Experience with Bundled Payments – The Good, Bad and Ugly

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Disclosures

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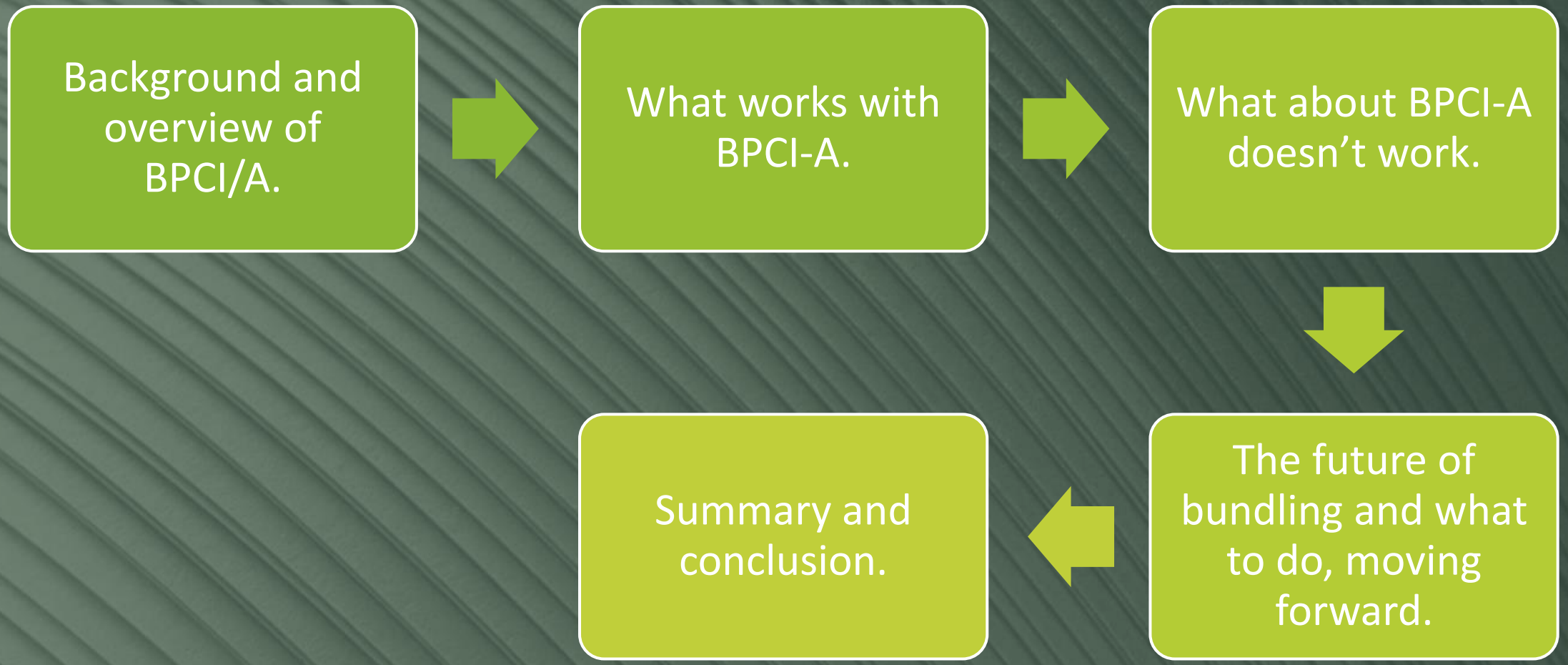
Outline

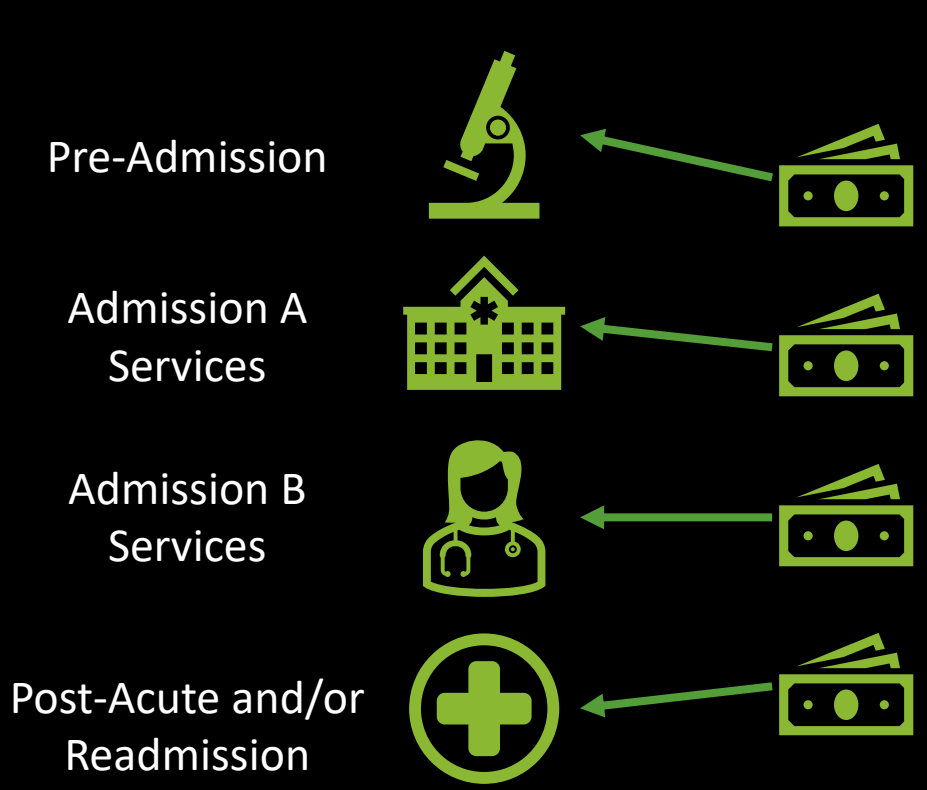

Background and overview of BPCI/A.
What works with BPCI-A.
What about BPCI-A doesn't work.
The future of bundling and what to do, moving forward.
Summary and conclusion.

A brief background and overview of BPCI.

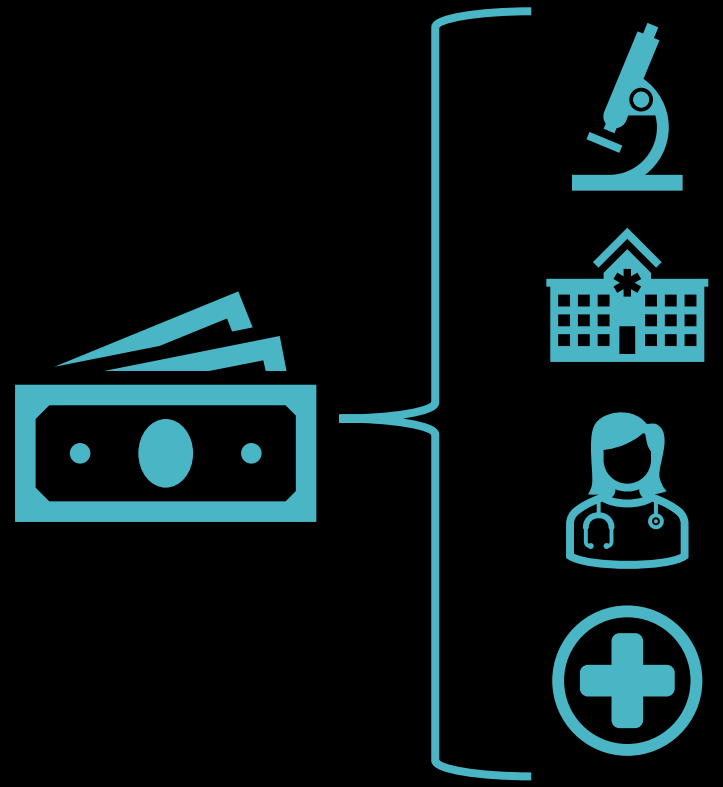
BPCI emerged around a decade ago, with the goal of lowering the overall cost of care.

