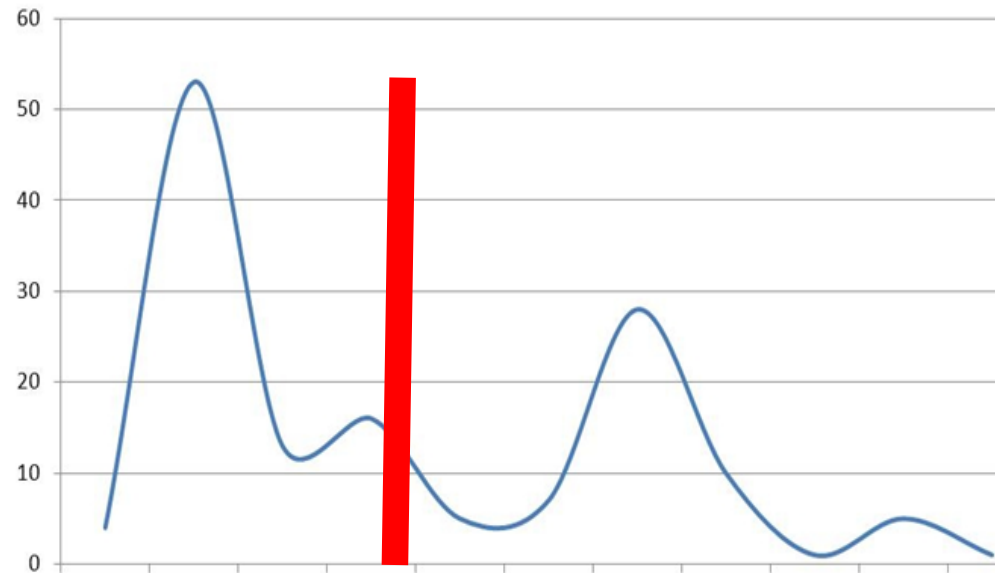
Understanding and Managing Variation

Working With Clinicians – Reducing Variation Reduces Costs

Nursing Cost Distribution for DRG 195

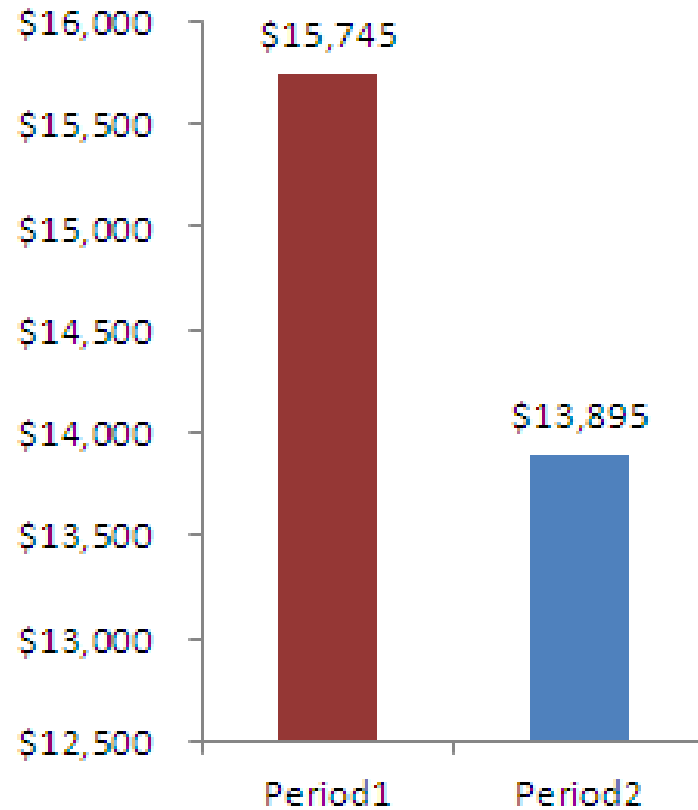
BEFORE
Avg Cost / Day = \$864

AFTER
Avg Cost / Day = \$552



Understanding and Managing Variation

Working with Clinicians

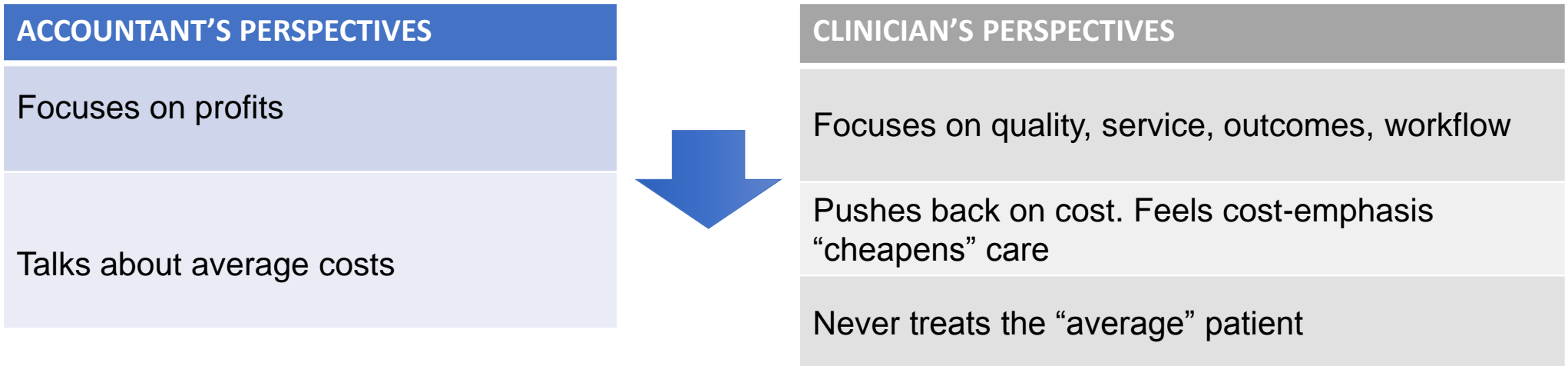


- What response do you get when you share this kind of information?
- What tactical decision can a clinician make with this information?

Understanding and Managing Variation

Working with Clinicians – Common Ground = Reducing Variation

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TOGETHER: Emphasize reducing variation

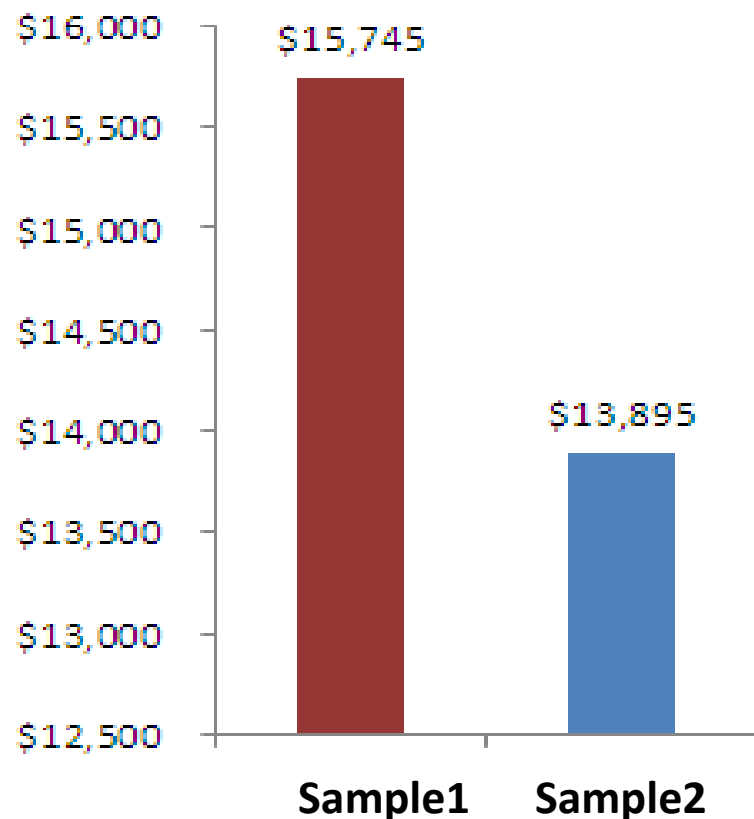
RESULT: Average costs go down, profits go up

CONCERN: Most financial systems capture and report average costs, not variation

Understanding and Managing Variation

Working with Clinicians – Importance of Statistical Thinking

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Sample 1: 55 patients treated
\$6,200 standard deviation

Sample 2: 42 patients treated
\$6,600 standard deviation

Were the changes to the process effective in reducing costs?

Accountant:

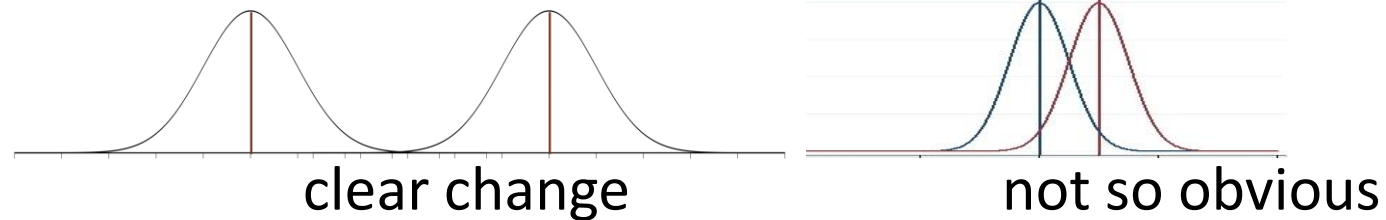
$$\begin{aligned} &\$15,745 - \$13,895 = \\ &\quad \mathbf{\$1,850 \text{ savings}} \end{aligned}$$

Understanding and Managing Variation

120

Working with Clinicians – Importance of Statistical Thinking

Statistician: Is the difference between the two populations the result of sampling, or did we experience a real value shift?



Conclusion: *95% confident there were no savings!*

Understanding and Managing Variation

How Sampling Error Works

121

	A	B	C	D
1		Population	Sample1	Sample2
2		3	2	4
3		9	1	3
4		5	9	6
5		1	3	10
6		4		
7		7		
8		2		
9		8		
10		6		
11		10		
12	Avg	5.5	3.75	5.75
13	Std Dev	2.872281323	3.593976	3.095696

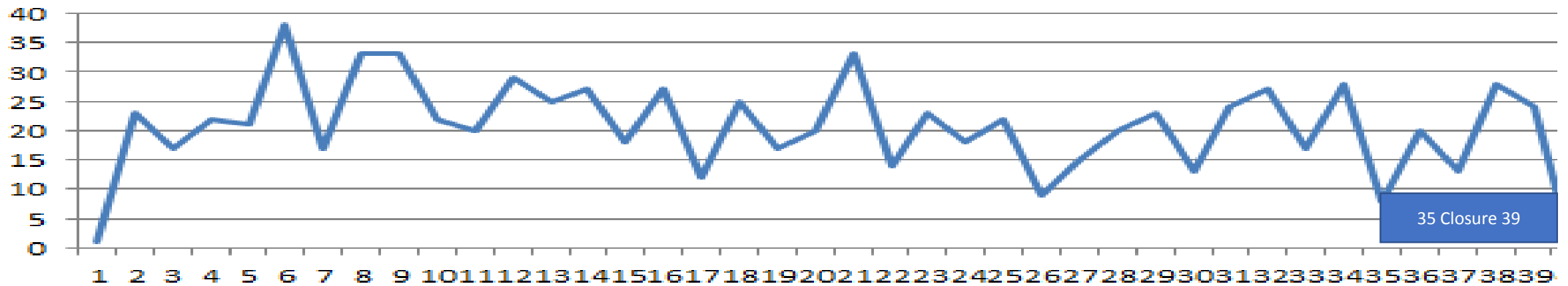
Group Exercise

Applying T-Tests to Lost Surgery Cases

Group Exercise

Applying T-Tests to Lost Surgery Cases

- Two Data Sets: “Before” and “During”
- See “analyze lost surgery.xlsx”
- How many surgeries were lost due to room closure?



Group Exercise

Applying T-Tests to Lost Surgery Cases – Result Using Excel

E	F	G	H	I	J	K
			t-Test: Two-Sample Assuming Unequal Variances			
	before	closed		<i>before</i>	<i>closed</i>	
23	8		Mean	22.1812	18.6	A
17	20		Variance	44.09091	65.8	
22	13		Observations	33	5	
21	28		Hypothesized Mean Diff	0		
38	24		df	5		
17			t Stat	0.940758		
33			P(T<=t) one-tail	0.195011		
33			t Critical one-tail	2.015048		
22			P(T<=t) two-tail	0.390021		B
20			t Critical two-tail	2.570582		
29						
25			Notes			
27			A The weekly average shows that volume dropped			
18			B if $p > .05$ cannot conclude that populations are different			
27						

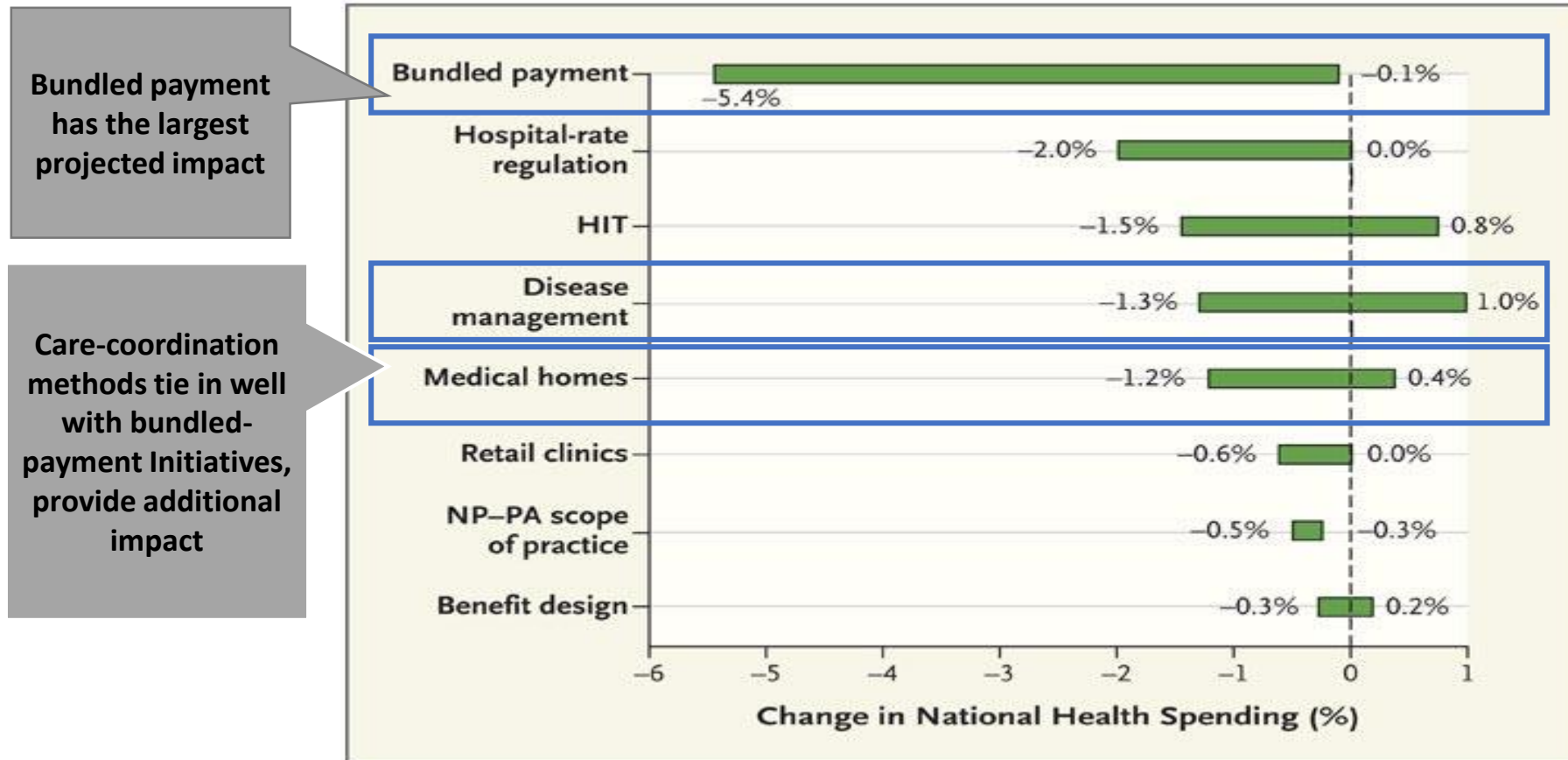
Conclusion?

Bundles – The Emerging Payment Paradigm

Bundles – The New Payment Paradigm

Payers see Best Chance to Bend the Cost Curve

Estimated Cumulative Percentage Changes in National Healthcare Expenditures:
2010 through 2019

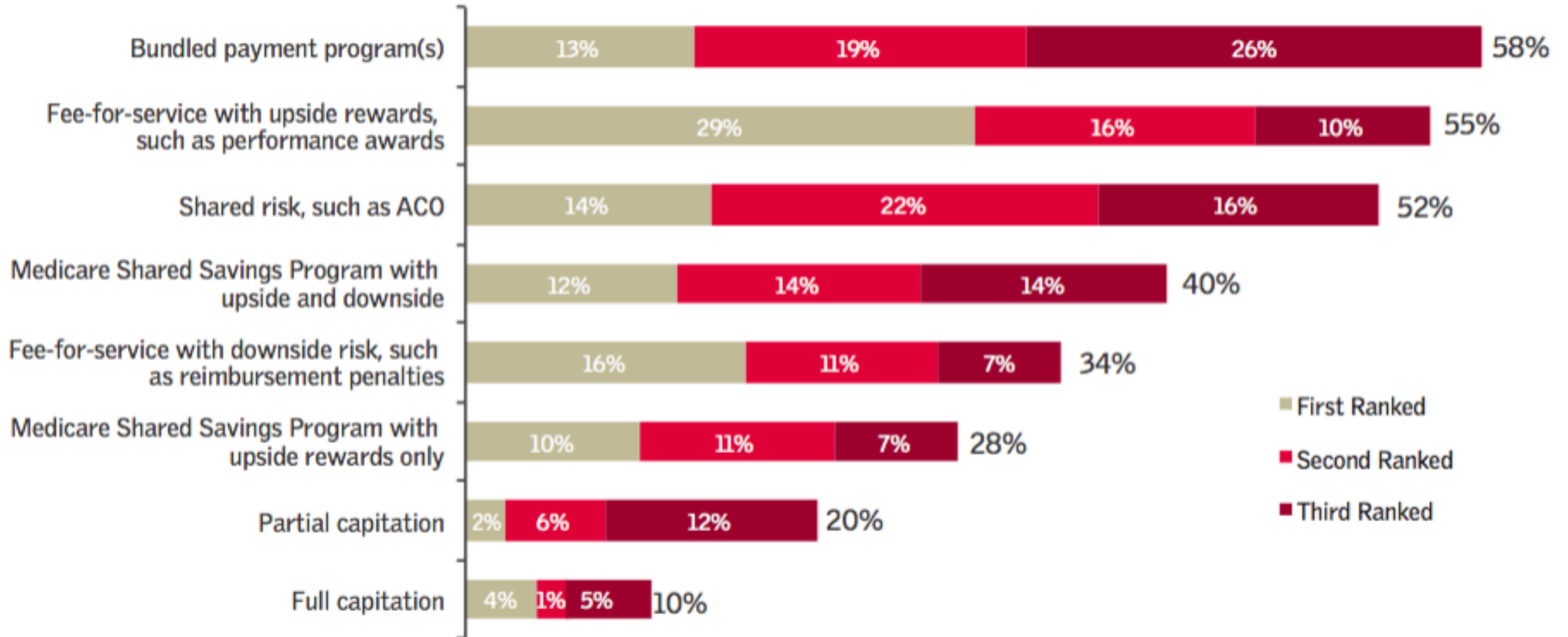


SOURCE: Hussey et al, New England Journal of Medicine, 2009; 361:2109-2111

Bundles – The New Payment Paradigm

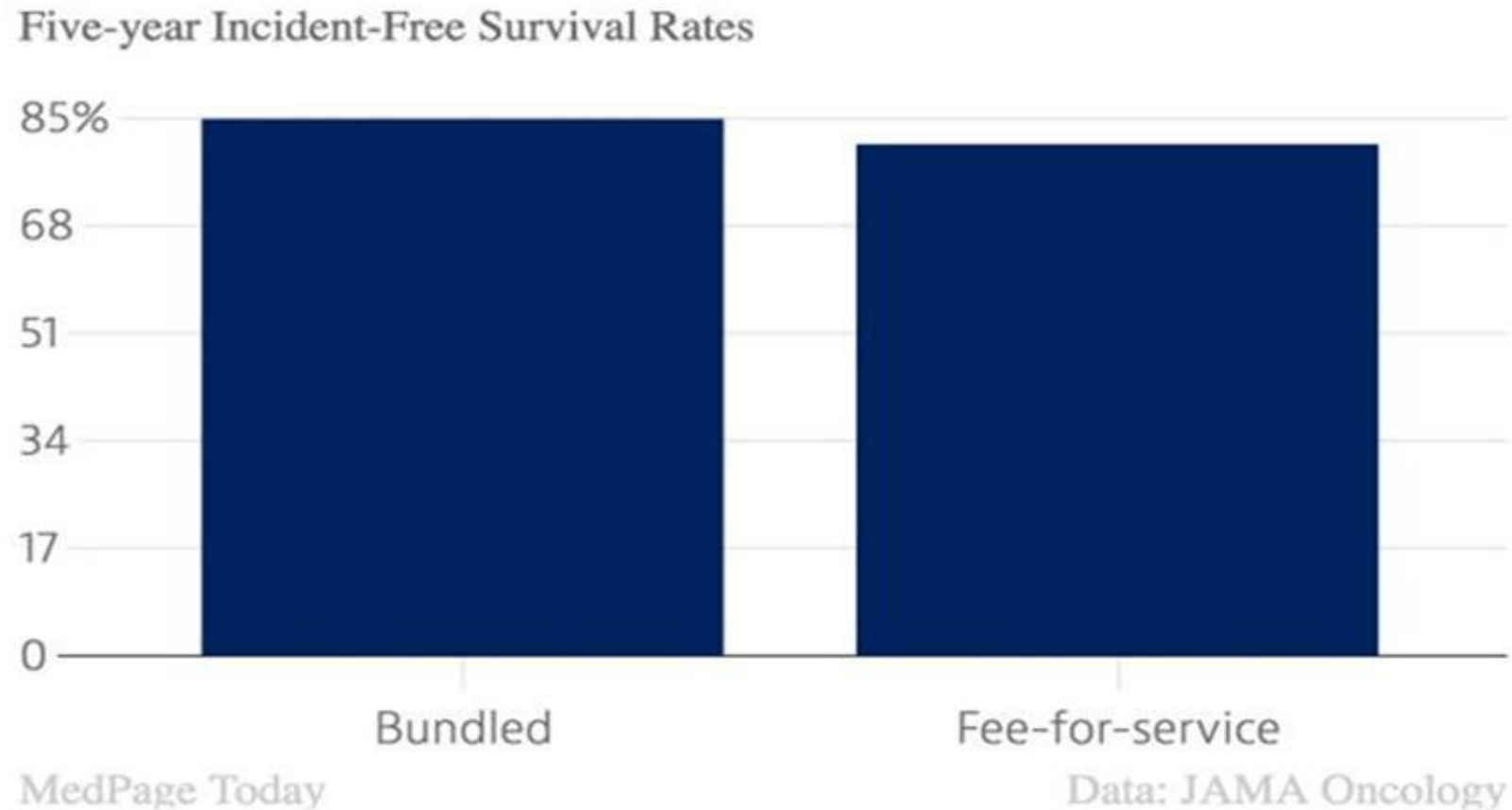
Provider Acceptance of Bundled Payments

127



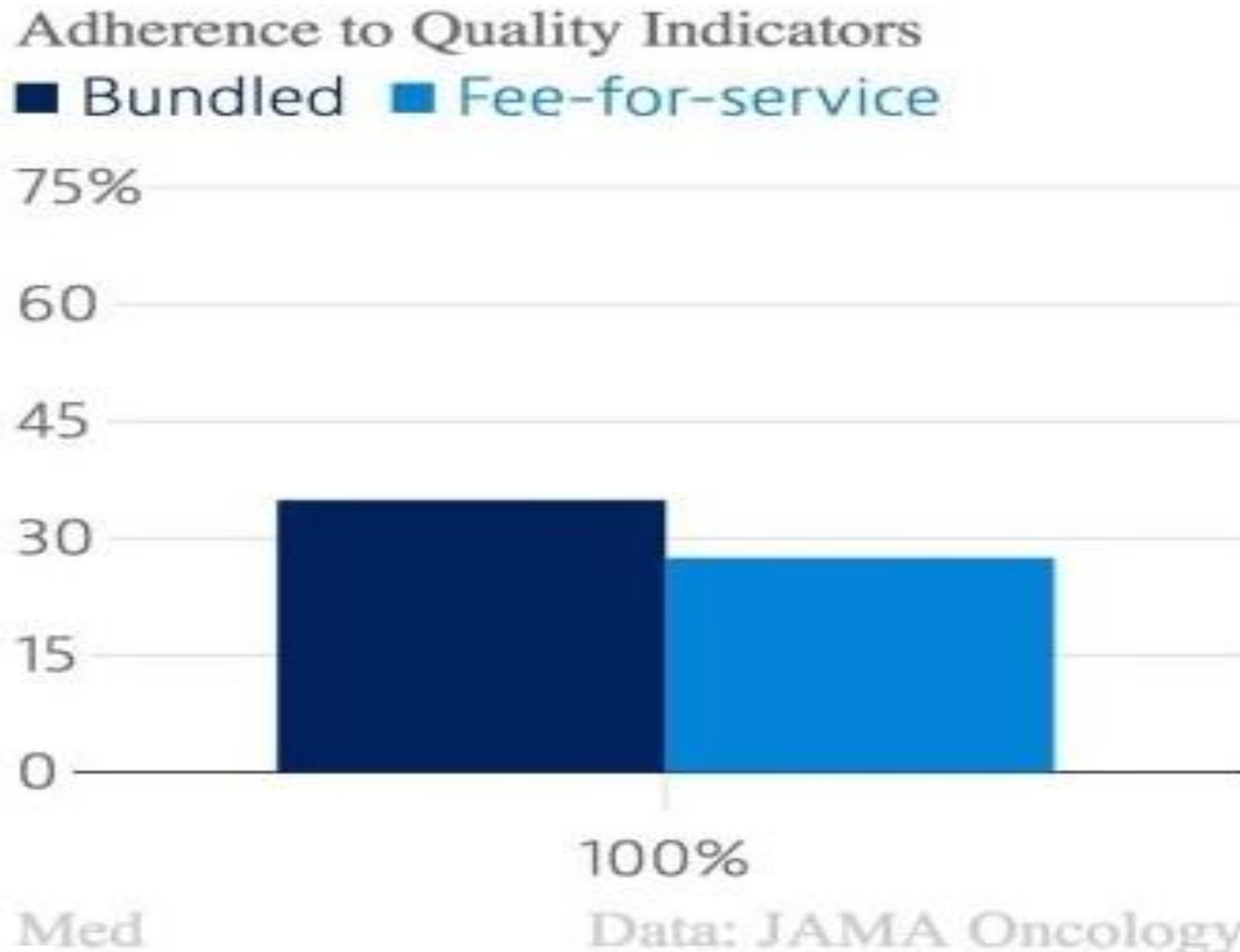
Bundles – The New Payment Paradigm Demonstrated Clinical Improvements

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Bundles – The New Payment Paradigm Demonstrated Clinical Improvements

129



Bundles – The New Payment Paradigm

Bundle Definitions – Six Factors Driving Success or Failure

1 Price Discount

Right-sizing pricing is critical to profitability and requires a solid understanding of costs including baseline, labor, physician, device, and supplies

2 Program Costs

Implementation and start-up costs often include staff to process claims, marketing outreach to physicians, outside counsel or consultants, and IT improvements

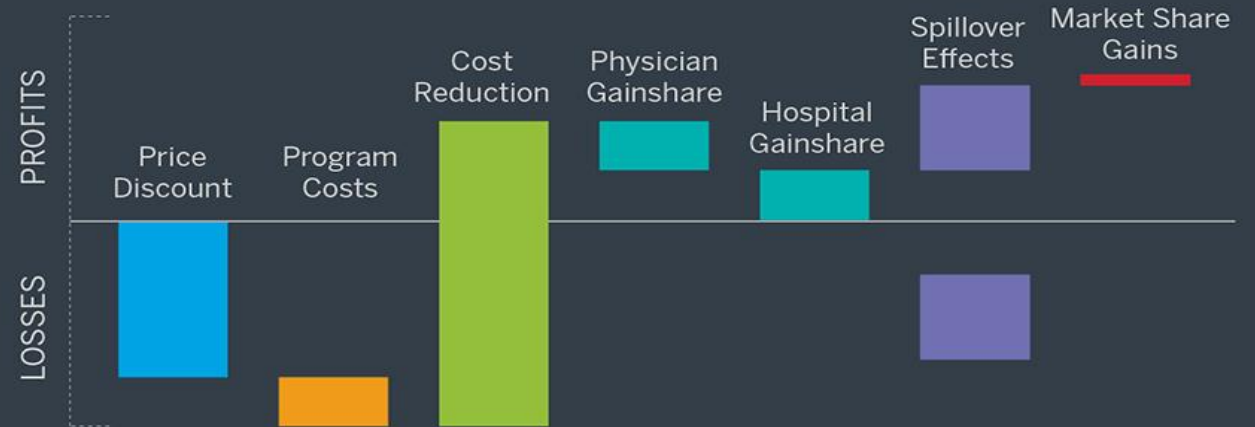
3 Cost Reduction

Implant and device costs account for the majority of savings. Depending on baseline practice, you may also expect reductions in LOS, consults, and supply costs

4 Gainsharing

Most hospitals split savings with specialists on a 50/50 basis

Key Factors Driving Bundled Payment Profitability



5 Spillover Effects

Cost savings for patients not directly covered by the bundled payment contract will be a net positive for patients reimbursed on a case rate basis and net negative for patients covered under percent-of-change contracts

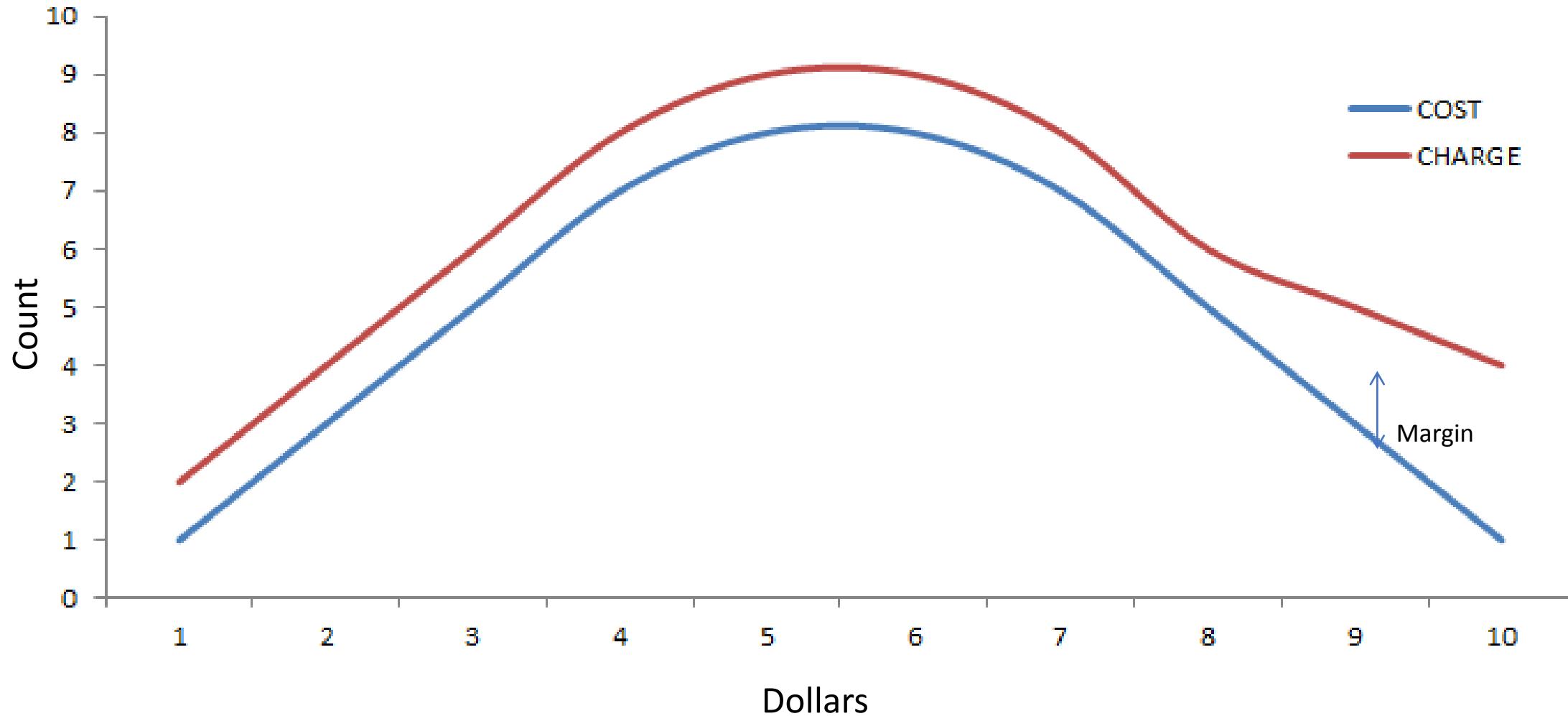
6 Market Share Gains

Some hospitals may see market share shifts, but we recommend that these scenarios be considered 'best case' and not included in profitability models

Bundles – The New Payment Paradigm

Price Discount as it Relates to Fee-For-Service

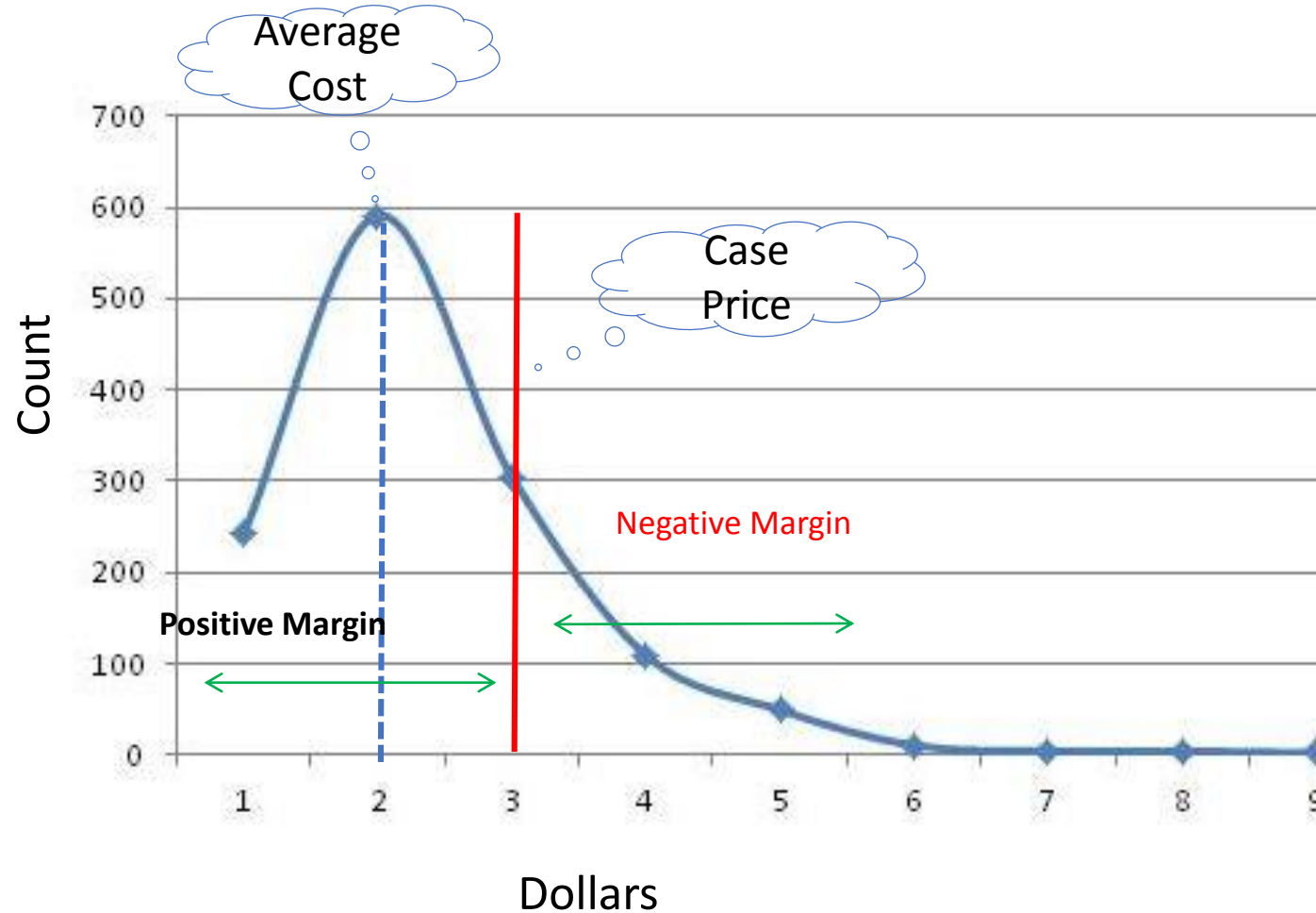
131



Bundles – The New Payment Paradigm

Ideal Price Discount as it Relates to Bundles

132



Case Rate	\$3,000
Case Cost	\$2,000
Margin	\$1,000

Avg Cost

Bundle Price

Desired attributes

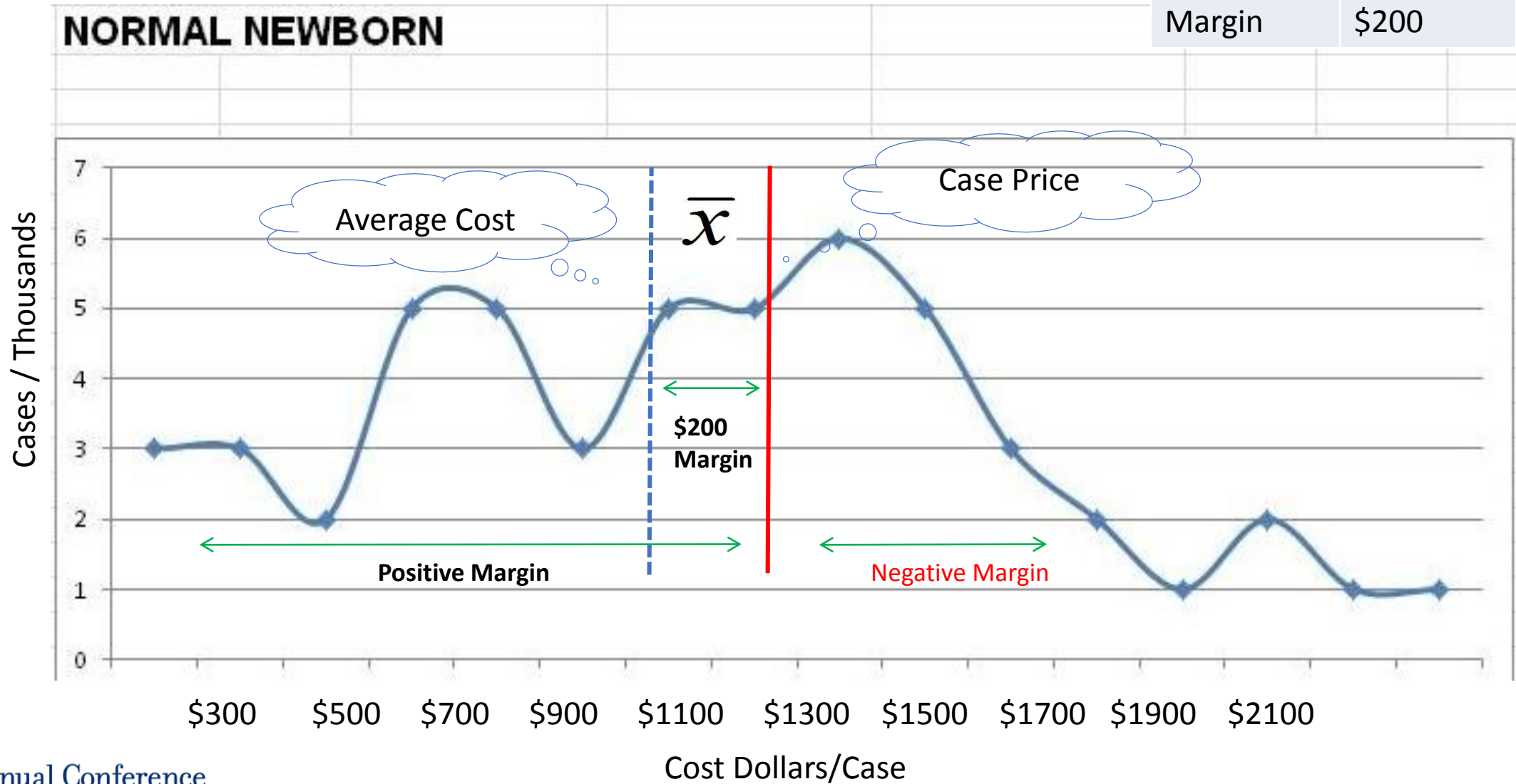
1. Narrow and tall
2. Symmetrical distribution around the mean