- Bundled Payments for Care Improvement (BPCI) = total expenditures for care is predetermined
  - Introduced by Center for Medicaid and Medicare Innovation.
- Transition away from fee-for-service payments.
- One type of alternative payment method.
  - Versus Accountable Care Organizations.

A general example of bundled payment.



Fee for Service



General Bundled Option

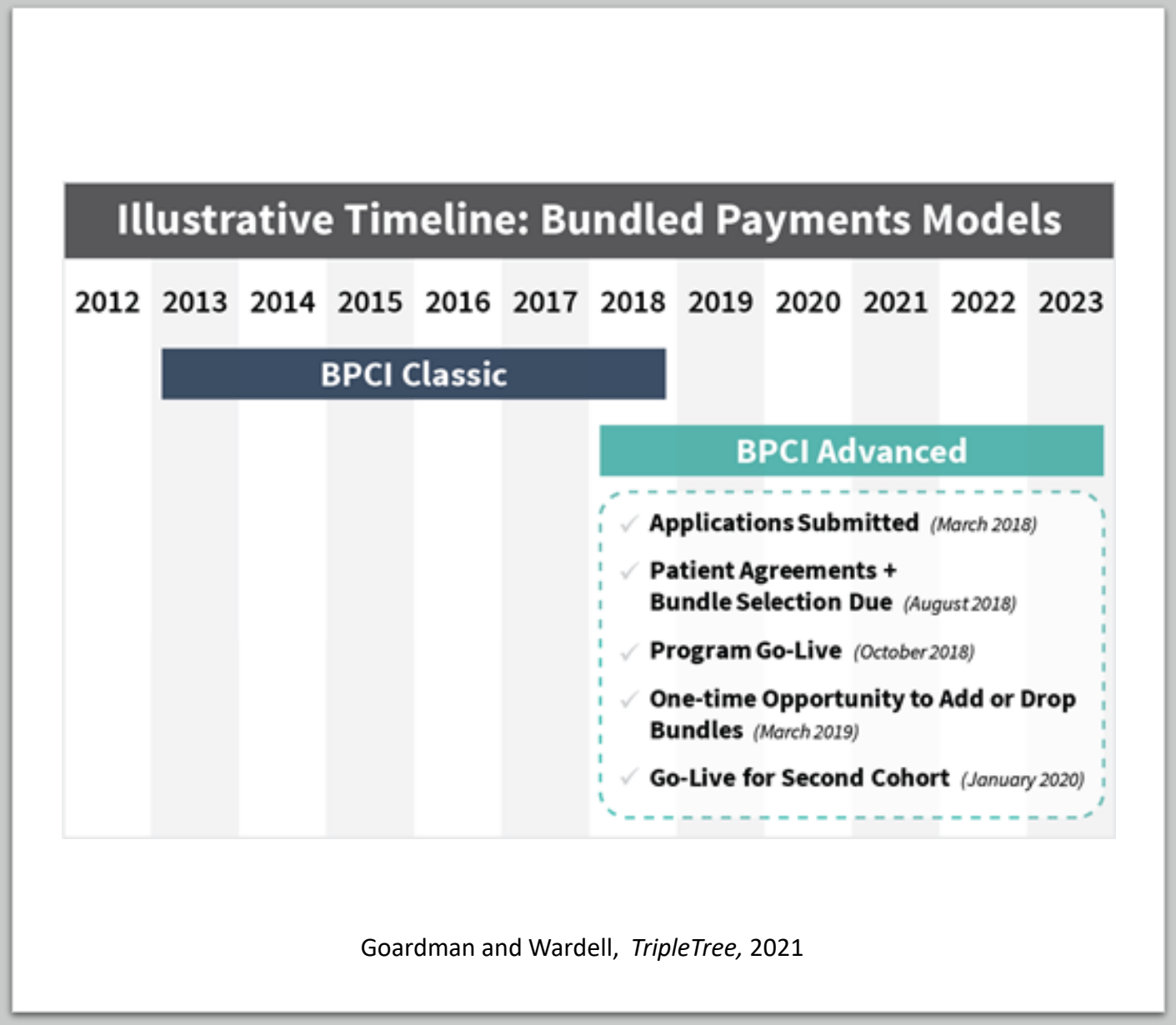
From 2013 to 2017, four main BPCI models were explored.

- Each model explored a different payment type as well as different services included.
- Most ended 30-90 days from discharge.

Model	Type	Services Included	Payment
1	Retrospective	Acute hospital inpatient services.	Lump-sum to acute care hospital / Retains FFS for physicians
2	Retrospective	All inpatient and post-acute care as well as associated services including readmissions ending 30 - 90 days after hospital discharge.	FFS – Actual expenditures reconciled against target price.
3	Retrospective	Post-acute care beginning within 30 days after hospital discharge as well as associated services including readmissions ending 30 - 90 days after hospital discharge.	FFS – Actual expenditures reconciled against target price.
4	Prospective	Acute care hospital stay. All inpatient services provided by the hospital, physicians, and other practitioners during stay and during related readmissions for 30 days after discharge.	Single lump-sum payment to the hospital. Physicians and other practitioners submit "no-pay" claims to Medicare and are paid by the hospital.

Catalyst, *NEJM*, 2018

BPCI-Advanced (BPCI-A)



Goardman and Wardell, *TripleTree,* 2021

Targets

BPCI

- By TIN
- Baseline 2009-2012
- Historic average
- Current dollars
- Adjust for outliers

BPCI-Advanced

- By hospital
- Baseline 2013-2016
- Facility efficiency
- **Practice efficiency**
- Facility case mix
- Peer trending
- Practice case mix
- Patient acuity
- Current dollars
- Adjust for outliers

CMS BPCI-Advanced Programs
Orthopedic Clinical Episodes

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Inpatient

- Back & neck except spinal fusion
- Cervical spine fusion
- Combined anterior posterior spinal fusion
- Double joint replacement of the lower extremity
- Fractures of the femur and hip or pelvis
- Hip and femur procedures except major joint
- Lower extremity/humerus procedure except hip, foot and femur
- Major joint replacement of the lower extremity
- Major joint replacement of the upper extremity
- Spinal fusion (non-cervical)