Bundles – The New Payment Paradigm

Realistic Price Discount as it Relates to Bundles

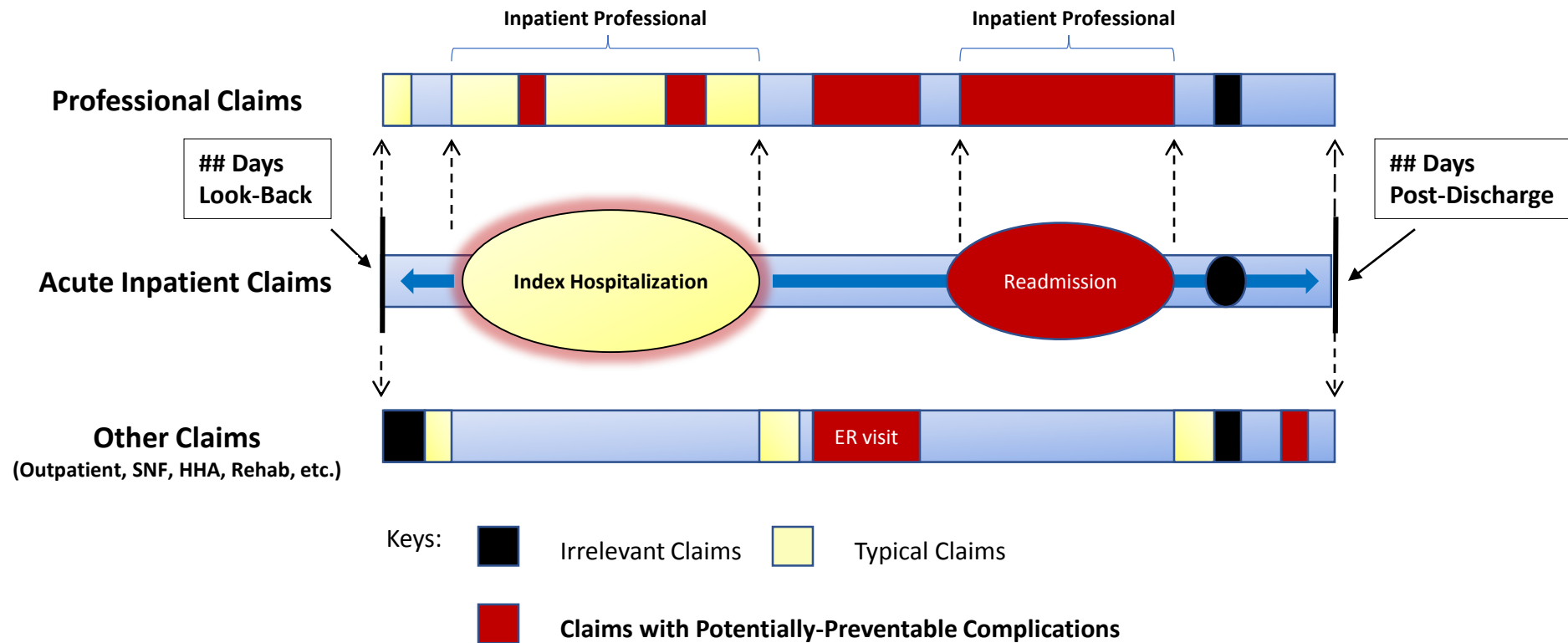
Case Rate	\$1,250
Case Cost	\$1,050
Margin	\$200

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Bundles – The New Payment Paradigm

Program Cost - Every Encounter Must Be Properly Captured and Processed

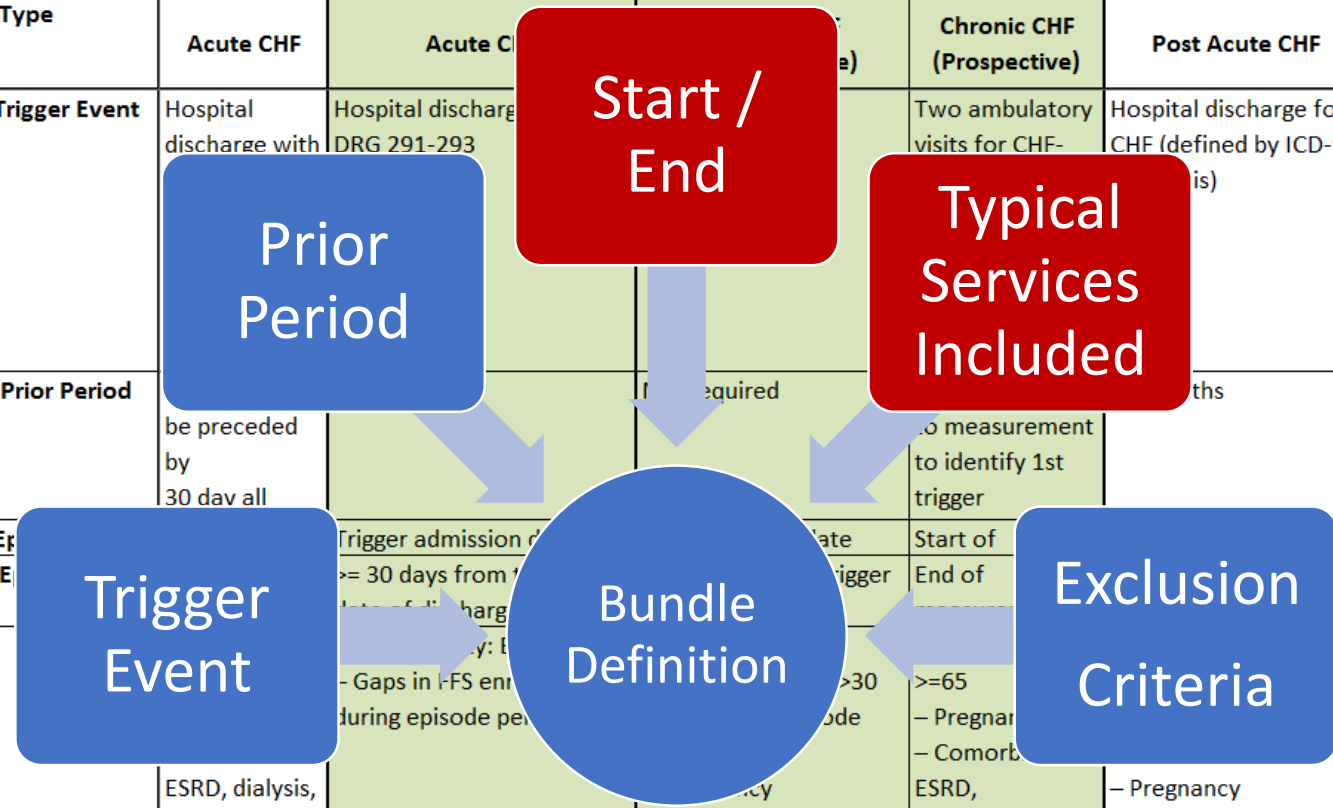


1. Episode trigger and relevant services are defined based on diagnosis codes, procedure codes, DRG codes, or a combination.
2. Typical services and complications are defined based on clinical guidelines.

Bundles – The New Payment Paradigm

Program Cost - Bundle Definitions Must Be Refined and Customized

		Arkansas Payment Improvement Initiative	CMMI Bundled Payment for Care Improvement (model 2)	Prometheus	American Board of Medical Specialties	
Episode Type		Acute CHF	Acute CHF	Chronic CHF (Prospective)	Post Acute CHF	Chronic CHF
Episode Definition	Trigger Event	Hospital discharge with DRG 291-293	Hospital discharge with DRG 291-293	Two ambulatory visits for CHF-	Hospital discharge for CHF (defined by ICD-9	Two ambulatory visits for CHF-related care with at least one visit > 1 month prior to the measurement year
	Prior Period	be preceded by 30 day all	be preceded by 30 day all	to measurement to identify 1st trigger	12 months	12 months
	Trigger Event	Trigger admission of	Trigger admission of	Start of	Start of	Start of
	Exclusion Criteria	ESRD, dialysis, LVAD, IABP,	ESRD, dialysis, LVAD, IABP,	ESRD, dialysis, organ	ESRD, dialysis, organ	ESRD, dialysis, organ

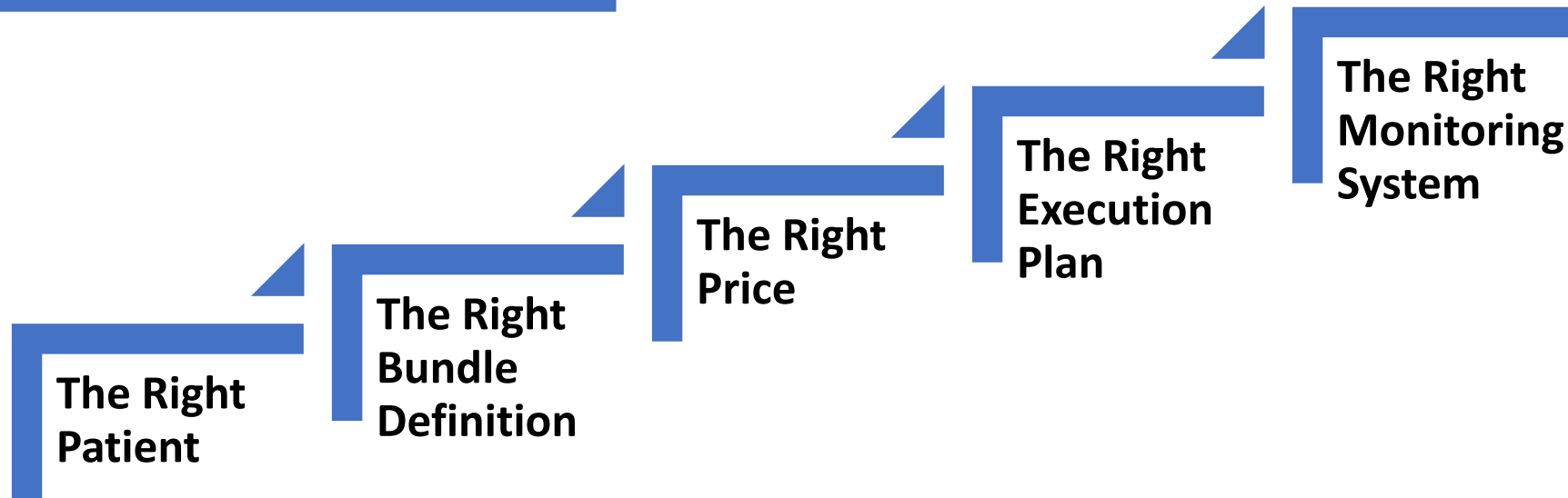


Bundles – The New Payment Paradigm

Program Costs – Key Success Imperatives

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KEY Success Imperatives

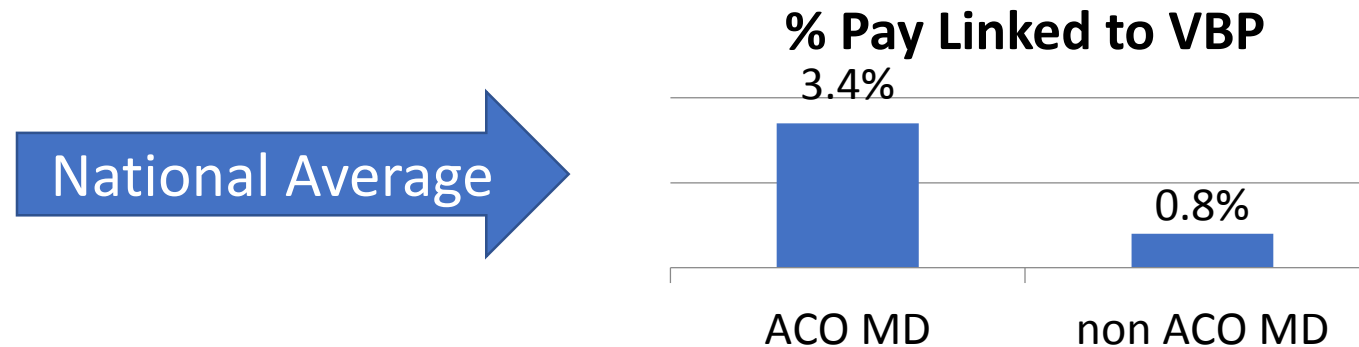


Bundles – The New Payment Paradigm

Gainsharing Strategy

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1. **Fair** – Allocates proportionately by contribution
2. **Measurable** – By mutually-accepted metrics
3. **Significant** – At some successful organizations, MDs' VBP payments range up to 20%, based on outcome metrics



Bundles – The New Payment Paradigm

Spillover Effects

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- The extent to which improved processes will affect cost and revenue for non-bundled patients
- Public-relations impacts of improved cost and quality outcomes

Bundles – The New Payment Paradigm

Market Risk / Utilization Risk

139

Don't expect volume growth unless you have a clear strategy

- Incentivize your product over competitors' products
- Consider a narrow-network option
- Advertise heavily
- Contemplate waiving deductibles or copays
- Strategize other viable strategies – do you have any?

Bundles – The New Payment Paradigm

Market/Utilization Risk in VBP Systems

140

Relative Contributions to Healthcare Spending of Utilization vs Price

- Components of healthcare cost growth over a four-year span
- Largely-FFS population
 - Utilization contribution 37% ← Payer's pop health strategy will impact
 - Price contribution 63% ← Bundle limits provider price inflation

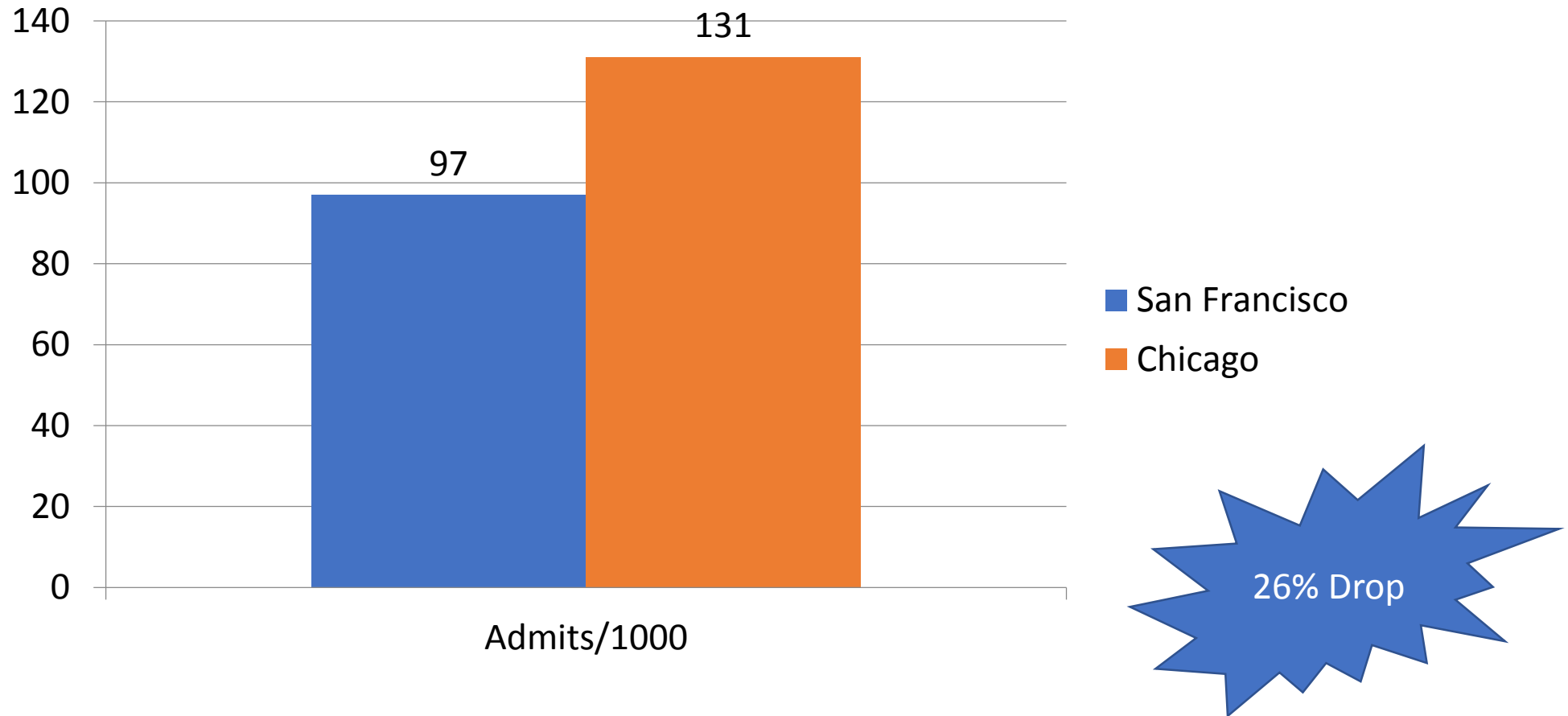
SOURCE: de Brantes, Francois, "Emerging Payment Models – State Employee Benefits Plan 2009-2012 HCI3 Data Analysis," HFMA ANI, 2012

- How much utilization growth was/is “medically necessary?”
- How much is driven by revenue expectations from providers?

Bundles – The New Payment Paradigm

Market/Utilization Risk – Impact of VBP on Admissions

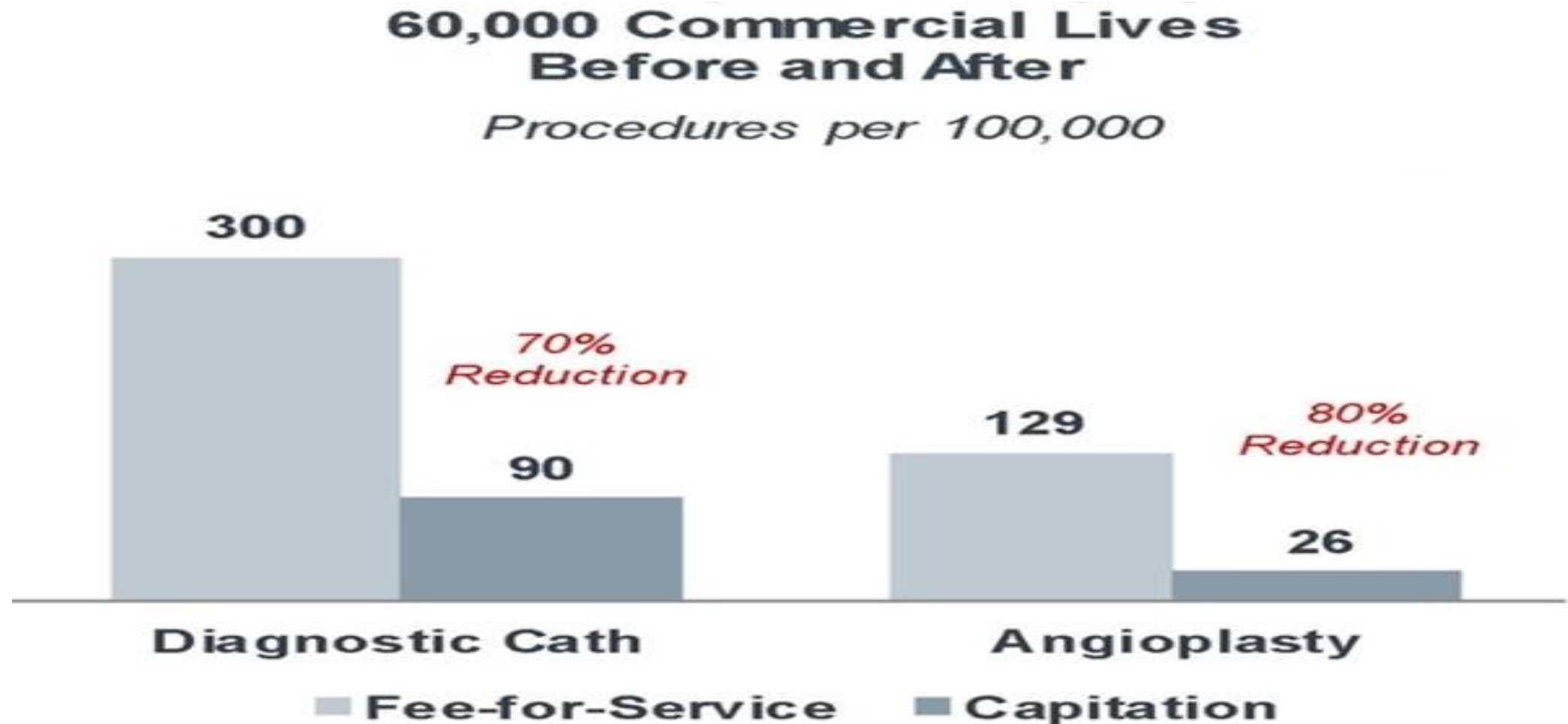
141



Bundles – The New Payment Paradigm

Market/Utilization Risk – Impact of VBP on Admissions

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Analyzing and Managing Variation in Bundles

Evaluating Histograms for Risk and Opportunity

Analyzing Variation in Bundles

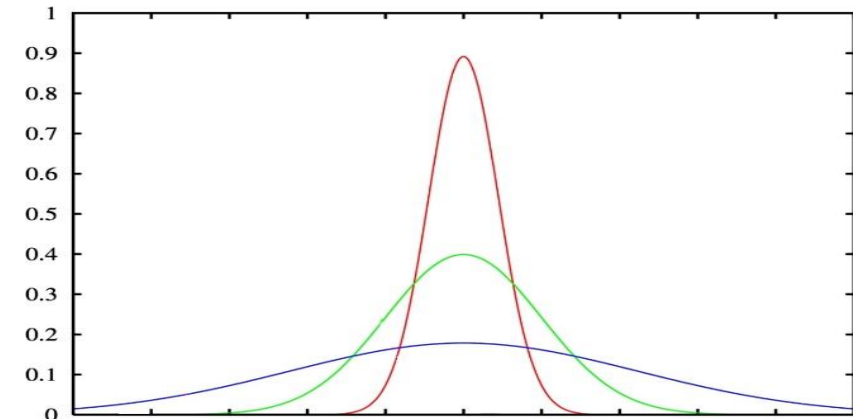
Examples of Healthcare Variation

	Supply Purchasing	Process Design	Clinical Compliance
<i>Appearance of cost or LOS* data</i>	 <ul style="list-style-type: none"> • Multiple nodes • Patients above mean form distinct cost groups 	 <ul style="list-style-type: none"> • Wide curve • Large proportion of patients above mean 	 <ul style="list-style-type: none"> • Long tail • Select patients extremely far above mean
<i>Root cause</i>	<ul style="list-style-type: none"> • Purchasing preferences of providers 	<ul style="list-style-type: none"> • Structural processes informing care decisions 	<ul style="list-style-type: none"> • Individual providers' clinical decisions
<i>Commonly affected service lines</i>	<ul style="list-style-type: none"> • Orthopedic surgery • Cardiac surgery • Neurological and spinal surgery 	<ul style="list-style-type: none"> • Cardiology • Women and infants • General medicine • Infectious disease 	<ul style="list-style-type: none"> • Musculoskeletal • Pulmonology • Neurology • Gastroenterology
<i>Example variation driver</i>	Knee replacement implants range from \$3,500 to \$11,000	Obstetrics department with multiple bottlenecks in triage and discharge	Gastroenterology patients receive multiple specialty consults
<i>Inflected metrics</i>	<ul style="list-style-type: none"> • Implant cost per case • Supply cost per case 	<ul style="list-style-type: none"> • Acute care, ED LOS • Efficiency, timeliness of care 	<ul style="list-style-type: none"> • Adverse events, readmissions • Procedure, service utilization

Analyzing Variation in Bundles

Case Study: Good Bundle Gone Bad

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Challenging the Design and Approach to Profitability

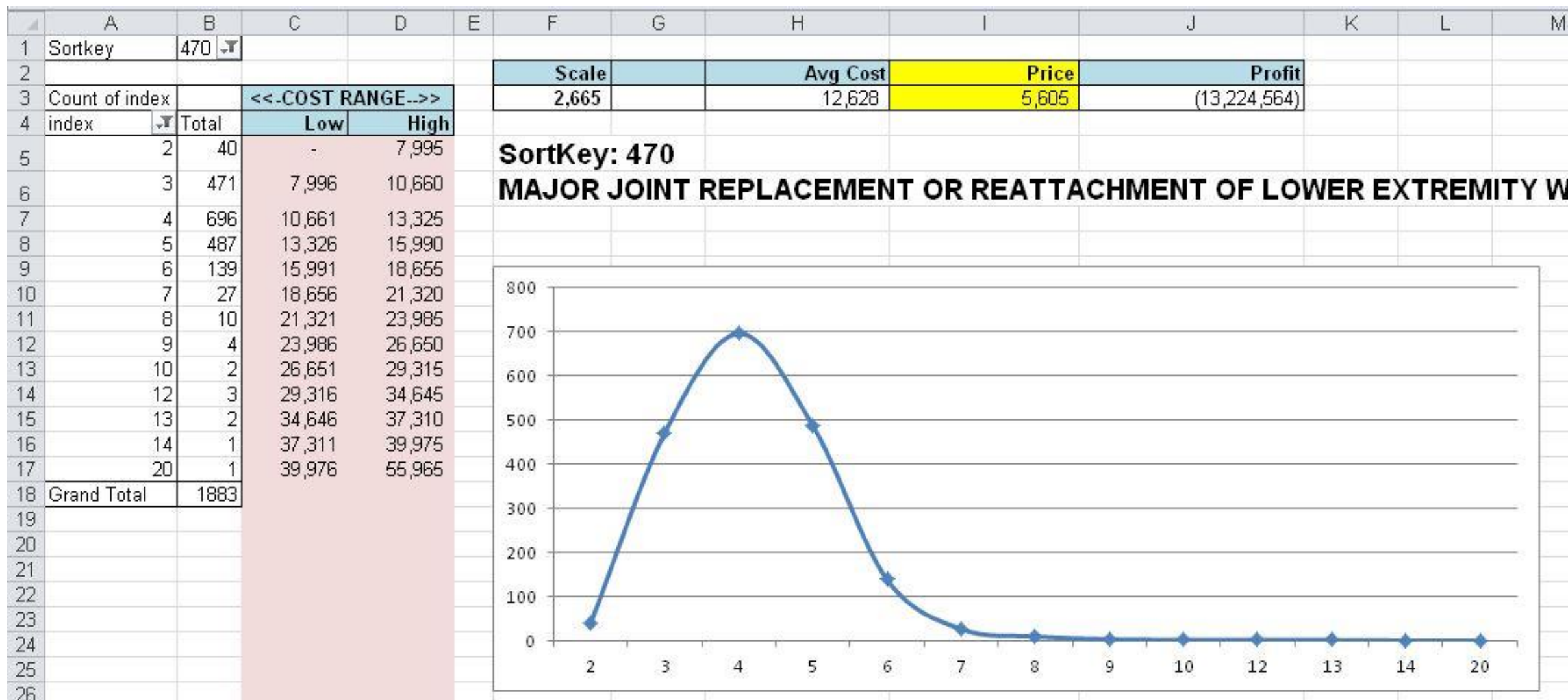
"You really challenged the way we were thinking about profitability of this contract. We were unable to see the variability and isolate the episodes with negative profits on our own."

*Chief Executive, Healthplan, Westfield Hospital**

Board Comment

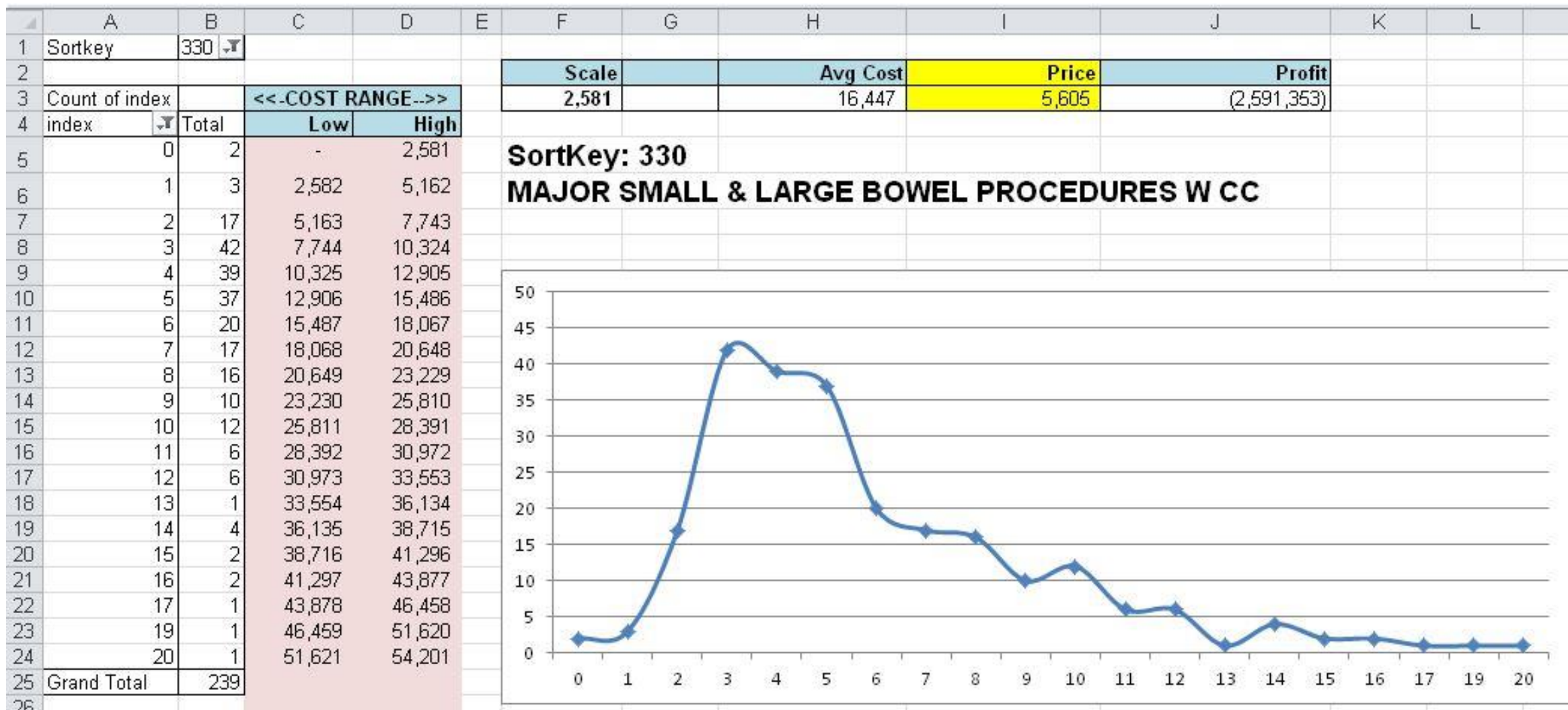
Analyzing Variation in Bundles

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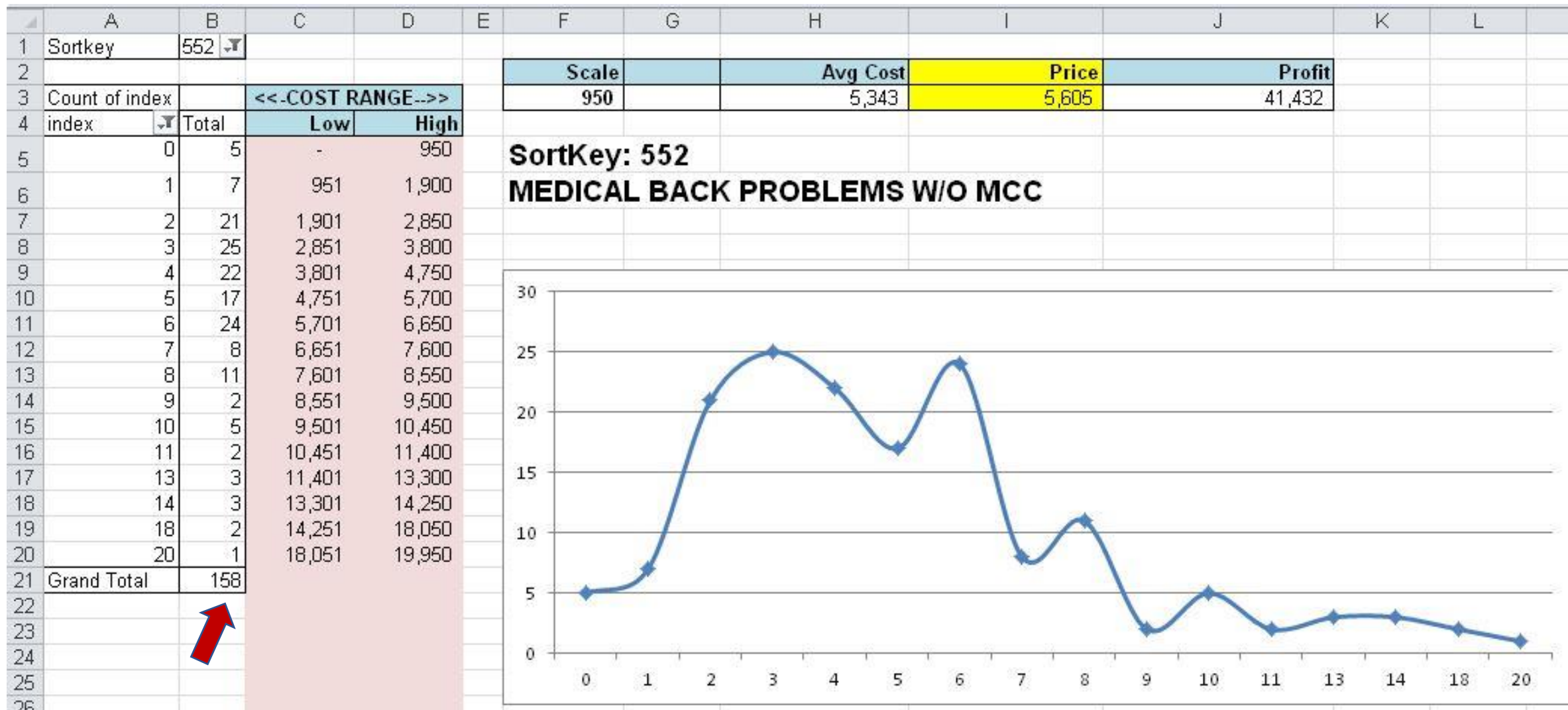
Analyzing Variation in Bundles

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Analyzing Variation in Bundles

148



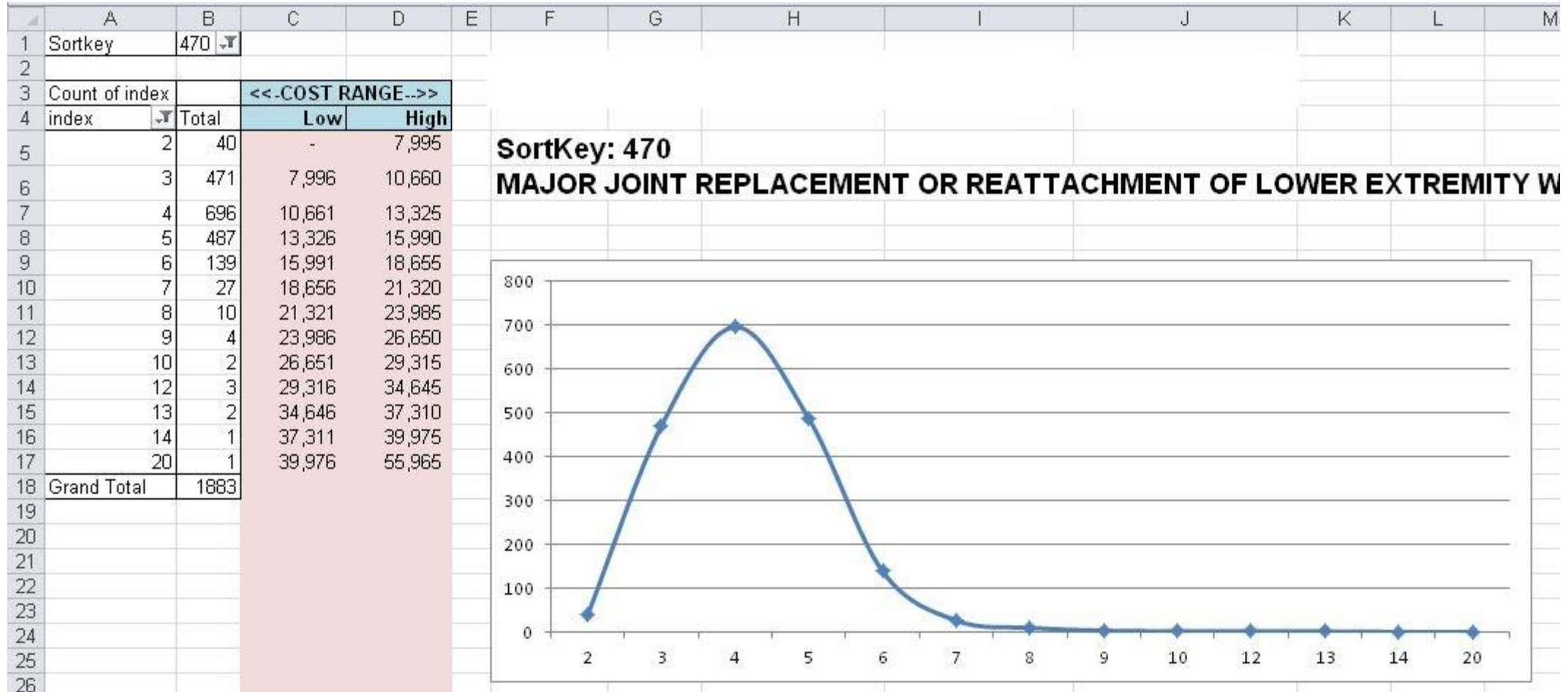
Group Exercise – Analyzing Variation in Bundles