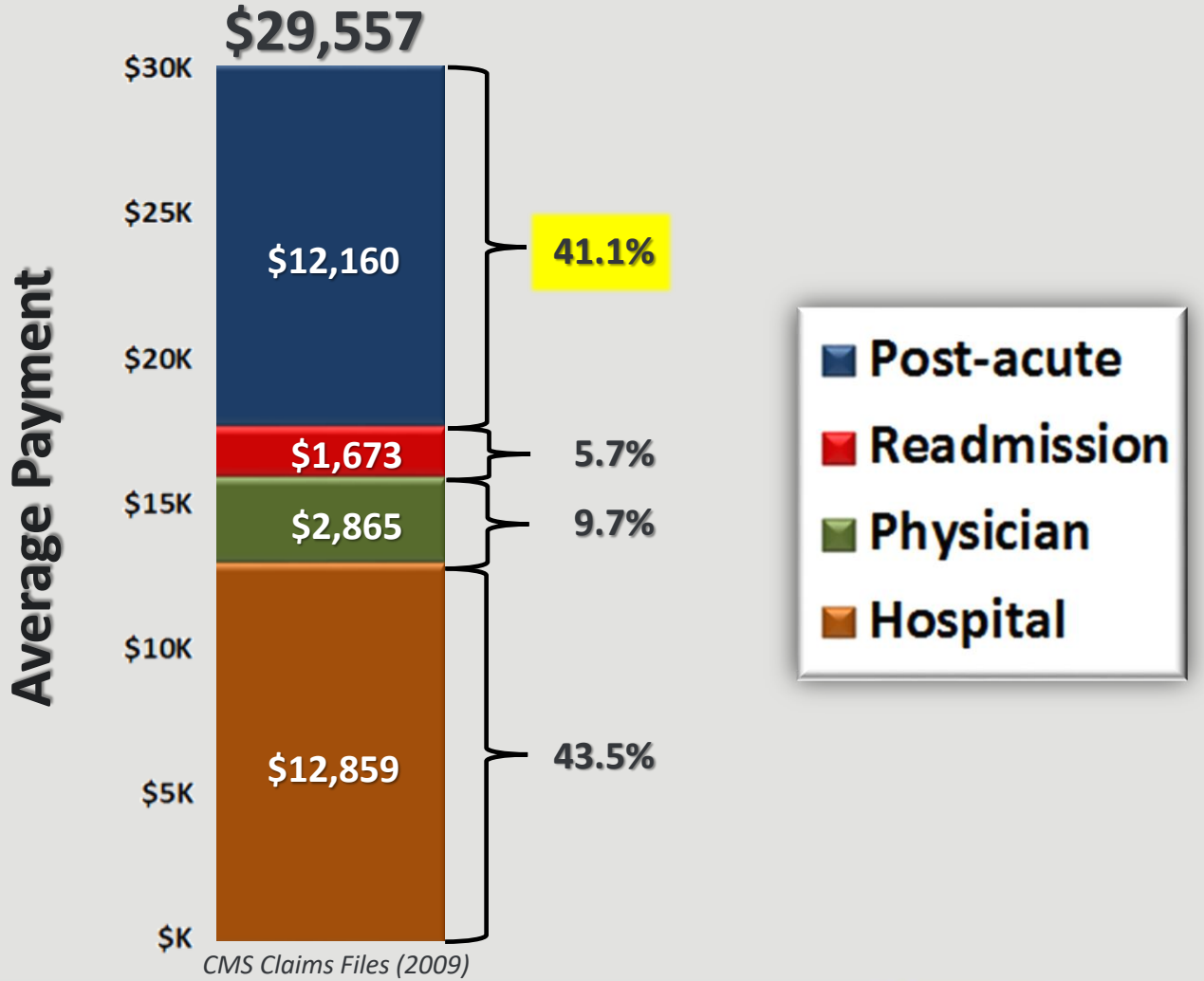
Outpatient

- Back & neck except spinal fusion

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Bundled Payment/EOC: CMS Average EOC Cost

Joint (#470)
90 Days Post-Op



CMS Claims Files (2009)

Principles for Successful Bundle Payment Program

- Establishment of a robust data collection and dissemination infrastructure
- Ensure adequate patient volume
- Identification and alignment of stakeholders
- Dedicated bundled payment management team
- Control of site of service/postdischarge care and costs
- Adoption of evidence-based clinical pathways (EBCPs)
- Preoperative identification and modification of patient risk factors- (The most important one)
- Identification of variations: outcomes and costs
- Maximization and demonstration of quality
- Manage Risk

BPCI-A – what works.

From a patient, payer, and provider perspective

From the **patient** perspective, bundled payments reduce confusion.

Easier for the patient to understand where money is being spent

Reduces uncertainty and confusion about payment for service

From the **payer** perspective, bundled payments minimize risk

Bundled payments reduce **cost** for payers.

Costs to providers.

Costs internally.

They also minimize and distribute **risk** to other stakeholders.

From the **provider** perspective, bundled payments support patient facing care.

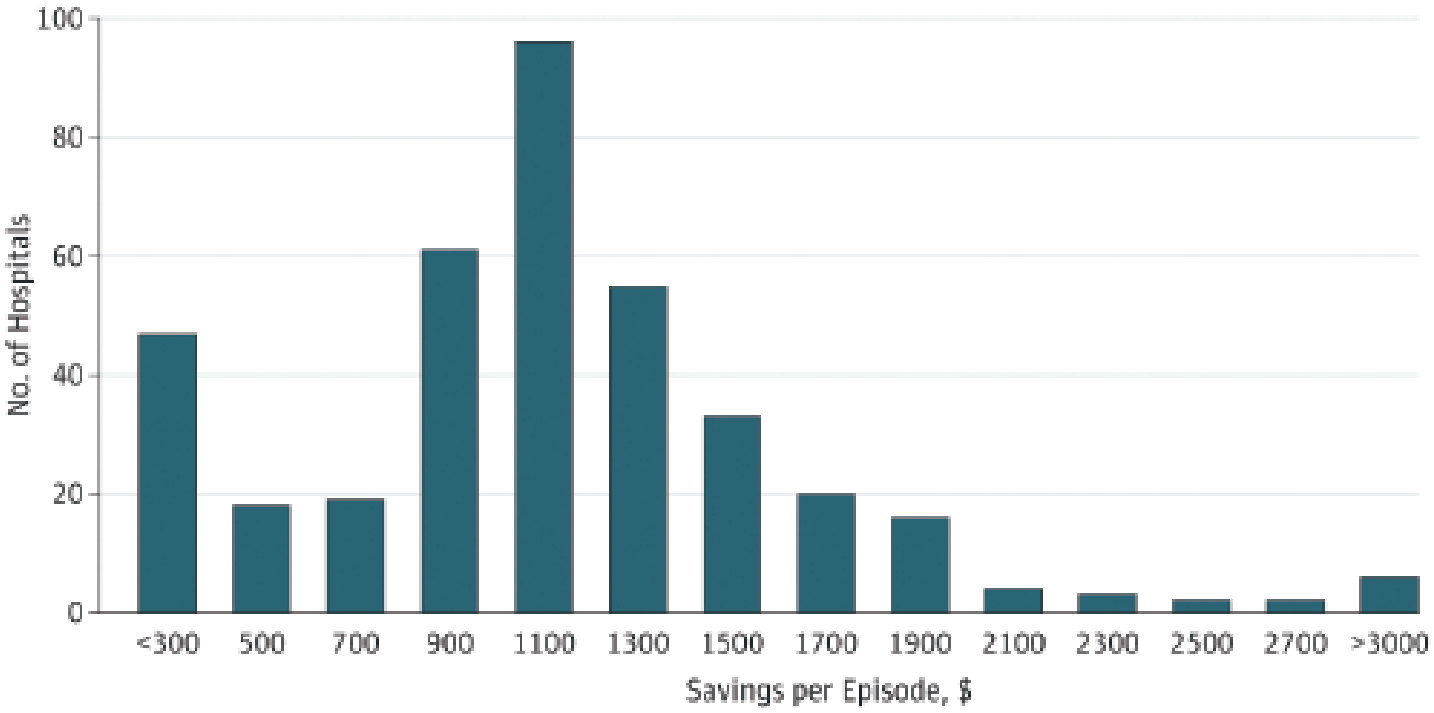
BUNDLED PAYMENTS ENCOURAGE IMPROVED COORDINATION OF CARE.

PROVIDERS REALIGN FOCUS TOWARDS PATIENT CENTERED CARE.

PROVIDERS WHICH ASSESS AND MITIGATE RISK ARE REWARDED.

MOST UP-TO-DATE EVIDENCE-BASED TREATMENT STRATEGIES ARE ALSO GENERALLY REWARDED.

Figure 1. Distribution of Savings in CJR



Navathe AS, Liao JM, Shah Y, et al. Characteristics of Hospitals Earning Savings in the First Year of Mandatory Bundled Payment for Hip and Knee Surgery. *JAMA*. 2018;319(9):930-932.

BPCI-A is especially effective for specific orthopedic cases.

- Particularly in cases where more straightforward pathways exist for (1) patient selection and (2) management.
  - Hip
  - Knee
  - Shoulder

Yet, there are many problems with bundled payments.

Particularly with regard to spine surgery.

Costs for spine surgery can be highly variable.

- Even for the same diagnosis, costs can vary significantly
- Average DRGs for cervical and lumbar procedures ranged from $11k to over $100k. (Ugiliweneza, *Spine*, 2014)
- Bundled payments-inflexible and do not match this variability.

FFS vs BPCI

- Orthocarolina Group- C-spine fusion surgery, 2009-15
- DRG 471 w/MCC, 472 w/CC, 473 no/CC
- IRF, SNF, HH, readmission- 93%, 59%, 26%, 45% higher total spend
- BPCI significantly associated with 10% higher total expenditure
- Cervical spine bundles based on DRG not ideal due to relatively high variability in disease complexity- CPT design more appropriate

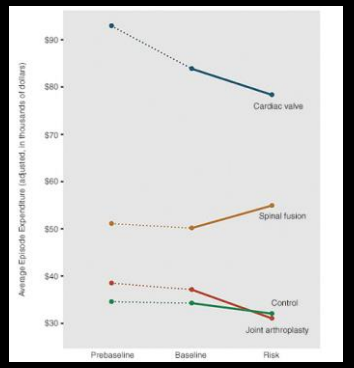
CSRS, Toronto, 2016

Even with risk adjustments, variation in spine procedure cost remains high.

- Multiple factors may affect the cost of surgery (e.g. site of care).
- Variance in cost of spine surgery is large.
  - >110% variance in cost for spine surgery; from $15,997 to $34,171. (Schoenfield, *The Spine Journal*, 2014)
- Around 50% variability in cost remained, when accounting for risk and procedure type.

NYU Langone Experience BPCI 2 with risk

- Criteria: high volume, opportunity to reduce postacute spending and readmissions
- Lower extremity joint arthroplasty- cost decreased by **$3,017**
- Cardiac-cost decreased $2,999
- Spinal fusion bundles- costs increased $8,291 due to new technology
- Savings- through Postdischarge care location primarily
- Payment initiative does not account for changes and innovations in medical care



Bosco, JAAOS, 2018

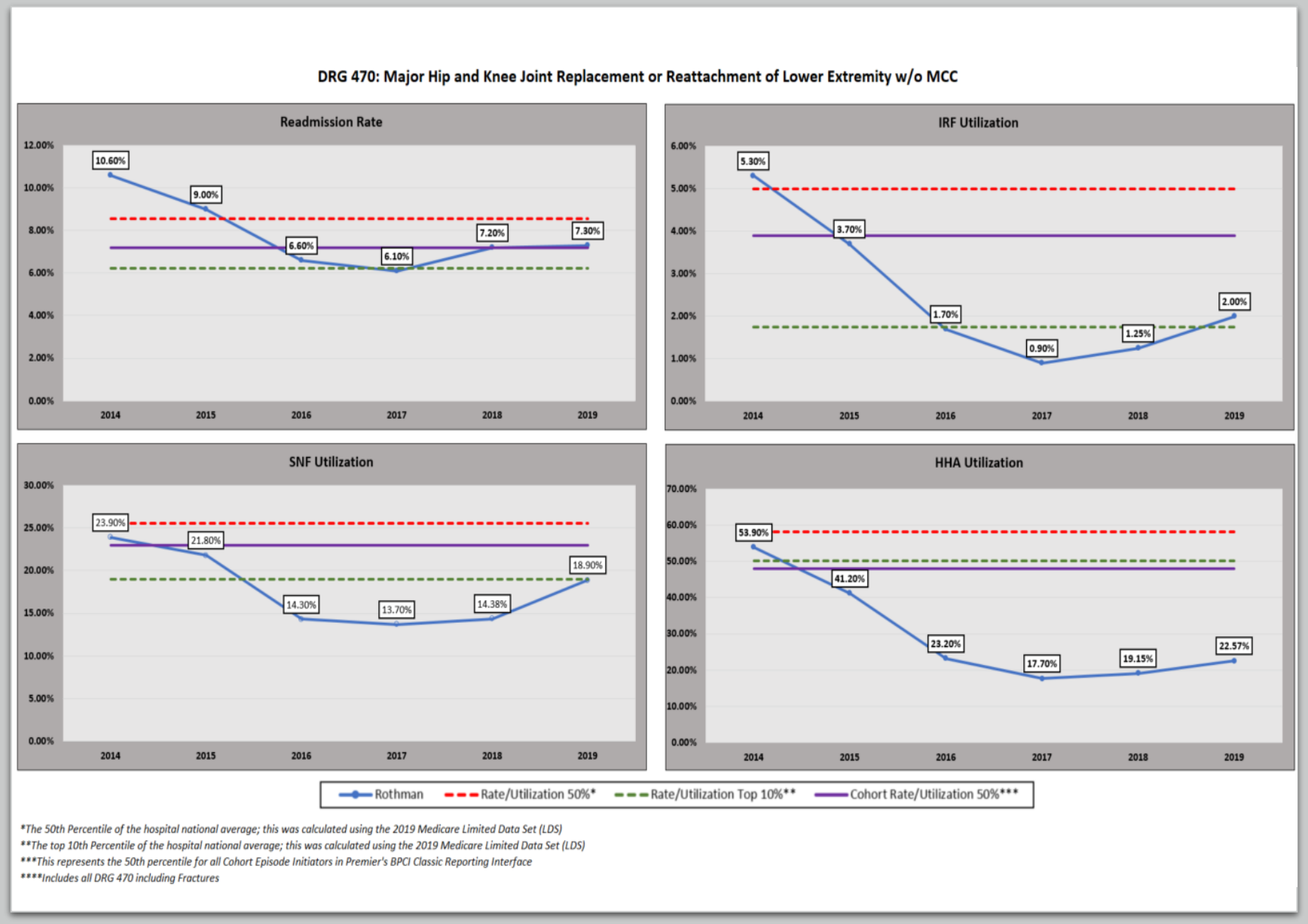
Example of BPCI-A failure in spine: Being compared to the wrong target.

- Reasons for BPCI-A failure:
  - 1. Target reimbursement too low
  - 2. Comparison to past performance diminishes opportunity for efficient providers and does not account for variation in cases.
- Even if outperforming market, still possible to lose money. An example spine case:
  - Target cost (determined by CMS) = $75K
  - True cost (at RO) = $80K
  - Market Cost = $88K
  - Even though Rothman is 10% more efficient than all other groups, Rothman still loses $5k per case.

Increased reliance on bundled payments may negatively alter provider decision-making.

- Providers may increasingly rely on financial risk calculators based on patient demographics and comorbidities.
  - E.g. COPD, DM, BMI, etc.
- These predictions may have ethical implications and affect who can receive certain types of care.

Rothman, an institution ranked in the top 10% of quality can still have losses in a BPCI-A model.



EOC Shared Savings: Scalable Success and Some Failures

By Payer & Episode (2015 – 2019)

Payer	Program	CY DOS 2015	CY DOS 2016	CY DOS 2017	CY DOS 2018	CY DOS 2019*	5-Yr Total
Aetna	TJA @ SH				$1,122,660	$898,128	$2,020,788
	Market Savings				$2,197,017	$1,098,509	$3,295,526
Cigna	THA				-	-	-
	TKA				$24,922	-	$24,922
	Knee Arthrosc				$14,338	$109,980	$124,318
	L/S Lami				$82,296	-	$82,296
	C/S Fusion	$34,033					$34,033
CMS BPCI	TJA	$2,069,981	$2,874,321	$3,082,737	$1,670,240	-	$9,697,279
CMS BPCI-A	All Ortho				($1,781,661)	($5,244,768)	($7,026,429)
CMS BPCI Gainshare	TJA		$385,315	$1,410,569	$909,073	-	$2,704,957
Horizon BCBS NJ	Knee Arthrosc - NJ		$113,187	$326,536	$44,845	-	$484,568
	Knee Arthrosc - PA		$275,889	$254,115	$76,326	-	$606,330
	THA w/AtlantiCare	$1,687,366	$1,954,828	$2,603,517	$680,512	$843,721	$7,769,944
	TKA w/AtlantiCare	$2,841,620	$3,087,502	$4,557,326	$528,157	$1,034,840	$12,049,445
	THA - NJ		$239,680	$355,460	$123,326	-	$718,466
	TKA - NJ		$288,212	$685,290	$180,016	-	$1,153,518
	THA - PA		$864,234	$810,538	$248,990	$58,410	$1,982,172
	TKA - PA		$532,496	$943,444	$657,830	$76,640	$2,210,410
	LBP - NJ		$468,213	$541,200	-	-	$1,009,413
	LBP - PA		$19,231	$104,760	-	-	$123,991
	Fusion - NJ					$279,039	$279,039
	Fusion - PA					$45,710	$45,710
	TSA - NJ			$325,058	$418,041	$398,715	$1,141,814
	TSA - PA			$212,628	$177,163	$58,455	$448,246
IBC	TJA	$2,616,613	$5,700,569	$7,770,050	-	-	$16,087,232
	THA				$743,849	$1,778,454	$2,522,303
	TKA				$3,079,015	$1,181,770	$4,260,785
	Knee Arthroscopy				($23,523)	($11,161)	($34,684)
	TSA				($328,569)	$265,604	($62,965)
	L/S Lami			$50,546	$261,066	$322,644	$634,256
	L/S Fusion				$85,667	$421,006	$506,673
Gross Savings		$9,249,613	$16,803,677	$24,033,774	$11,191,596	$3,615,696	**$64,894,356**
Net Savings Paid		**$3,240,202**	**$6,829,577**	**$9,824,172**	**$6,639,472**	**$3,319,721**	**$29,853,144**
Share of Gross Savings		35%	41%	41%	59%	92%	46%

CMS BPCI-A based (-$3.4M) payback to date, with additional (-$3.6M) estimated pending final reconciliation.