At your table, pick and study one of the following the histograms:
DRG 470, 743, 460, 195 and 003 answer these questions:

- What are the risks in bundling this DRG? List 3
- Which present the greatest risk? Why?
- Which present the least risk? Why?
- Which present the greatest improvement opportunity? Why?
- Which present the least improvement opportunity? Why?
- What are some strategies to mitigate risk? List 3

Group Exercise

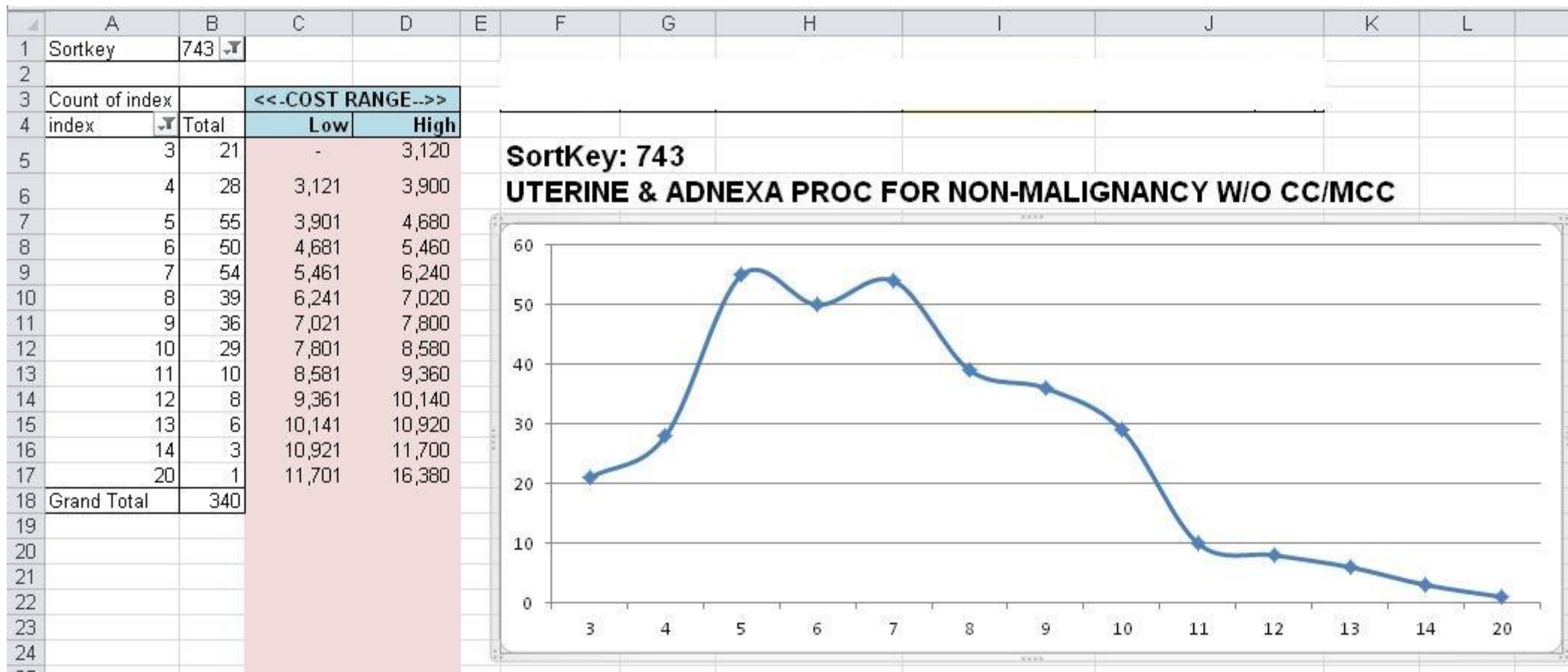
Analyzing Variation in Bundles



Group Exercise

Analyzing Variation in Bundles

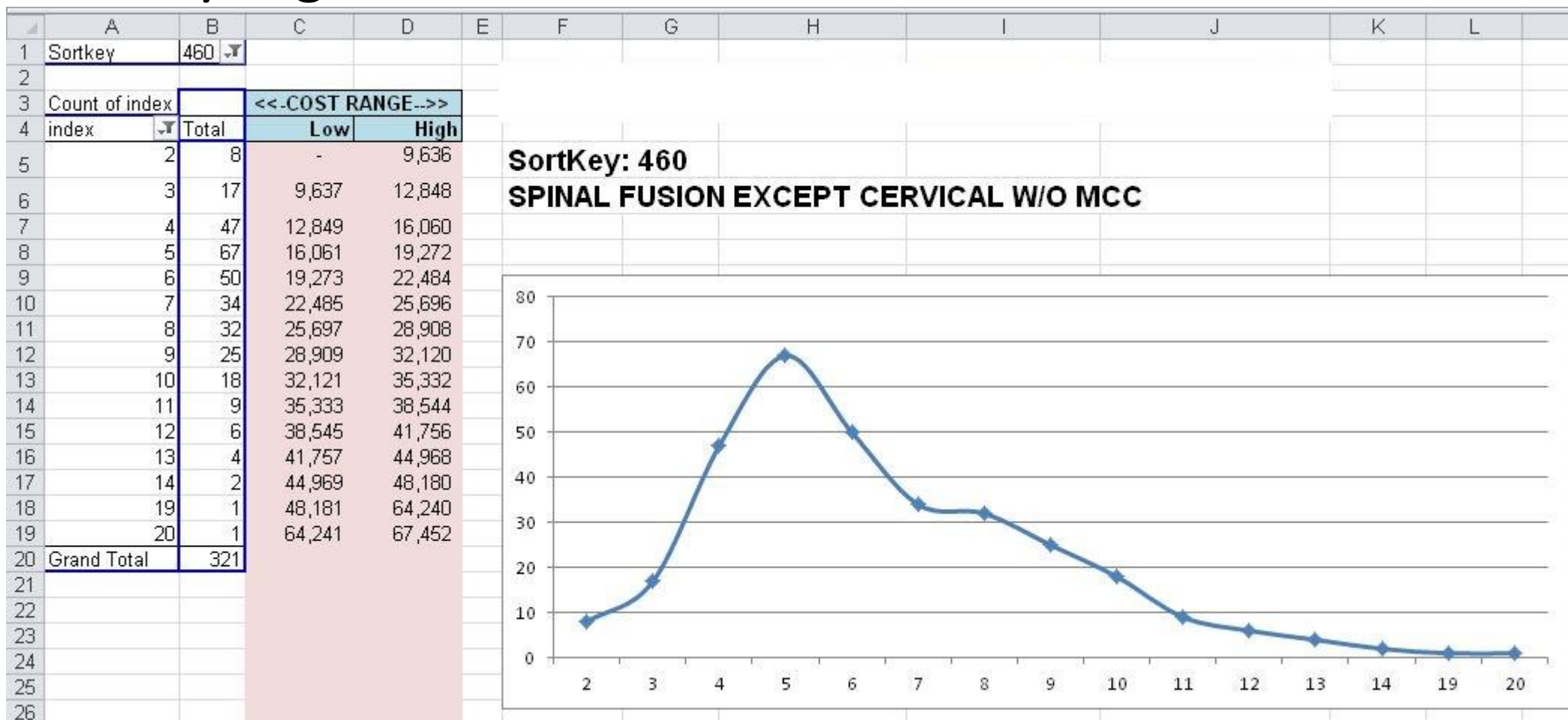
151



Group Exercise

Analyzing Variation in Bundles

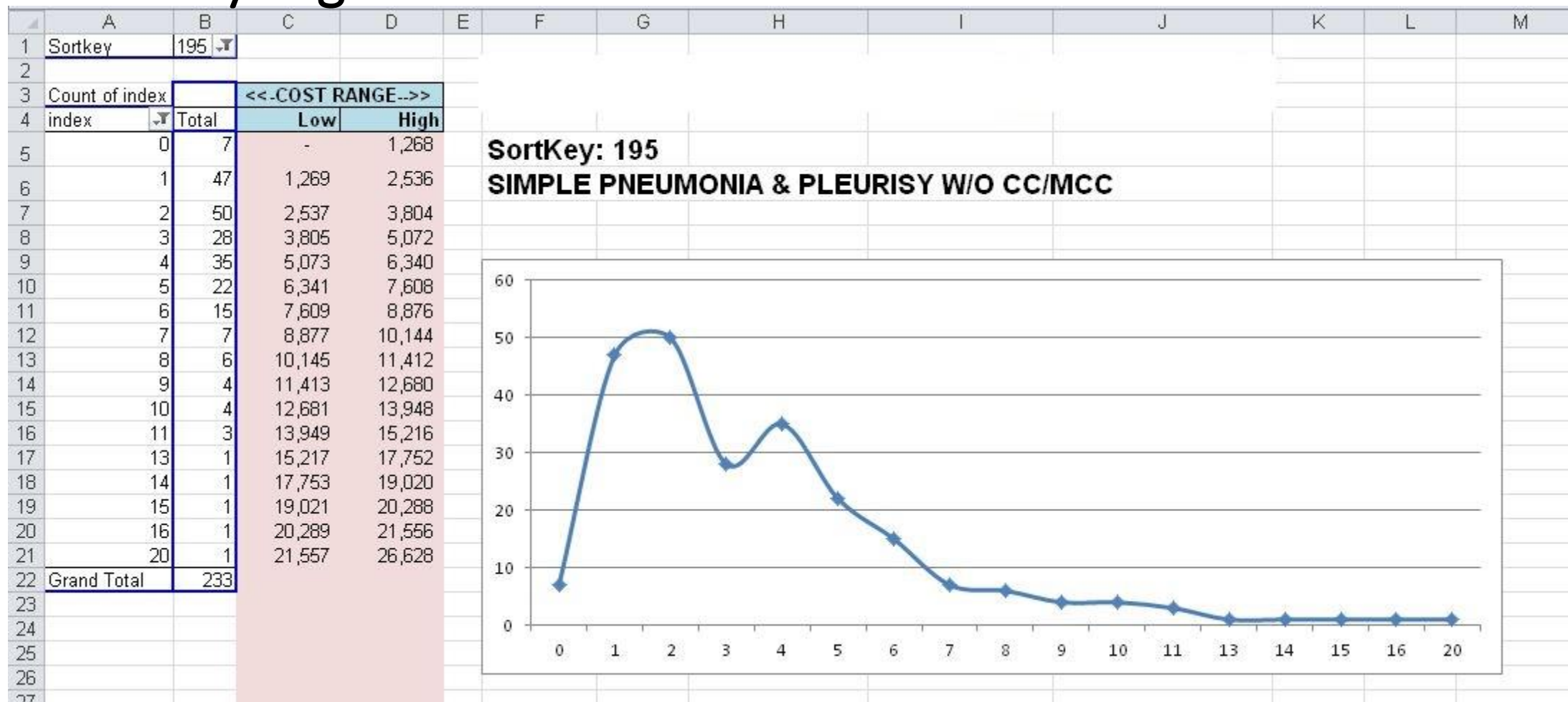
152



Group Exercise

Analyzing Variation in Bundles

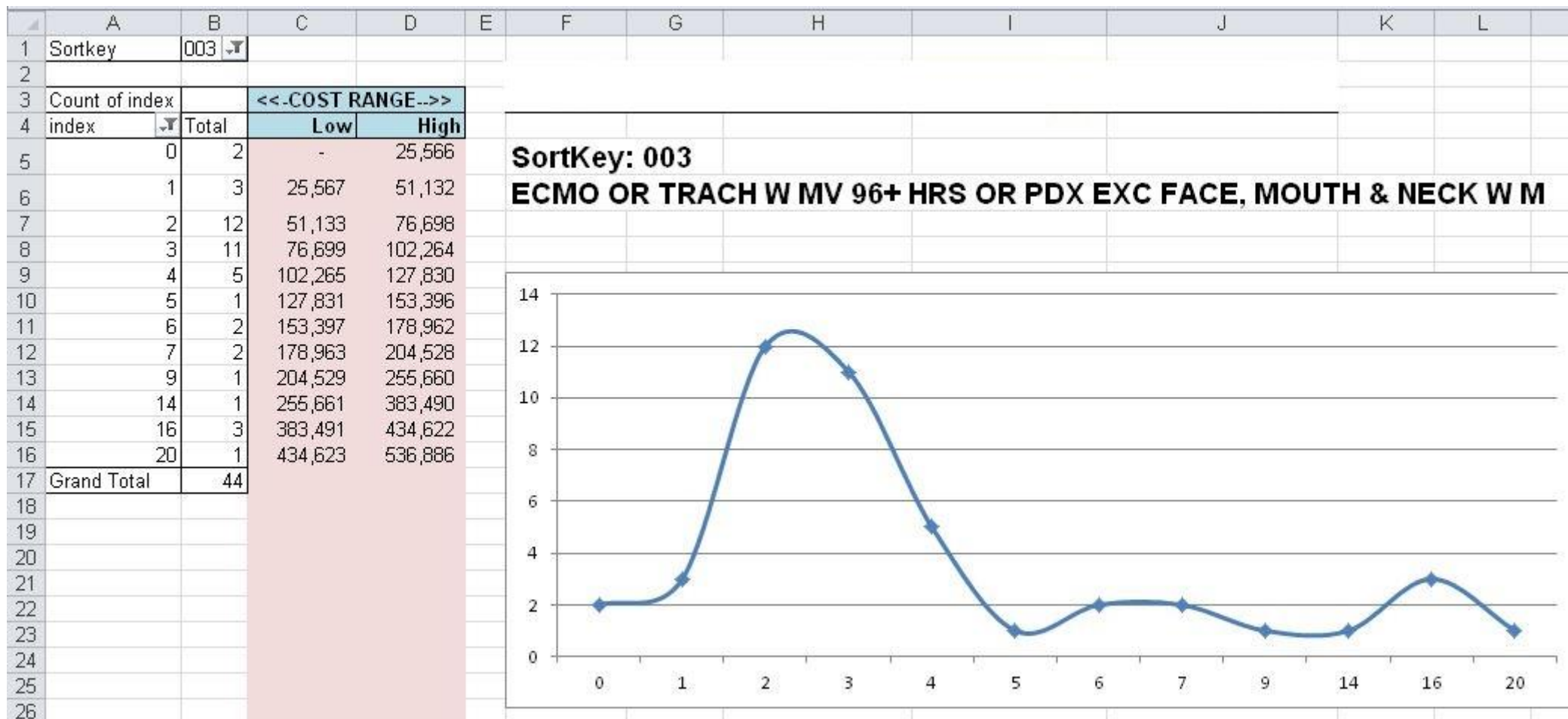
153



Group Exercise

Analyzing Variation in Bundles

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Demo – Analyzing Variation in Bundles

Drilling Down to Root Causes

Analyzing Variation in Bundles

Drilling Down to Root Causes

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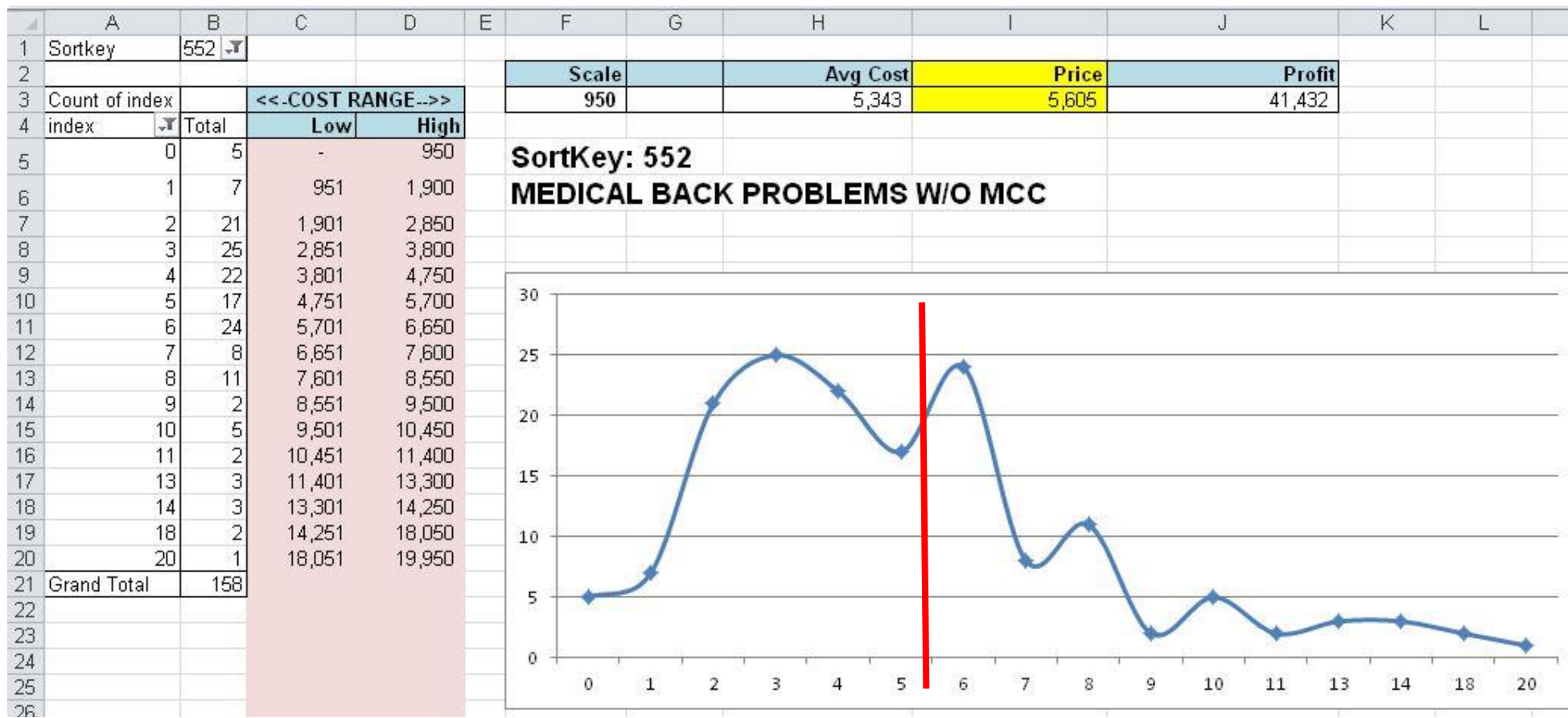
Possible
causes

Data Elements			
Sortkey			
SortDescriptor			
Discharge Date Fiscal Period			
FinClass			
Discharge Date Fiscal Period Name			
Discharge Date Fiscal Year			
Smoking Status			
BMI			
Sex			
Doctor			
Diabetes			
Age			
Race			
DRG (MS)			
DRG Description			
DRG Weight			
Charges			
Payment			
Cost			
Claim_Status			

Analyzing Variation in Bundles

Drilling Down to Root Causes

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Analyzing Variation in Bundles

Drilling Down to Root Causes – BMI

	A	B	C	D	K	L	M
1	Sortkey	552			Sortkey	552	
2							
3	Count of Cost				Count of Cost		
4	BMI	Total			BMI	Total	
5	19	103	65%		19	29	78%
6	21	16	10%		21	2	5%
7	25	14	9%		25	3	8%
8	31	25	16%		31	3	8%
9	Grand Total	158	100%		Grand Total	37	100%