**Gross savings data is partial for CY DOS 2019, awaiting episode runouts & reconciliations for 2019 & 2020*

Reduced spending does not translate into savings.

- Only around 40% of reduced spending translates to savings. (Mulvany, *HFMA*, 2020)
  - A 3.9% reduction in spending leads to only 1.6% change in savings.
- Rothman experience
  - $70M in reduced spending but $30M of savings.

Bundled payments as a race to the bottom.

	Diminishing Marginal Returns: Follow the Math	
	Actual Model & Payment	
Shared Savings Calculation Per Case	**2018**	**2019**
Cost Target (Budget)	$44,089	$40,124
3% Insurance Admin Fee	-$1,323	-$1,204
Cost Target Minus Admin Adjustment	$42,766	$38,920
Actual Cost of Care	$40,124	$38,644
Savings per Case	$2,642	$276
Total Cases	1,316	1,834
Total Savings (All Cases)	$3,477,153	$506,212
Shared Savings Split With RO (50%)	*$1,738,576*	$253,106

2018 rec was actually 11/1/17-12/31/2018 so savings amount was higher

Year-over-Year Reduced Baseline = DMR

3% taken off top = reduces savings arbitrarily

Cost per Case Reduced

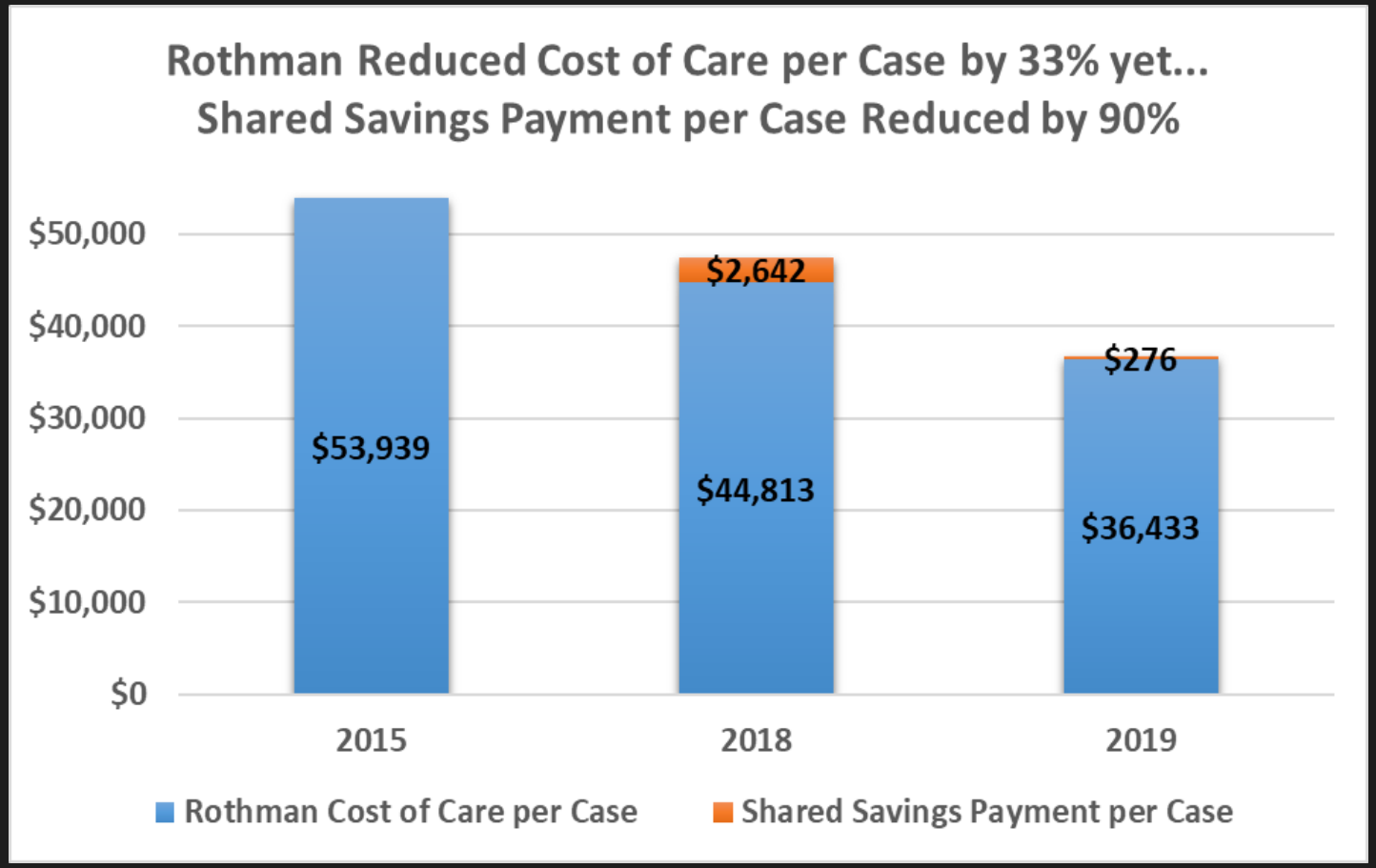
However

Savings per Case Reduce due to Baseline Shrinking

Increased Volume but Reduced Total Savings

Reduced Savings = Race-to-Bottom

Rothman reduced cost per case by 33% over a four-year period – yet is being paid less in shared savings.



What providers can do, moving forward.

Managing the future in a bundle payment paradigm

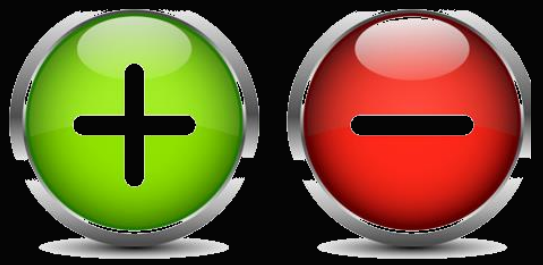
Risk stratification and identification will become increasingly prevalent.

- Risk assessments should be kept to simple yes/no questions.
- Auto-score risk.
- Example questions to help quickly and easily stratify:
  - Do you have diabetes?
  - Do you live alone?

NAVIGATING THE EPISODE OF CARE

The Risk Assessment

Patient answers Yes/No Questions



43 Medical & 15 Social Questions

Do you have:
- Diabetes?
- Seizures?
- Sleep Apnea?

Do you live alone?

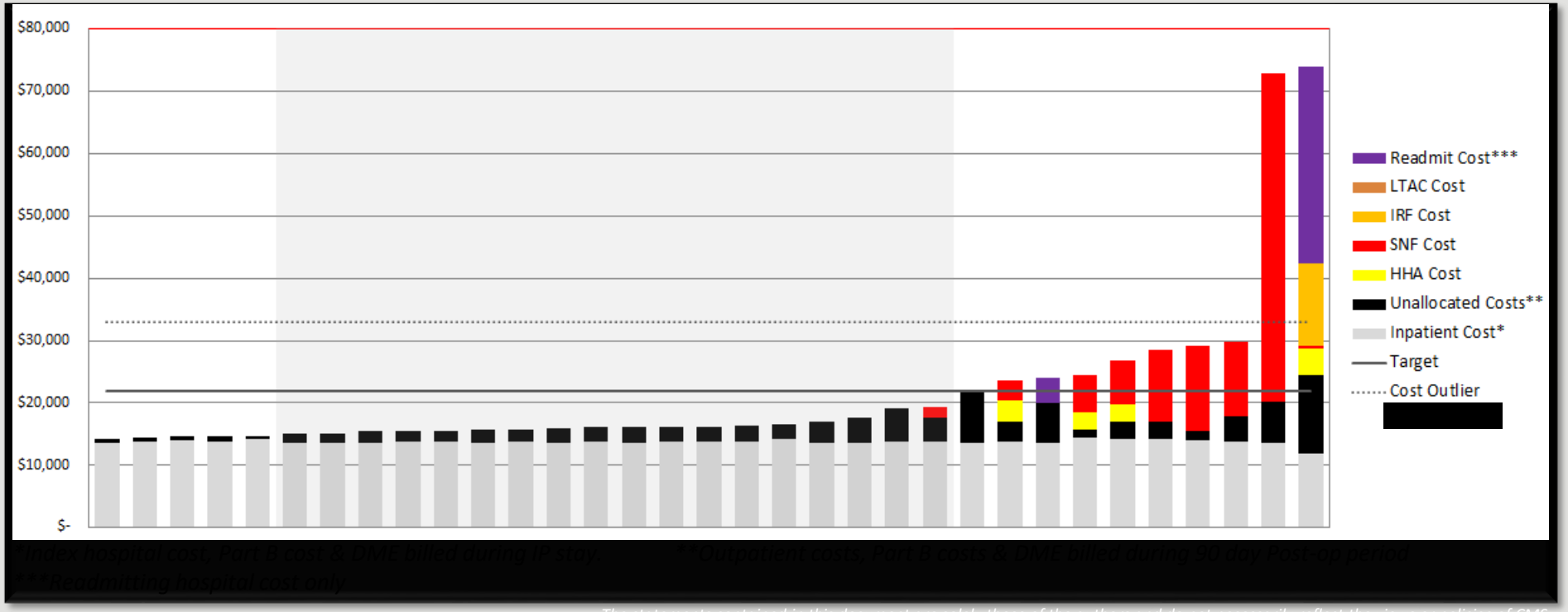
Do you require assist with daily activities?

Auto-Scores Risk Result, Pertinent Positives Displayed

RISK:

IMPROVED CMS ANALYTICS

Total EOC Components, by Surgeon, Quarter, & DRG



Physician #1:

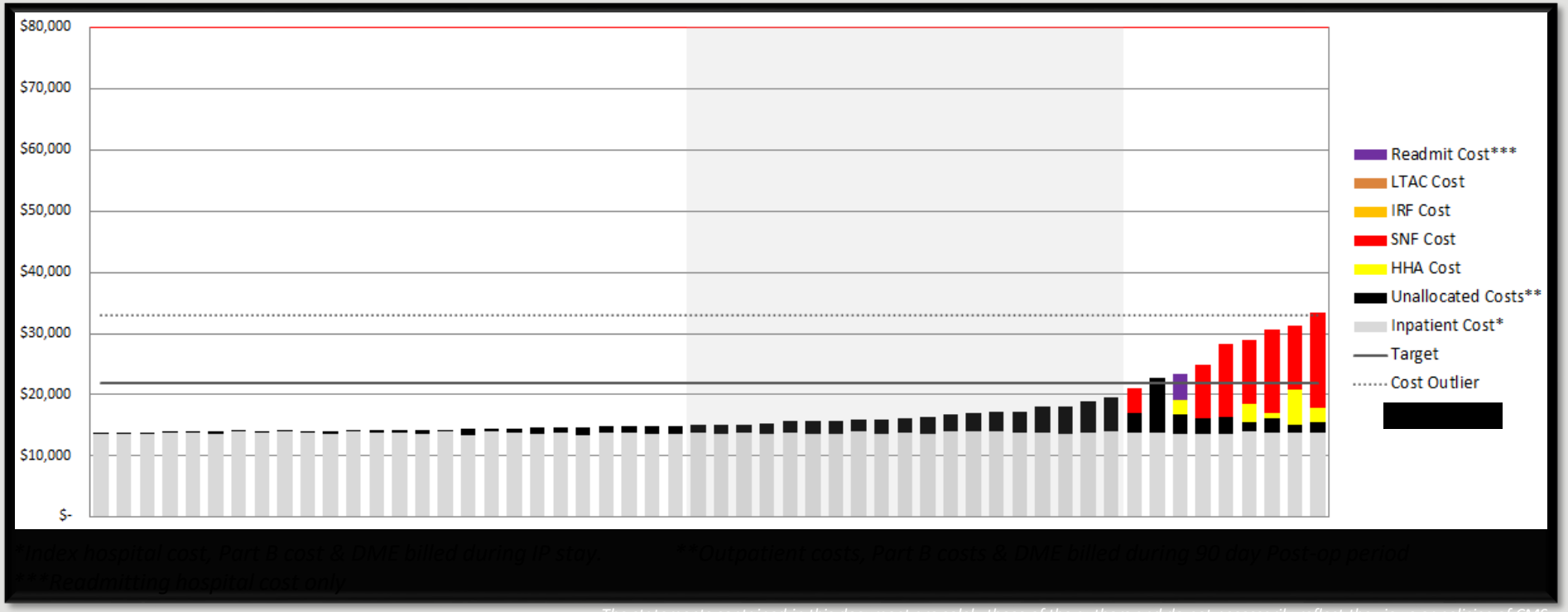
All Cases			
Case count	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
33	$ 21,897	$ (6,621)	$ (201)

Cost Outliers				
Case count	Case (perc)	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
2	6%	$ 73,360	$ (103,326)	$ (51,663)

Cases Net Cost Outliers				
Case count	Case (perc)	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
31	94%	$ 18,577	$ 96,705	$ 3,120

IMPROVED CMS ANALYTICS

Total EOC Components, by Surgeon, Quarter, & DRG



Physician #2:

All Cases			
Case count	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
54	$ 17,232	$ 241,089	$ 4,465

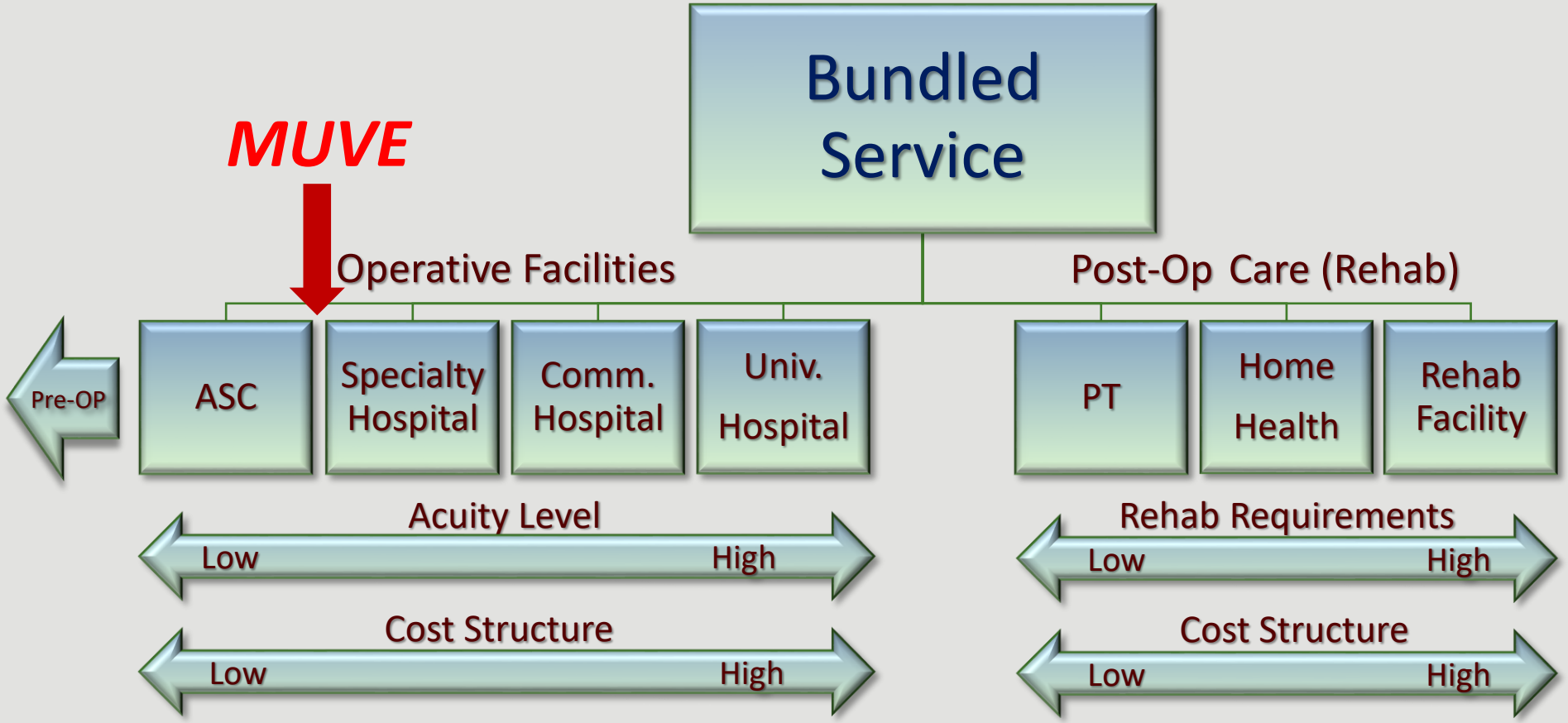
Cost Outliers				
Case count	Case (perc)	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
1	2%	$ 33,486	$ (11,789)	$ (11,789)