Analyzing Variation in Bundles





Drilling Down to Root Causes – Diabetes

	A	B	C	D	K	L	M
1	Sortkey	552			Sortkey	552HiCost	
2							
3	Count of Cost				Count of Cost		
4	Diabetes	Total			Diabetes	Total	
5	No	153	97%		No	36	97%
6	Yes	5	3%		Yes	1	3%
7	Grand Total	158	100%		Grand Total	37	100%

Analyzing Variation in Bundles

Drilling Down to Root Causes – Smoking Status

160

	A	B	C	D	K	L	M
1	Sortkey	552 			Sortkey	552HI 	
2							
3	Count of Cost				Count of Cost		
4	Smoking Status 	Total			Smoking Status 	Total	
5	H	19	12%		H	2	5%
6	L	10	6%		L	3	8%
7	M	5	3%		M	2	5%
8	N	124	78%		N	30	81%
9	Grand Total	158	100%		Grand Total	37	100%

Analyzing Variation in Bundles

Drilling Down to Root Causes – Treating Physician

161

	A	B	C	D	K	L	M
1	Sortkey	552			Sortkey	552HiCost	
2							
3	Count of Cost				Count of Cost		
4	Doctor	Total			Doctor	Total	
5	1	16	10%		1	3	8%
6	2	15	9%		2	1	3%
7	3	11	7%		3	1	3%
8	4	9	6%		5	2	5%
9	5	11	7%		6	2	5%
10	6	10	6%		7	4	11%
11	7	13	8%		8	5	14%
12	8	11	7%		9	2	5%
13	9	11	7%		10	4	11%
14	10	16	10%		11	1	3%
15	11	6	4%		12	3	8%
16	12	6	4%		13	6	16%
17	13	14	9%		14	3	8%
18	14	9	6%		Grand Total	37	
19	Grand Total	158					
20							

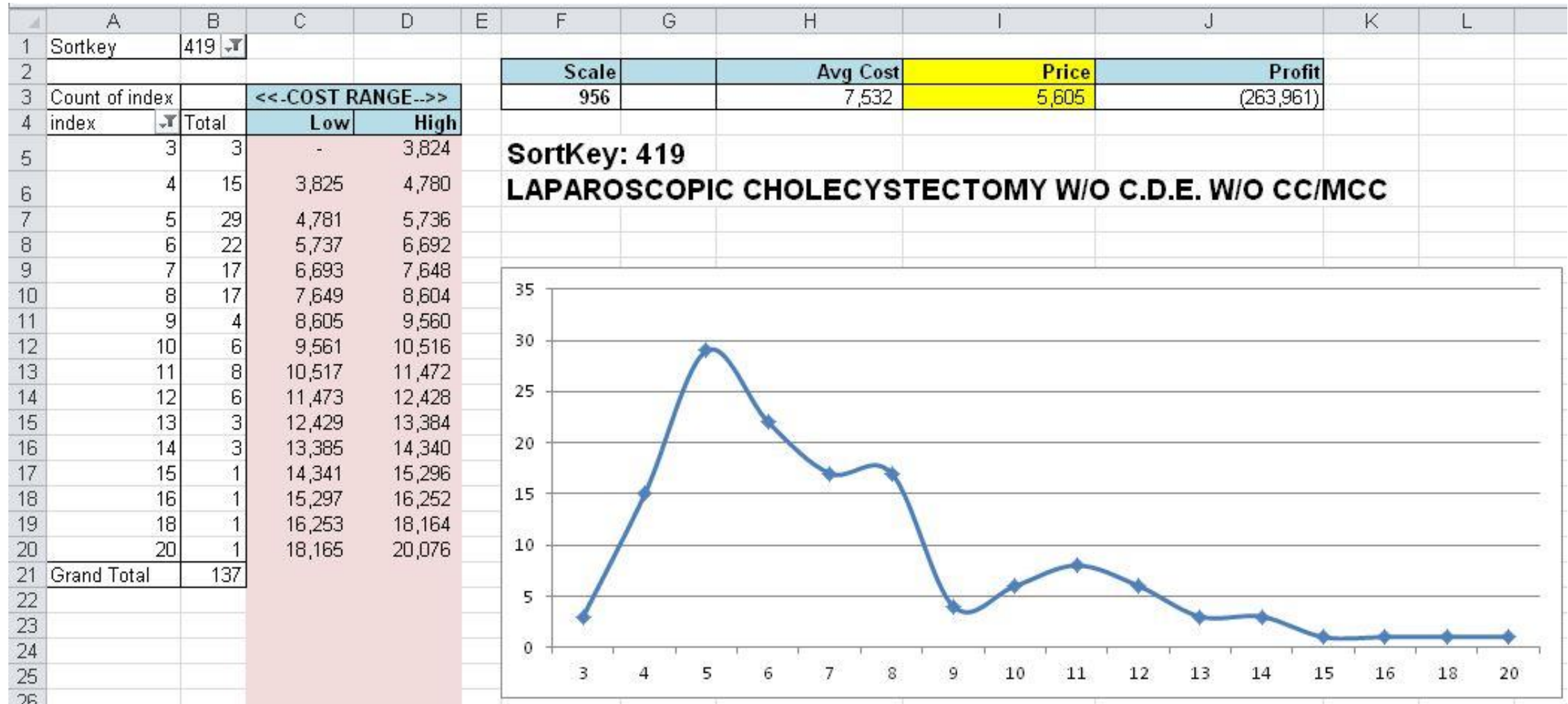
Group Exercise: Drilling into DRG 419

Activity: Analyze DRG 419 – Can you find patient attributes responsible for the cost outliers?

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes in DRG 419

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Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes in DRG 419

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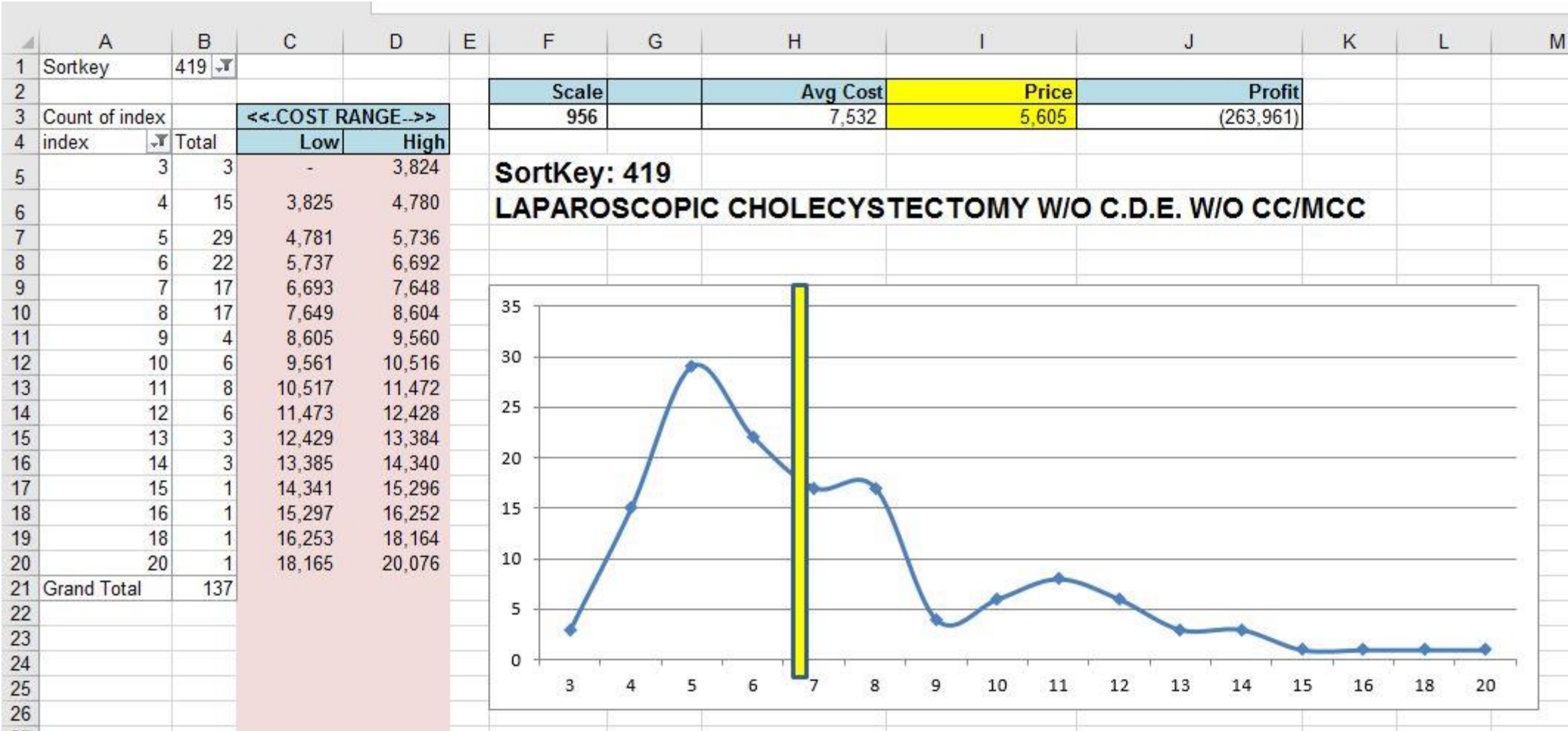


Possible
Causes?

Data Elements			
Sortkey			
SortDescriptor			
Discharge Date	Fiscal Period		
FinClass			
Discharge Date	Fiscal Period	Name	
Discharge Date	Fiscal Year		
Smoking Status			
BMI			
Sex			
Doctor			
Diabetes			
Age			
Race			
DRG (MS)			
DRG Description			
DRG Weight			
Charges			
Payment			
Cost			
Claim_Status			

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Isolate Population to be Compared



Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Body Mass Index

166

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	BMI	Total			BMI	Total	
5	19	49	71%		19	50	74%
6	21	6	9%		21	3	4%
7	25	1	1%		25	2	3%
8	31	13	19%		31	13	19%
9	Grand Total	69	100%		Grand Total	68	100%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Diabetes

167

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	Diabetes	Total			Diabetes	Total	
5	No	65	94%		No	59	87%
6	Yes	4	6%		Yes	9	13%
7	Grand Total	69	100%		Grand Total	68	100%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Financial Class

168

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	FinClass	Total			FinClass	Total	
5	BCB	25	36%		BCB	17	25%
6	CHA	3	4%		COV	7	10%
7	COM	1	1%		MCD	7	10%
8	COV	4	6%		MCR	25	37%
9	MAN	1	1%		MID	7	10%
10	MCD	6	9%		SEL	3	4%
11	MCR	14	20%		UHC	2	3%
12	MID	9	13%		Grand Total	68	100%
13	SEL	4	6%				0%
14	UHC	2	3%				0%
15	Grand Total	69	100%				0%
16			0%				0%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Race

169

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	Race	Total			Race	Total	
5	Black	16	23%		Black	19	28%
6	Native	17	25%		Native	21	31%
7	White	36	52%		White	28	41%
8	Grand Total	69	100%		Grand Total	68	100%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Gender

170

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	Sex	Total			Sex	Total	
5	F	46	67%		F	44	65%
6	M	23	33%		M	24	35%
7	Grand Total	69	100%		Grand Total	68	100%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Smoking Status

171

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	Smoking Status ▼	Total			Smoking Status ▼	Total	
5	H	14	20%		H	11	16%
6	L	7	10%		L	5	7%
7	M	1	1%		M	2	3%
8	N	47	68%		N	50	74%
9	Grand Total	69	100%		Grand Total	68	100%

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – Physician

172

	A	B	C	D	K	L	M
1	Sortkey	419			Sortkey	419HI	
2							
3	Count of Cost				Count of Cost		
4	Doctor	Total			Doctor	Total	
5	1	3	4%		1	8	12%
6	2	6	9%		2	7	10%
7	3	4	6%		3	3	4%
8	4	10	14%		4	6	9%
9	5	5	7%		5	6	9%
10	6	6	9%		6	8	12%
11	7	3	4%		7	3	4%
12	8	3	4%		8	5	7%
13	10	10	14%		9	3	4%
14	11	5	7%		10	2	3%
15	12	5	7%		11	3	4%
16	13	5	7%		12	2	3%
17	14	4	6%		13	7	10%
18	Grand Total	69	100%		14	5	7%
19					Grand Total	68	

Group Exercise – Analyzing Variation in Bundles

Drilling Down to Root Causes – And... the Conclusion Is?

173

- BMI?
- Diabetes?
- Financial Class?
- Race?
- Gender?
- Smoking Status?
- Physician?

Transitioning to Fee for Value Can You Model Change?

Transitioning to Fee for Value Financial-Assessment Models

An assessment aimed at gauging the true impact of VBP models should include separate analyses of

- Direct contract results
- Impact of volume changes on net income
- Impact of operational and clinical improvements
- Net income at risk from competitor actions
- Other strategic benefits

The following financial analysis is based on pro-forma results for four different hypothetical contracts

- | | |
|-----------------------------|--------------------|
| • Medicare ACO | 10,000 lives |
| • Commercial ACO | 20,000 lives |
| • Medicare bundled payments | 275 expected cases |
| • Commercial narrow network | 10,000 lives |

Transitioning to Fee for Value Financial-Assessment Models

176

ESTIMATED DIRECT CONTRACT RESULTS					
	Medicare ACO	Commercial ACO	Medicare Bundled Payments	Commercial Narrow Network	Total
Units	Lives	Lives	Episodes	Lives	
Annual Volume	10,000 Lives	20,000 Lives	275 Episodes	10,000 Lives	
Average Payer Spend per Unit	\$9,000/Member	\$3,200/Member	\$40,000/Episode	\$3,200/Member	
Annual Payer Spend	\$90,000,000	\$64,000,000	\$11,000,000	\$32,000,000	\$197,000,000
Estimated Incentive (as a % of payer spend)	2%	1%	2%	0%	
Estimated Incentive from Payer	\$1,800,000	\$640,000	\$220,000	\$0	\$2,660,000
Contract Administration Costs	-\$1,500,000	-\$400,000	-\$100,000	-\$50,000	-\$2,050,000
Impact of Discounts	\$0	\$0	-\$220,000	-\$800,000	-\$1,020,000
Incentives Payments to Others (e.g., physicians)	-\$150,000	-\$120,000	-\$60,000	\$0	-\$330,000
Direct Contract Results for Health System	\$150,000	\$120,000	-\$160,000	-\$850,000	-\$740,000

- The four contracts would reduce net income by \$740K on ~\$200M of payer spend
- \$200M of payer spend does not represent \$200M of health system revenue, as payers are spending some of these funds on other types of providers
- In many cases, the direct result of the contract may be neutral or negative
- That does not mean the overall impact of the contract will be negative, particularly when competitor actions are considered

Transitioning to Fee for Value Market Share and Operational Improvement Models

177

MARKET SHARE AND UTILIZATION IMPACT					
	Medicare ACO	Commercial ACO	Medicare Bundled Payments	Commercial Narrow Network	Total
Change in Revenue from Utilization	-\$2,700,000	-\$2,369,000	-\$198,000	\$0	-\$5,267,000
Change in Revenue from Market Share	\$1,800,000	\$1,280,000	\$220,000	\$960,000	\$4,260,000
Impact of Volume Changes on Revenue	-\$900,000	-\$1,089,000	\$22,000	\$960,000	-\$1,007,000
Variable Cost Savings	\$360,000	\$436,000	-\$9,000	-\$384,000	\$403,000
Impact of Volume Changes on Net Income	-\$540,000	-\$653,000	\$13,000	\$576,000	-\$604,000

IMPACT OF OPERATIONAL IMPROVEMENTS					
	Medicare ACO	Commercial ACO	Medicare Bundled Payments	Commercial Narrow Network	Total
Operational Cost Savings	\$480,000	\$200,000	\$180,000	\$0	\$860,000
Impact on Medicare Value-Based Purchasing	\$80,000	\$20,000	\$28,000	\$0	\$128,000
Impact on Medicare Readmissions Penalties	\$40,000	\$10,000	\$6,000	\$0	\$56,000
Total Impact of Operational Improvements	\$600,000	\$230,000	\$214,000	\$0	\$1,044,000

Transitioning to Fee for Value

Revenue Risk and Summary Assessment Models

178

REVENUE AT RISK FROM COMPETITOR ACTIONS					
	Medicare ACO	Commercial ACO	Medicare Bundled Payments	Commercial Narrow Network	Total
From Competitor Utilization Reduction Strategies	\$540,000	\$384,000	\$72,000	\$0	\$996,000
From Competitor Market Share Strategies	\$900,000	\$640,000	\$110,000	\$688,000	\$2,338,000
Total Revenue at Risk	\$1,440,000	\$1,024,000	\$182,000	\$688,000	\$3,334,000
Variable Cost Savings	-\$576,000	-\$410,000	-\$73,000	-\$275,000	-\$1,334,000
Net Income at Risk from Competitor Actions	\$864,000	\$614,000	\$109,000	\$413,000	\$2,000,000

Transitioning to Fee for Value

Summary Financial-Impact Assessment

179

SUMMARY: COMBINED IMPACT					
	Medicare ACO	Commercial ACO	Medicare Bundled Payments	Commercial Narrow Network	Total
Direct Contract Results for Health System	\$150,000	\$120,000	–\$160,000	–\$850,000	–\$740,000
Impact of Volume Changes on Net Income	–\$540,000	–\$653,000	\$13,000	\$576,000	–\$604,000
Total Impact of Operational Improvements	\$600,000	\$230,000	\$214,000	\$0	\$1,044,000
Combined Net Impact on Health System Bottom Line	\$210,000	–\$303,000	\$67,000	–\$274,000	–\$300,000
Net Income at Risk from Competitor Actions	\$864,000	\$614,000	\$109,000	\$413,000	\$2,000,000
Net Impact Compared with Risk from Competitor Actions	\$1,074,000	\$311,000	\$176,000	\$139,000	\$1,700,000

- The result of these new models is a loss of \$300,000. If a loss is expected, why do it?
- The response should consider another question: “Compared with what other strategy?”
- When status quos used for comparison, pursuing the new models doesn’t look preferable
- But the future is likely to upset the status quo, and it is important to factor into the analysis the very real likelihood of competitor activity
- This threatens market-share and utilization losses – yet offers the potential for a \$2 million positive impact (a/k/a protection) – from countering this activity

The Way Forward Where Do We Go From Here?

The Way Forward The River Moved!

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The Way Forward

My Water's Gone!

182



Live Content Slide

When playing as a slideshow, this slide will display live content

Poll: As a result of attending this seminar, I will

Questions?



Program Evaluation

Your comments and feedback are important. We encourage you to complete the electronic program evaluation using the link below at your earliest convenience.

www.hfma.org/WCAF



Paul Selivanoff, CPA

Operational Effectiveness Consultant

Mr. Selivanoff has nine years experience as a healthcare CFO. He was previously with Adventist Health, where he assisted with development of BI and costing strategy . Paul pioneered use of Windows and Office automation to automate report creation and distribution. He has been Senior Financial Analyst at Catholic Health Initiatives' St. Elizabeth Regional Medical Center and Vice President / CFO at McAllen Heart Hospital. Paul focuses on project management, efficiency, operations management, business process improvement, TQM, process design and re-engineering, benchmarking, cost accounting, labor productivity, budgeting, and financial modelling for hospitals, health systems, and related entities.

Background and Affiliations

Mr. Selivanoff received a BBA in Accounting from the University of Central Florida in 1988. He is a Certified Public Accountant (CPA) and is a well-known speaker and author for HFMA and other professional associations.