Cases Net Cost Outliers				
Case count	Case (perc)	Epi Cost (avg)	Savings / Deficit (sum)	Savings / Deficit (per case)
53	98%	$ 16,925	$ 252,878	$ 4,771

Shifting care to ambulatory surgical centers will be important.

- Post-op care - Home health, PT much less costly than admission to a rehab facility.
- Controlling the operative facility and shifting care away from university/tertiary hospitals to smaller facilities such as ambulatory surgery centers allows for significantly reduced costs.

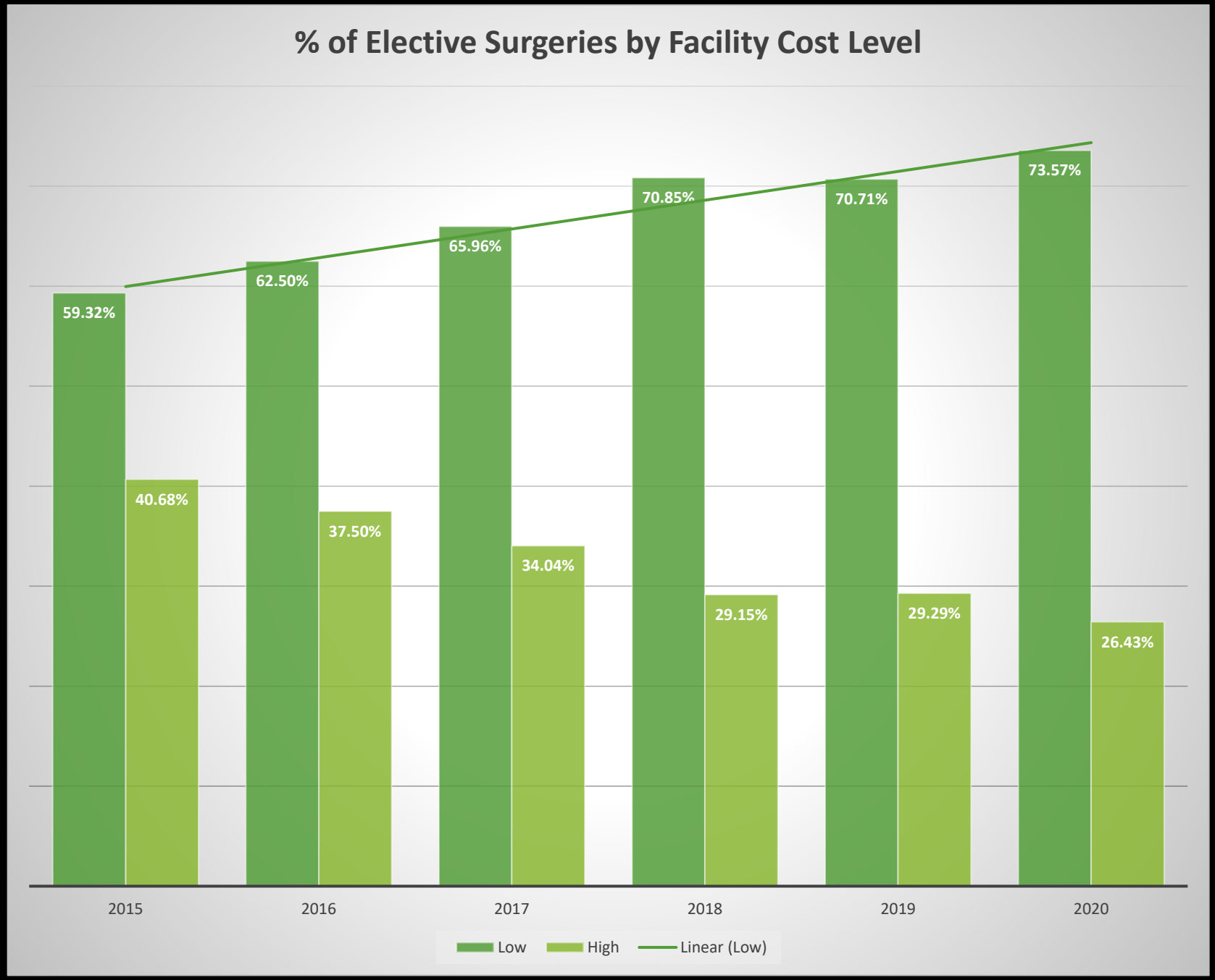
DEMAND MATCHING



CONTROL UTILIZATION

Importance of facility demand matching.

- Average Cost Savings = $15,000 - $21,000 per case.
- New markets average a 10%-15% increase in appropriate demand matching.



EVOLUTION OF EPISODIC CARE

Beyond Standard Retrospective Financial Models

EOC Low Cost Facilities Steerage - Example

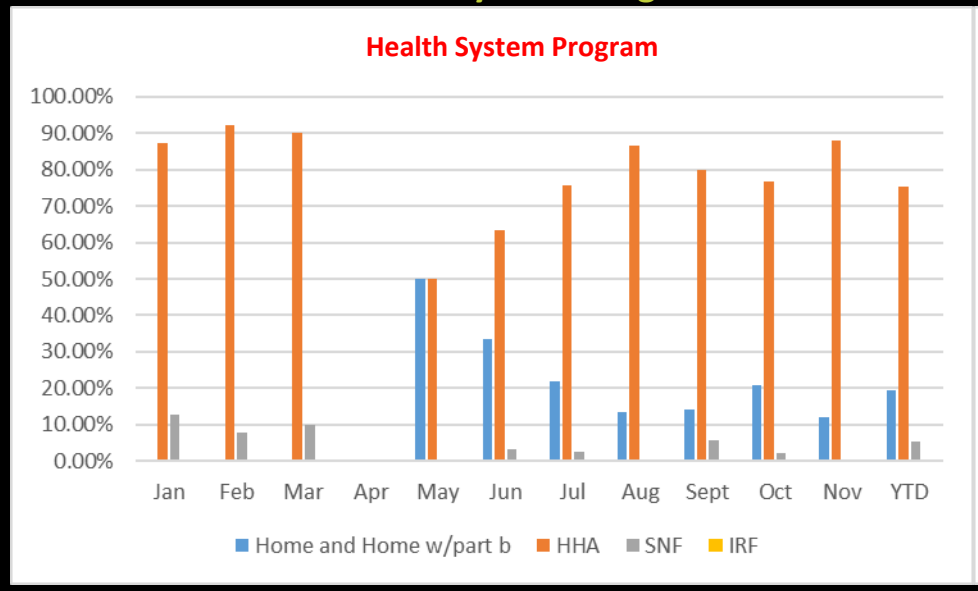
Description	Volume	EOC Cost	Total Cost
Current:			
Low Cost Facility EOC Cost	250	$ 25,000	$ 6,250,000
Mid Cost Facility EOC Cost	500	$ 35,000	$ 17,500,000
High Cost Facility EOC Cost	750	$ 45,000	$ 33,750,000
Total Cost of Care (TCC)	1,500		$ 57,500,000
Average Cost per EOC			$ 38,333
Target:			
Low Cost Facility EOC Cost**	700	$ 30,000	$ 21,000,000
Mid Cost Facility EOC Cost	350	$ 35,000	$ 12,250,000
High Cost Facility EOC Cost	450	$ 45,000	$ 20,250,000
Total Cost of Care (TCC)	1,500		$ 53,500,000
Average Cost per EOC			$ 35,667
Actual TCC Reduction %			7.0%
% Cases Shifted to Low Cost Fac.*			30.0%
Rev. Shifted to Low Cost Fac. (RI owned)			$ 14,750,000

**450 cases shifted to low-cost facility (i.e. 30%)*

***20% premium for low-cost steerage (i.e. $25,000 to $30,000)*

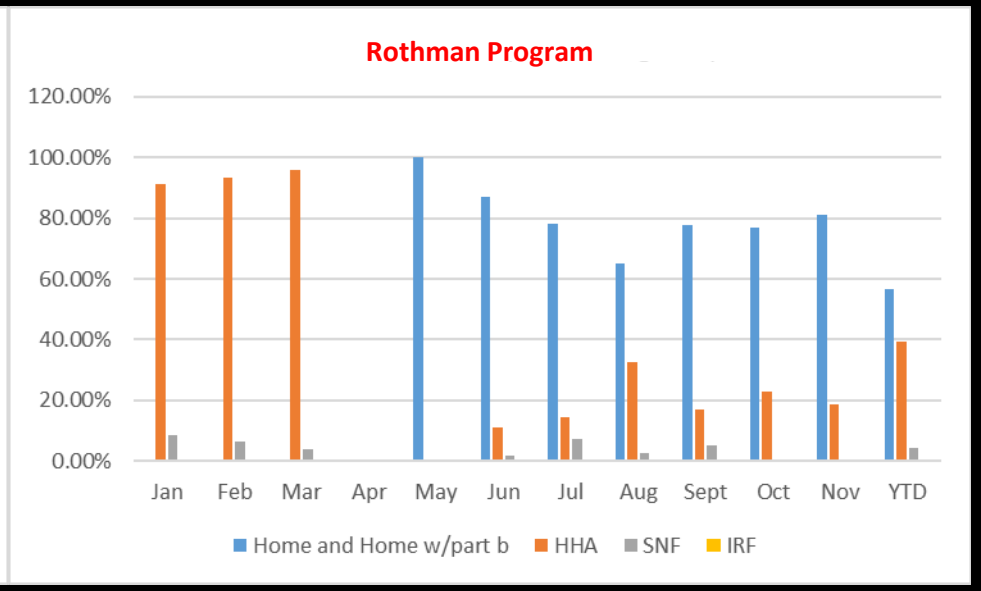
Surgical centers of excellence; what we're doing at Rothman for success.

Without Rothman Health System Program



100% of Patients Discharged with HHA or to SNF: Inadequate Patient Quality and additional $4K-$5K cost per case on average

With Rothman Nurse Navigation

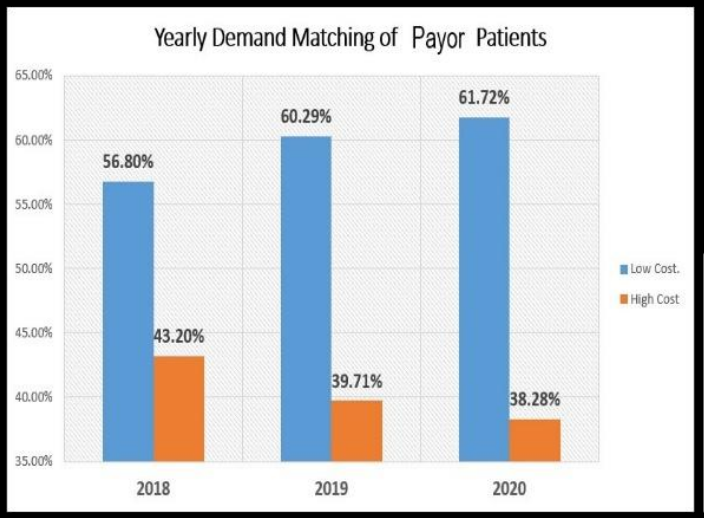


90% of Patients Discharged to Home: Improved Patient Quality and $3K-$5K savings per case on average

New and acquired groups lead to savings as well.

Demand Matching:

Focus on Site-of-Service

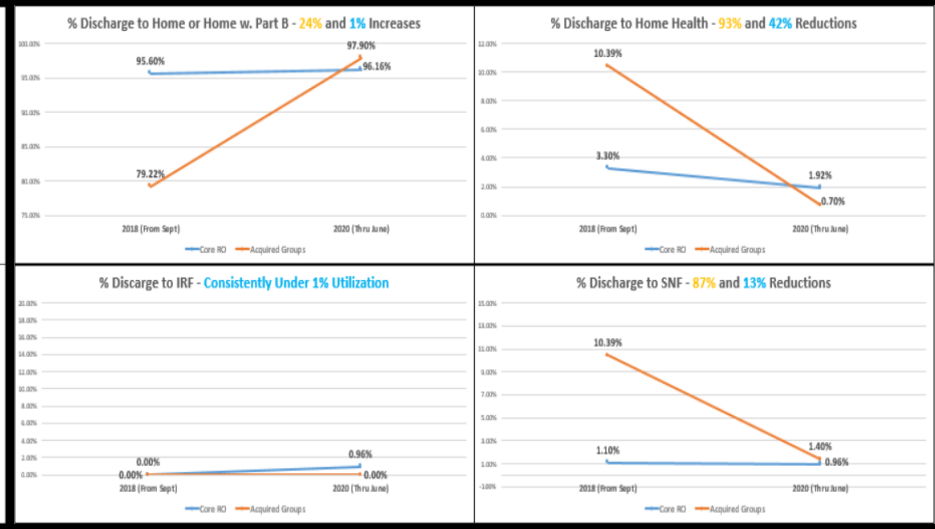


Quality:

Focus on Outcomes

Post-Acute Care:

Focus on Plan of Care



Demand Matching ($18.5M in Savings) + Focus on Quality and Post-Acute Care ($12.5M in Savings) = $31M saved

Most Important Strategy.

1

Negotiating reasonable reimbursement with patient centered care in mind.

Summary.

Bundled payments have advantages but also place additional challenges on providers.

Bundled payments seem likely to be increasingly used in the future.

Providers will have to learn to navigate care with this form of reimbursement.

While bundled payments intrinsically increase risk to providers, strategies may be taken to minimize these risks.

Of course, all while ensuring patient centered care.

Conclusion

- Current cervical and lumbar fusion bundled payment model fails to employ robust risk adjustment of prices
- DRG-based risk adjustment model- reimbursed same amount regardless of surgical approach, extent of fusion, use of adjunct procedures, and cause/indication of procedure
- Need to account for individual patient-level, state-level, and procedure-level variation to prevent creation of financial dis-incentive in taking care of sicker patients and/or performing more extensive complex spinal fusions

Malik, The Spine Journal, 2019

A Better Bundle

- Start with CMS-proposed bundle
- Limit scope
- Ensure reasonable population persists
- Run data against limited scope
- Modify risk with data
- Don’t accept inappropriate risk
- Don’t carve the model in stone

Bundled Program Evolution

- Opportunity to practice VBC
- Guide to efficient care
- Cost savings diminish with success
- Models shift to competitive quality”

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While providers improve, their incentive and returns diminish.

Providers through bundle payments adopt value based strategies:

Minimize wasteful care

Navigate site of care to minimize unnecessary costs

Optimize patient morbidities

Improving patient outcomes through evidence based care.

What providers get over time:

Improved patient outcomes

Lower reimbursement.

Incentives are not aligned, in order to encourage providers to improve.

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