Recent Publications and Presentations

Mr. Selivanoff's and Mr. Hammer's first joint article, "Cost Management's Renewed Imperative," will be published in the Fall 2019 issue of the UK's Management in Healthcare journal. Paul's article, "Toward a More Effective Way of Validating Cost Data," appeared in the Mar 2019 issue of HFMA's healthcare financial management (hfm), while "Selecting the Right Costing Model" was published in the Nov 2018 issue. Mr. Selivanoff is also the author of "The Impact of Healthcare Reform on Hospital Costing Systems," which appeared in hfm in May 2011. He was the co-author of "Cost Accounting Ratios – Cost Accounting for Health Care Organizations," published in 1989 by Aspen. He also co-authored "Costing Method Stresses Accuracy and Cost Effectiveness," in the Nov 1986 issue of hfm. His recent presentations include, "How Thinking Frameworks Lead to Successful Change Management" [HFMA ANI 2014], "Cost Accounting Strategies under ACA and Population Health" [HFMA ANI 2018], "How to Double Your Savings from Using Action OI," [Healthcare Advantage Convention, 2010] and "Have Fun, Save Money, Improve Performance with a Balanced Scorecard Model," [Healthcare Advantage Conference, 2009].

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David Hammer, MBA, MHA

Integra Connect

Mr. Hammer is Vice President – Revenue Cycle Management at Integra Connect in West Palm Beach, Florida. In his leadership role at Integra Connect, he works with specialty physician practices to optimize revenue cycle and managed care outcomes. Prior to joining the firm, David was a Principal Consultant at HPMC, Senior Vice President of Revenue Cycle Advisory Solutions at MedAssets, and was also a Partner at Accenture. David focuses on revenue cycle, managed care, and healthcare reform issues for specialty physicians, hospitals, health systems, and related entities. He serves many of the largest health systems, MD-led clinics, and academic medical centers in the US. He was also formerly VP of Enterprise Revenue Management at McKesson and Chief Revenue Officer for Charter Behavioral Health, a +100-facility health system. David has over 30 years of healthcare experience, including executive leadership and direction, revenue cycle transformation, information system planning / implementation, and consulting. He has worked for a variety of leading health systems, software vendors, and professional services firms.

Background and Affiliations

Mr. Hammer received an MBA in Management and an MHS in Health Care Administration from the University of Florida. He also received a BBA in Accounting with a minor in Information Systems from the University of North Florida. Mr. Hammer is certified by HFMA as a Fellow (FHFMA) and as a Certified Healthcare Finance Professional (CHFP). He has been repeatedly named an HFMA Distinguished Speaker, and is a recipient of HFMA's Medal of Honor service award.

Recent Publications

Mr. Hammer's most recent publication is "Cost Management's Renewed Imperative" (with Paul Selivanoff), which will be published in the Fall 2019 issue of the UK's Management in Healthcare journal. He has also authored "Health Reform: Intended and Unintended Consequences," which appeared in the October 2010 issue of HFMA's healthcare financial management journal (hfm). "Don't Panic: CFOs React to the New Economic Reality," appeared in hfm's March 2009 issue. Mr. Hammer authored the February 2008 cover story in hfm, entitled "Beyond Bolt-Ons – Breakthroughs in Revenue Cycle Information Systems" and the July 2007 cover story, called "The Next Generation of Revenue Cycle Management," as well as the July 2005 hfm cover story, entitled "Performance is Reality: Is Your Revenue Cycle Holding Up?" Another one of his articles, "UPMC's Metric-Driven Revenue Cycle," appeared in the September 2007 issue of hfm.

Contact Information

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Appendices

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Appendix 1: Costing-System Reform-Readiness Checklist

189



A1 – Costing-System Reform-Readiness Checklist 190

#	QUESTION	Y / N	COMMENT
1	Competent process for monitoring costing-data quality?		
2	System accurately captures costs for services and activities in non-patient areas?		
3	Costing model updated annually, to align with organization's strategic plan?		
4	Model considers organizational structure, market factors, payors, technology, culture?		
5	Costing leaders anticipate management's needs and educates them to use costing data in new or innovative ways?		

A1 – Costing-System Reform-Readiness Checklist 191

#	QUESTION	Y / N	COMMENT
6	Management broadly understands system's benefits, limitations and future capabilities?		
7	Cost accounting perspective included in software / policy / business-process planning discussions / decisions?		
8	Costing department able to consolidate and obtain data needed for system's scope?		
9	Able to adjust costs for unique patient attributes?		
10	Good access to clinical data, for both cost-assignment and reporting?		

A1 – Costing-System Reform-Readiness Checklist 192

#	QUESTION	Y / N	COMMENT
11	Overhead allocations rational and reflect actual demand?		
12	Able to model contracts not paid on a per-discharge basis?		
13	Cost data defensible and transparently-shared with key stakeholders?		
14	System helps identify waste, excess capacity, and savings opportunities?		
15	System aligns / interfaces / integrates with other management-reporting systems?		

A1 – Costing-System Reform-Readiness Checklist 193

#	QUESTION	Y / N	COMMENT
16	System capable of modifying and/or has altered clinical-managers' behavior?		
17	System can provide support for M&A and/or divestiture decisions?		
18	System presents important information in straightforward dashboards and reports?		
19	System supports complex analyses by end-users?		
20	End-users require little or no manual support from costing team?		

A2 – Addn'l Considerations for Costing Strategy

Cost-Object Dev'l – CDM Enables Accurate Costing?

195

#	QUESTION	ANSWER / COMMENT
1	CDM not limited only to "reimbursable" items (limitation which reflects "conventional wisdom," not sound costing theory)?	
2	To what extent is charging done in bundles or packages?	
3	To what extent are bundles "cost homogenous?"	
4	How will bundled or packaged services be "costed out?"	

A2 – Addn'l Considerations for Costing Strategy

Cost-Object Dev'l – CDM Enables Accurate Costing?

196

#	QUESTION	ANSWER / COMMENT
5	How are supply costs accurately-captured in the procedure-costing process?	
6	What is the “policy hold for charge entry,” i.e., time lag for charges to be posted?	
7	How are “true” late charges processed? <ul style="list-style-type: none">• Rebilled?• Written off?• Other?	
8	How can intra-unit variation in nursing costs by patient be captured / reflected?	

A2 – Addn'l Considerations for Costing Strategy

Human-Resource System

197

#	QUESTION	ANSWER / COMMENT
9	What is the highest-available level of summarization for creating homogenous cost pools?	
10	What is the HR system's methodology for classifying positions / job classes by the following categories? <ul style="list-style-type: none">• Fixed vs. Variable?• Direct vs. Indirect?	
11	What is the HR system's methodology for splitting benefits by the following categories? <ul style="list-style-type: none">• Fixed vs. Variable?• Direct vs. Indirect?	

A2 – Addn'l Considerations for Costing Strategy

General-Ledger System

198

#	QUESTION	ANSWER / COMMENT
12	Are all the expenses in the GL related to CDM items?	
13	What is the methodology for processing contract services? <ul style="list-style-type: none">• Registry / temporary FTEs?• Fully-outsourced services?	
14	What is the methodology for processing services not billed via the revenue-cycle system?	
15	What is the methodology for processing expenses recorded “off the books” of the hospital, i.e., net losses for ED physicians accounted for as a "guarantee" in Administration’s cost center?	

A2 – Addn'l Considerations for Costing Strategy

General-Ledger System

199

#	QUESTION	ANSWER / COMMENT
16	What is the methodology for processing profit or loss from contracts with a subsidiary or sister company?	
17	What is the methodology for recognizing and adjusting period costs for one-time and amortized adjustments?	
18	What is the methodology for processing non-patient revenues?	
19	What is the methodology for processing overhead allocation(s)?	
20	How much effort and expense is senior management willing to devote to cost accounting?	

A2 – Addn'l Considerations for Costing Strategy

Cost-Model Development

200

#	QUESTION	ANSWER / COMMENT
21	What is management's focus / orientation? <ul style="list-style-type: none">• Future vs. past?• Tactical vs. strategic?• Short vs. long costing period?• Small vs. large reported population?	
22	What is the methodology for defining expense categories?	
23	What is the methodology for ensuring that the delineation is clear?	
24	What is the methodology for capturing cost differences by patient type, within the same charge code?	
25	How many cost elements can the reporting system contain?	

A2 – Addn'l Considerations for Costing Strategy

Cost-Model Development

201

#	QUESTION	ANSWER / COMMENT
27	How many cost elements can stakeholders / end-users utilize, practically?	
27	What is the methodology for consolidating productivity, budget, and cost standards to create a consistent organizational model?	
28	On what basis should a procedure receive indirect costs? <ul style="list-style-type: none"> • One each? • By standard costs? • By period costs? 	
29	What is the methodology for confirming that standards / costs are valid for a period?	
30	To what extent can cost accounting efforts be optimized by employing a hybrid / phased implementation approach?	

Appendix 3: Sample Cost Accounting Footnotes

202



A3 – Sample Cost-Accounting Footnotes

203

1. To the Reader of This Report

These footnotes are provided to assist you in understanding how the cost data were prepared and the degree to which you can rely on the cost data displayed in this report. Different approaches to costing can yield dramatically-different results for the same period expenses and production mix. Because there are no commonly-promulgated industry standards for preparing and presenting cost information, every organization must establish its own costing framework. These notes provide an important source of information about how the cost data were prepared. They are essential for the reader to understand, to be able to draw accurate conclusions from the data.

2. Selecting a Cost Accounting Methodology

Ideally, the organization's computer systems would be able to capture the specific costs associated with rendering a particular service, based on the actual resources consumed. This, however, is not usually the case, and instead, estimates are used. Estimates are averages, and may bear very little resemblance to actual cost of specific cases. Estimates are created by assigning all period expenses to all period services using an allocation formula, or by summing up the cost of the components of a service which itself has 1) its cost derived from a standard list of quantities and unit costs of the inputs (average hourly labor rate, average purchase price, etc.), or by 2) specifically-identifying the resource and its cost.

The table below summarizes the methods used to cost items for __ **specific cost objects used in this report** __ the entire cost database. It also shows the relative dollar value of items "costed" by each method. Based on the mix of methods used and the years since last update, the weighted average accuracy is calculated at ____% (**enter percentage**).

Method	Est. Accuracy	Avg. Years Since Update	Total Costed
Ratio of Costs to Charges	35%		\$
Single RVU	65%		\$
Multiple RVU (ABC)	85%		\$
Micro-Cost	90%		\$
Actual Cost	100%		\$

Please note that the overall accuracy of the reported costs will increase with the size of the sample population. For example, even though RCC is only considered 25-35% accurate, when hundreds of patients who received hundreds of different services from many different cost centers are aggregated, the overstatement and understatement of cost for each service tends to cancel out and yield a significantly more-accurate result.

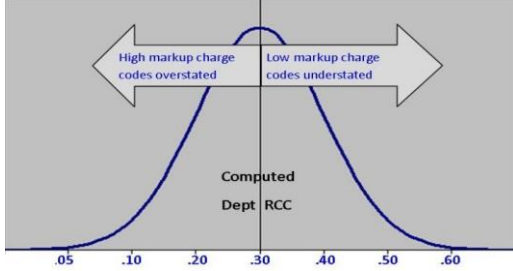
Michael Schwartz, David Young and Richard Seigrist in "The Ratio of Costs to Charge: How Good a Basis for Estimating Cost?" [Inquiry, Fall 1995] found overall RCC accuracy ranging from 85-95% at the product-line or DRG level. On the other hand, when the reported population is small, the reader should exercise caution in drawing conclusions when any method but micro-costing or actual costing is used.

A3 – Sample Cost-Accounting Footnotes

204

1. How Cost Accounting Works

There are four basic methods of calculating the cost of services rendered to patients:

1. **Ratio of Costs to Charges** – Assumes that the cost of an item is the ratio of costs to charges for the department, multiplied by the item's selling price. This method works if there is a constant markup for all services being costed. Most prices, however, are set based on market models that have little to do with actual costs. In those cases, costs computed by an average ratio of cost to charge may vary significantly from true cost. This method of costing has been found to be 25-35% accurate at the service-code level.

2. **Relative Value Unit** – This method assigns period expenses to each department service based on a weight factor which is a proxy for the relative intensity of resource consumption for that service. The most-important element of an RVU is not its point value, but its point value in relation to the point value of all the other services' RVUs. If a single RVU is used for all expenses, the assumption is that all costs are driven by the single weight factor. This is often not the case. For example, a service may be labor-intensive but use no supplies, or it may use very expensive supplies, but not require much labor. In this case, using a single weight factor to assign cost to a service will result in reported costs varying significantly from true cost. To rectify this problem, costs from the operating expense accounts are grouped into "cost pools" by cost driver. Then, each cost pool is allocated to the services based on a weight factor that most-closely matches the estimated relative amount of resources consumed. For example, it is common, but not required, to use a different weight factor for each service for each category of cost – direct labor, supplies, other variable costs, and overhead. This costing method (also known as Multiple RVU or ABC methodology) is estimated to be between 35% and 65% accurate at the service-code level.
3. **Micro-Cost** – This method creates a list of all the cost components in a product or service based on best practice actual, frequency-adjusted usage. The cost of each component is is not recomputed to be the actual average cash price paid for that component during the period costed. This method is estimated to be between 65% and 90% accurate, depending on how consistent the organization is in the way it delivers the service, and how up-to-date is the list of components.
4. **Actual Cost** – The actual resources consumed by a particular patient receiving a service are captured and reported. This most often requires a sophisticated computer system, capable of real-time logging of service events – such as using RFID to capture the amount of time a nurse actually spends with a patient, or tracking a specific supply from purchase order to use by a particular patient. This method is estimated to be 100% accurate and is used as the standard for comparison with the other methods.

A3 – Sample Cost-Accounting Footnotes

The costs presented in this report are categorized by cost behavior into the following classifications:

Cost Classification	Definition	Variance % if Micro-Costed
Direct Variable Labor	Nursing, Therapists, Aides	%
Direct Variable Supplies	Patient-Chargeable Items, Drugs, Implants	%
Departmental Indirect or Fixed Costs	Management, Administrative Support, Professional Fees, Rent, Utilities	%
Assigned Entity Overhead	Facility, Plant Maintenance, Administration, Accounting, Revenue Cycle, Information Technology.	%

The terms used in the “Cost Classification” column above have the following meanings:

- **Fixed** Does not vary with changes in volume (across the relevant range)
- **Variable** Clear association of variability with volume changes
- **Indirect** Cannot be associated with a particular charge code
- **Direct** Directly-traceable to a particular charge code

The “**Variance % if Micro-Costed**” column above is computed by taking all the period expenses assigned to the specific cost classification, and relating these expenses to the projected amount of period expenses that were expected to be found in the cost classification, based on the total volumes of services rendered. How well the projected costs match the actual costs is one indication of the underlying quality of the micro-cost components list, and accordingly, one would expect the total variance to be less than ____%, based on common-cause variation. For labor, this percent may also represent the average productivity level of the department, for which consideration should be given accordingly.

1. Cost Accounting Model Assumptions

1. For comparability in reporting, this organization has chosen to use the same allocation statistics used in the Medicare Cost Report.
2. Cost Exclusions:
 - a. For purposes of aligning costs of care to patients seen, the following departments’ costs are not included or allocated to patient services:
 - i. **[list departments]**
These departments are noted to facilitate reconciliation of the cost database to the G/L.
 - b. Expenses that are not a part of current-period operations, such as one-time write-offs, accounting adjustments, etc. ____ **were** ____ **were not** removed from ____ **direct expenses** ____ **all expenses**
 - c. Policy for handling revenue offsets and expense re-classes is: **(describe)**
3. Period costs are grouped by cost behavior and assigned to cost objects – typically charge codes. Not all period costs should necessarily be used in the costing process. For example, certain expenses of discontinued or restructured operations would unnecessarily overstate the cost of future operations, thus clouding decision making.

A3 – Sample Cost-Accounting Footnotes

206

In some cases, historical costs may be expected to continue, but the cost classification may need to be adjusted, such as when an organization converts a per-unit equipment lease to an owned asset. Our model takes a purely historical future approach. The historical approach attempts to reflect costs as perfectly as possible in the cost categories “as they were” during the period, while the future approach takes some liberty with expenses that are not expected to reoccur in future periods.

General Ledger accounts are organized by natural expense classification, not cost behavior. In the conversion of natural expenses into cost categories based on cost behavior, some judgment and estimation is required. Our model is biased towards treating uncertainty as Fixed Variable. To the extent that variable costs are overstated, contribution margin is understated, which we believe is a more-conservative approach for most decisions.

1. Department Indirect expenses were assigned to cost objects based on _____ (**describe method**).
2. Hospital Overhead expenses were assigned to cost objects based on _____ (**describe method**).
3. Supply cost objects include do not include an allocation for Department Indirect and if so, were based on _____ (**describe method**).
4. Supply cost objects include do not include an allocation for hospital overhead and if so, were based on _____ (**describe method**).
5. Cost objects do do not include services rendered at _____ **multiple locations** _____ **different shifts** which have different operating processes, procedures, and staffing costs. Therefore, the costs presented represent “averages” and do not reflect actual practice at any _____ **one location** _____ **shift**. Accordingly, care should be used when using these data to analyze costs at a single location, or for a single shift.

The reader should note that significant distortions may arise in Department Indirect or Hospital Overhead, depending on the “data slice” included in the report. For example, allocating these costs at one per procedure will have the effect of unduly-increasing the amount of overhead assigned to patients who have a large number of small charges, relative to patients who have a lower number of relatively-larger charges. Allocating these costs based on procedure charge or cost may unduly increase the amount of overhead assigned to inpatients vs. outpatients when an organization uses a tiered-pricing model, or has separate cost centers for outpatient services.

5. More Questions – Who to Contact?

Please feel free to contact _____ (**insert name**) for a more-detailed explanation of how the costing model used to generate this report affects the use and interpretation of the report.

6. Source

Selivanoff, Paul, CPA and David Blunt, MHA, CHE, CHFP, “Creating a High Performance Cost Accounting Strategy,” HFMA ANI 2012

Appendix 4: Eight “Do It Now!” Strategies for Cost Accounting

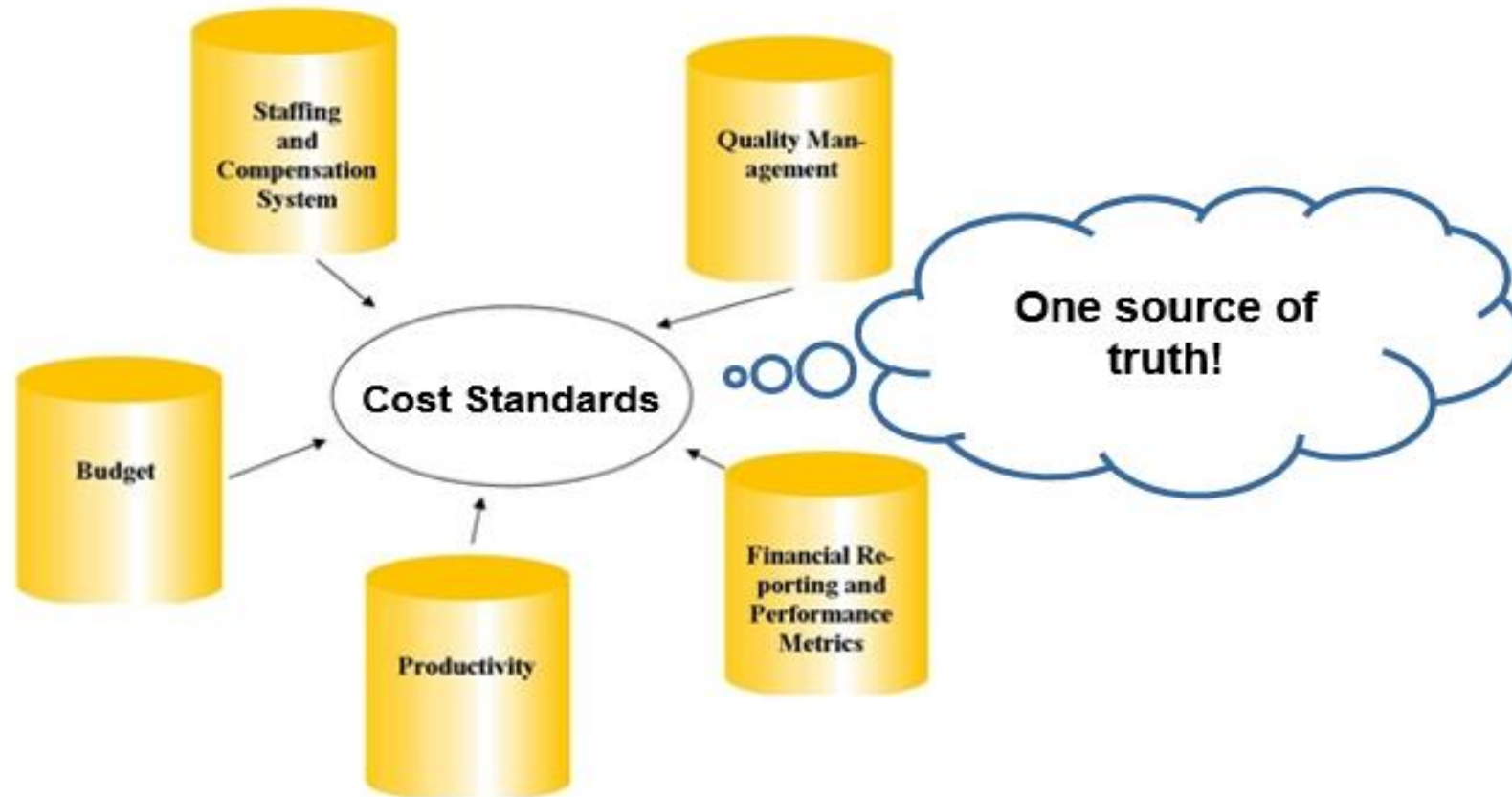
207



A4 – Eight “Do it Now!” Strategies

1. Align Incentives and Effort

208



A4 – Eight “Do it Now!” Strategies

1. Align Incentives and Effort

Strategy 1 Ensure that cost-reduction targets are integrated with organizational plans and budgets.

To realize cost reductions, the specific initiatives identified through the processes just described must be thoroughly integrated with the organization’s strategic financial plan, annual budget, and operating plan. Targets and reports must be aligned with financial statements so that the impact of initiatives is reflected in overall organizational performance. To ensure that progress toward specific goals can be monitored and measured, the initiatives also must be readily identifiable within these plans.











Additionally, productivity reporting systems and target metrics must integrate appropriately with the organization’s budget. Staffing plans with aligned staffing schedules should be reflected in the budget as well. If “disconnects” occur among any of these elements, cost efficiencies and reductions will be very difficult to achieve and will result in expenses that are higher than expected or warranted.

A4 – Eight “Do it Now!” Strategies

2. Break it Down

210

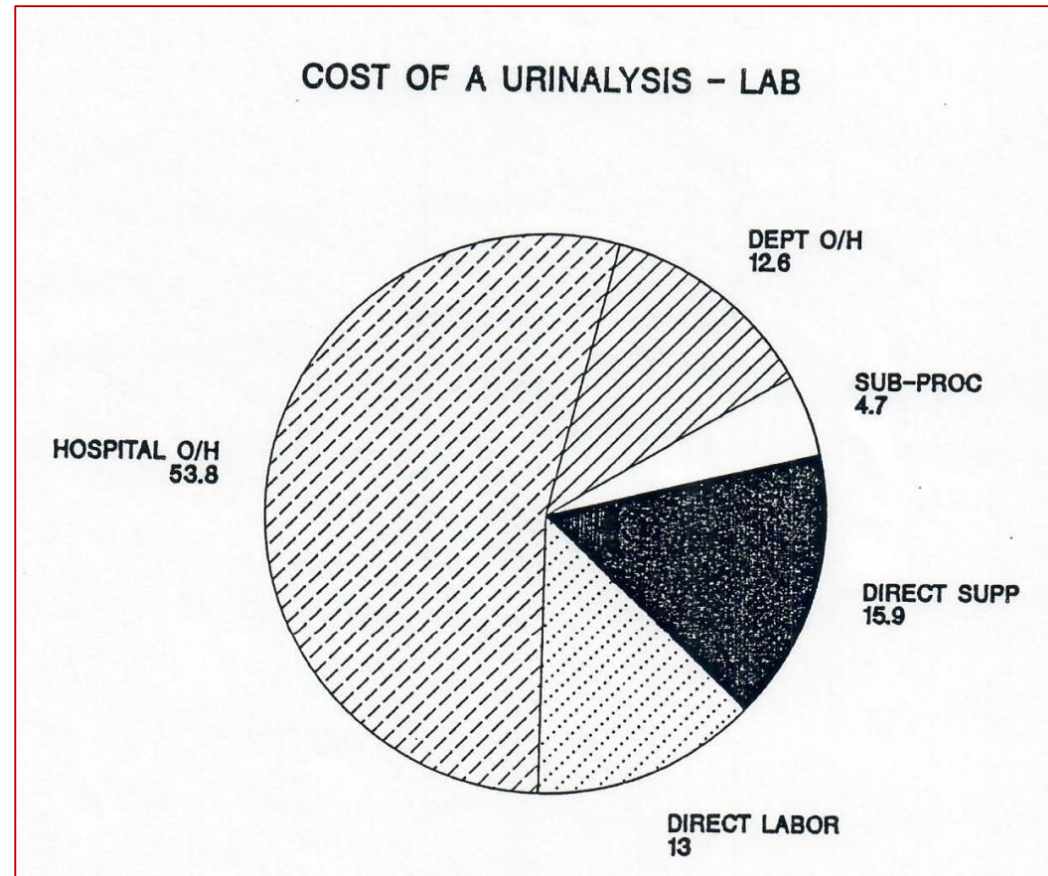
- Build a strategy for each cost element, instead of a department-by-department strategy
- Mix and match methods, to gain accuracy at lower cost
- Use the same “item code” for purchasing and billing

	INDIRECT OVERHEAD		DIRECT VARIABLE	
LABOR				
SUPPLIES			 	
OTHER				

A4 – Eight “Do it Now!” Strategies

3. Reduce Time Wasted on Overhead Allocation

211



A4 – Eight “Do it Now!” Strategies

212

3. Reduce Time Wasted on Overhead Allocation

- Often, 85-95% of data requests are for contribution-margin figures, not full costs
- ***Focus on improving variable costs***
- In a population health / PMPM / capitation world, focus should be on labor costs first, then supply costs
- Organizationally-speaking, however, much more challenging to focus on labor

A4 – Eight “Do it Now!” Strategies

4. Fix Your Charge Description Master

213

“We need to abandon the idea that charges billed, or reimbursements paid, in any way reflect costs.”

Isn't it time to start costing from the EHR?

A4 – Eight “Do it Now!” Strategies

4. Fix Your Charge Description Master – Typical Issues

- CDM often contains only “reimbursable” items
- This reflects public policy, not sound costing theory
- Late charges – some hospitals reverse after posting, or don’t bother to post at all



***Use “No Charge / \$0 codes”
to capture resource
utilization***

A4 – Eight “Do it Now!” Strategies

4. Fix Your Charge Description Master – Typical Issues

- Items that are bundled
 - Specialty beds hidden in the room rate
 - Actual nursing costs hidden in the standard room charge
- Items that may not be in the CDM today
 - Nuclear medicine scan – post stent insertion
 - C-arm or other x-ray support in surgery
 - OP surgery – pre / post surgical time
 - PFS cost-to-collect by financial class

***Use “No Charge / \$0 codes”
to capture resource
utilization***

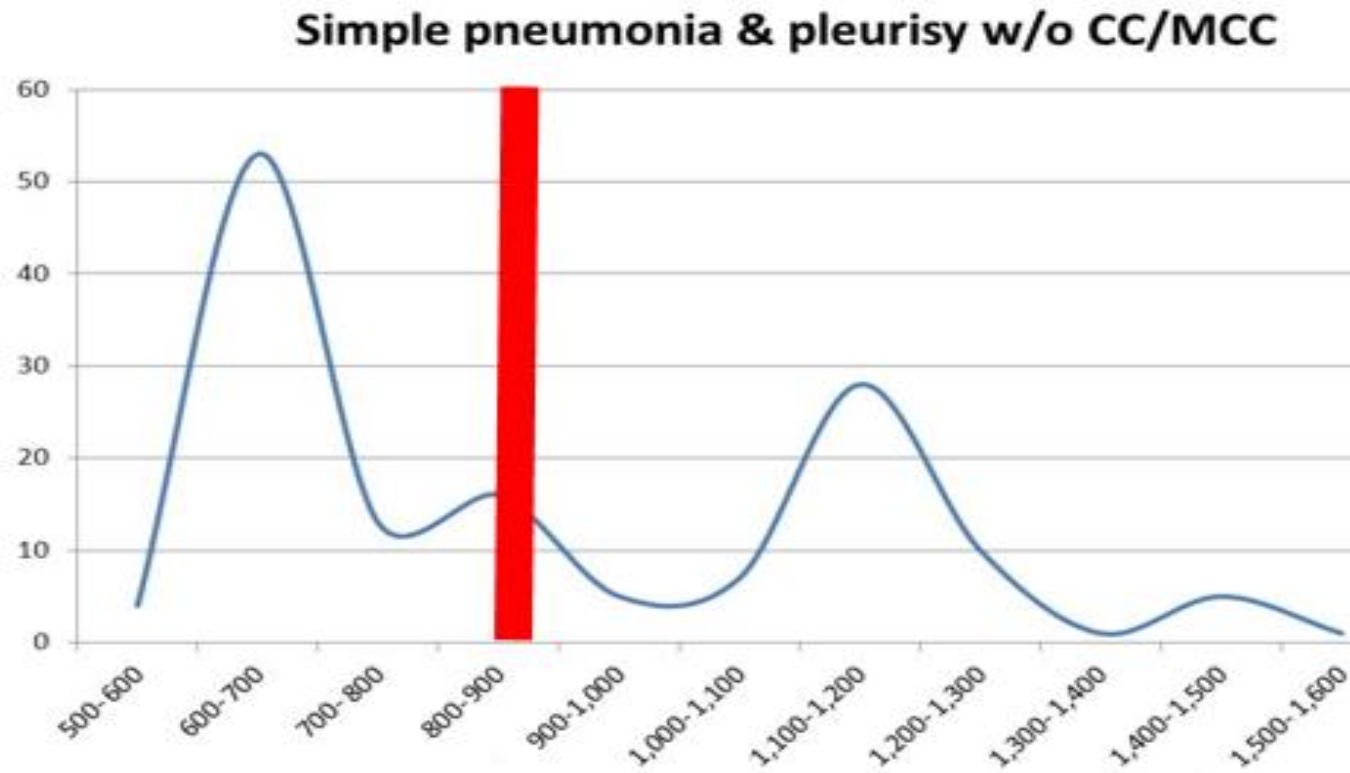
A4 – Eight “Do it Now!” Strategies

5. Stop Bundling IP Nursing in Room Charges

216

Nursing Cost Distribution for DRG 195

Average Cost/Day = \$864.31



A4 – Eight “Do it Now!” Strategies

6. Improve Pharmacy Costing

217

“As much as half of Pharmacy labour cost is clinical pharmacy activity. Clinical pharmacy activity workload is not directly related to drug-distribution labour.

For example, the drugs required by patients in ICU may generate relatively few labour units for distribution, while pharmacist clinical activity could be quite concentrated.

Conversely, chemotherapy patients whose treatment plan has already been established receive high-labour-cost drugs, with little concurrent clinical-pharmacist activity.”

SOURCE: “Ontario Guide to Case Costing,” Ontario Case Costing Initiative (OCCI), <http://www.occp.com/mainPage.htm>, Apr 2013

A4 – Eight “Do it Now!” Strategies

7. Stop Reconciling – Validate!

218

- Everyone reconciles their final cost standards back to the G/L.
Why?
- Reconciliation does not prove that costs are accurate
- It only proves that no dollars were lost during the costing process



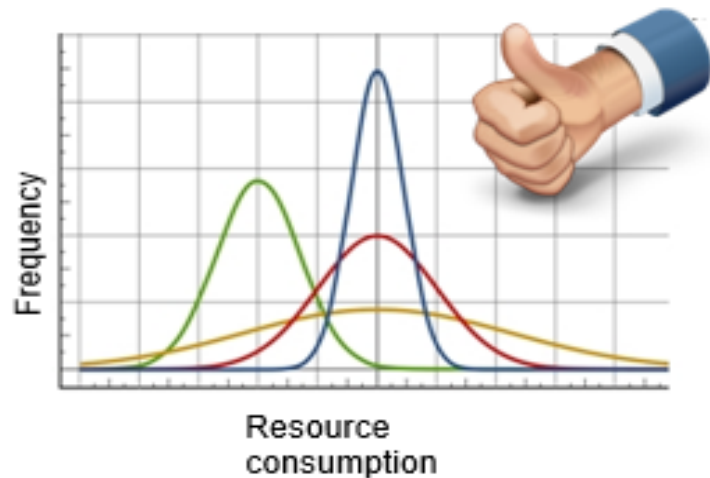
What you really need to know is that your costs are valid

A4 – Eight “Do it Now!” Strategies

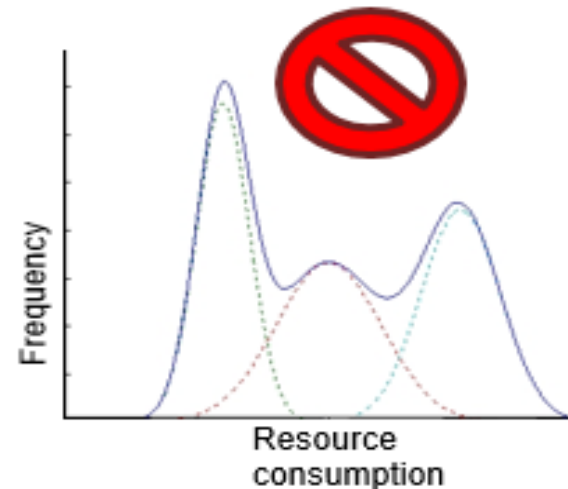
7. Stop Reconciling – Validate!

219

- **Q:** How do you know your cost standards are correct?
- **A:** Look at the distribution of observation samples, not just the average(s)



Acceptable: Blue has best predictive value. Yellow has least predictive value



Problem: Blue line indicates there are 3 distinct cost drivers – cannot combine into a single charge code with any predictive value.

A4 – Eight “Do it Now!” Strategies

7. Stop Reconciling – Validate!

220

Validating Cost Standards – Testing Options

1. Micro-costed:
 - Stable period-to-period variances
 - At the G/L-bucket level
2. RVU-costed
 - $\leq 10\%$ period-to-period dollar swing
 - At CDM level

A4 – Eight “Do it Now!” Strategies

7. Stop Reconciling – Validate!

221

Measures of Cost-System Validity

Accuracy: Compare the result of a particular method against a known standard

Charge Code	RVU	RCC	Purchase
Billable Supply2	40.47	48.80	35.16
Billable Supply4	150.33	61.15	130.12
Billable Supply10	17.34	59.49	65.25
Billable Supply11	150.33	149.38	125

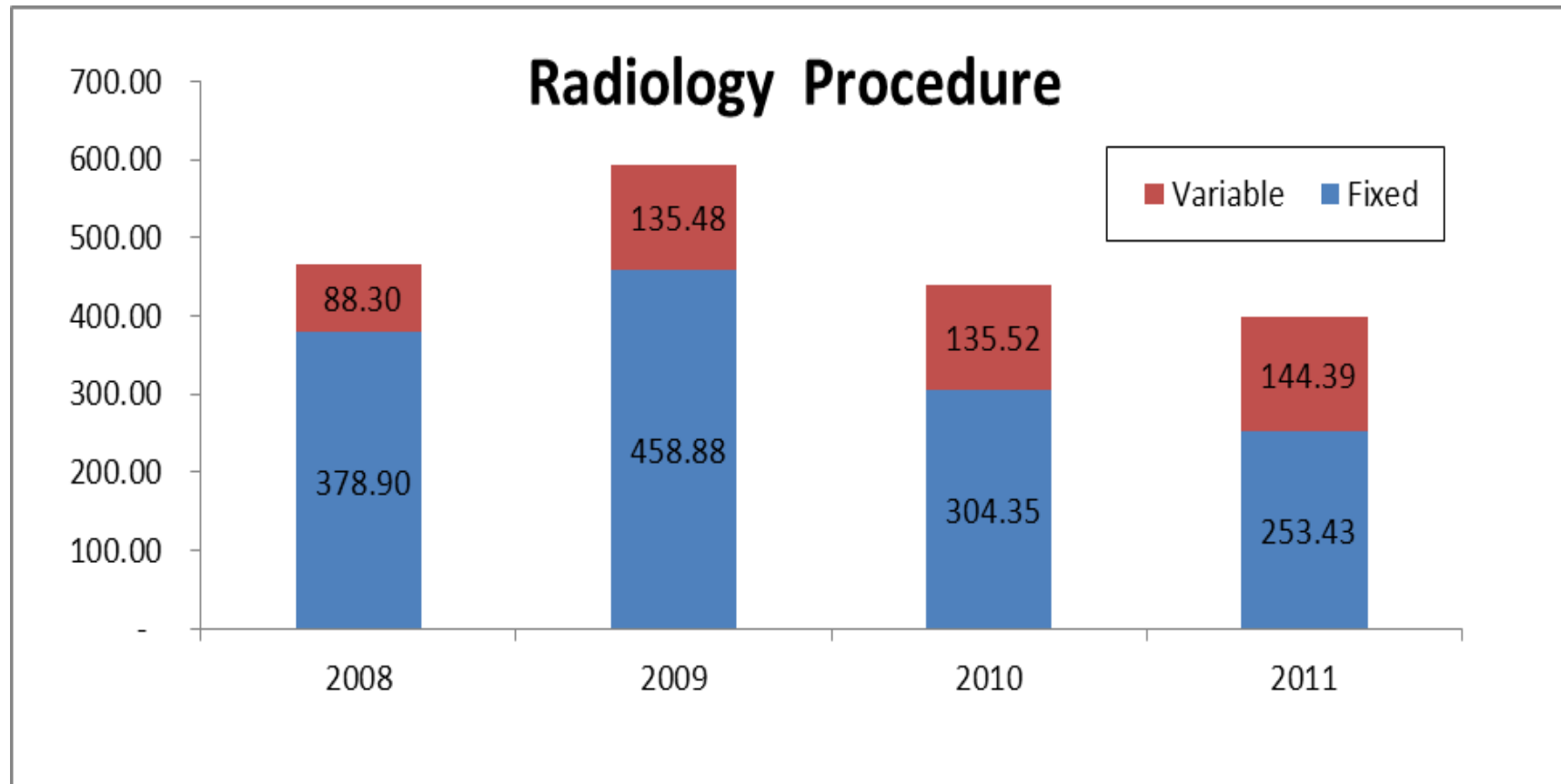
A4 – Eight “Do it Now!” Strategies

7. Stop Reconciling – Validate!

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Measures of Cost-System Validity

Reliability: Does the model generate similar results across multiple fiscal periods?



A4 – Eight “Do it Now!” Strategies

8. Engage Management

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- Define concepts and terms used in the model
- Disclose the entity specific assumptions used to “cost” data
- Provide “evidence-based” disclosures about the cost data
- Inform management about appropriate and inappropriate uses of cost data
- Link organizational evolution to necessary adaptation of financial-analysis tools

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