Bundled Payment and Using Episode Groupers to Measure Specialist Performance

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Session Outline

Part 1: Next steps for Medicare bundled payment and implications for ACOs

- Context for future CMS bundled payment policy

- Overview of BPCI-Advanced model

- Mitigating negative impact of Model overlap

- Considerations for ACO participation in bundles

Part 2: Using episode groupers to measure specialist physician performance

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Context for Medicare Bundled Payment

- Current bundled payment models are ending
  - BPCI-A and OCM end after 2023
  - CJR ends after 2024
- CMMI wants to bring more value-based specialist care into ACOs
- New models likely for 2024
- Model overlap is a concern for ACOs

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MedPAC Supports a National Medicare Episode Model

- Participation could be mandatory* for certain providers and clinical episodes

- Recommend ACO-attributed beneficiaries be included

- ACOs could incorporate episodes into their own contracts with providers

- Recommend CMMI continue limited testing of multiple episodes

- Different APMs should be designed to work together

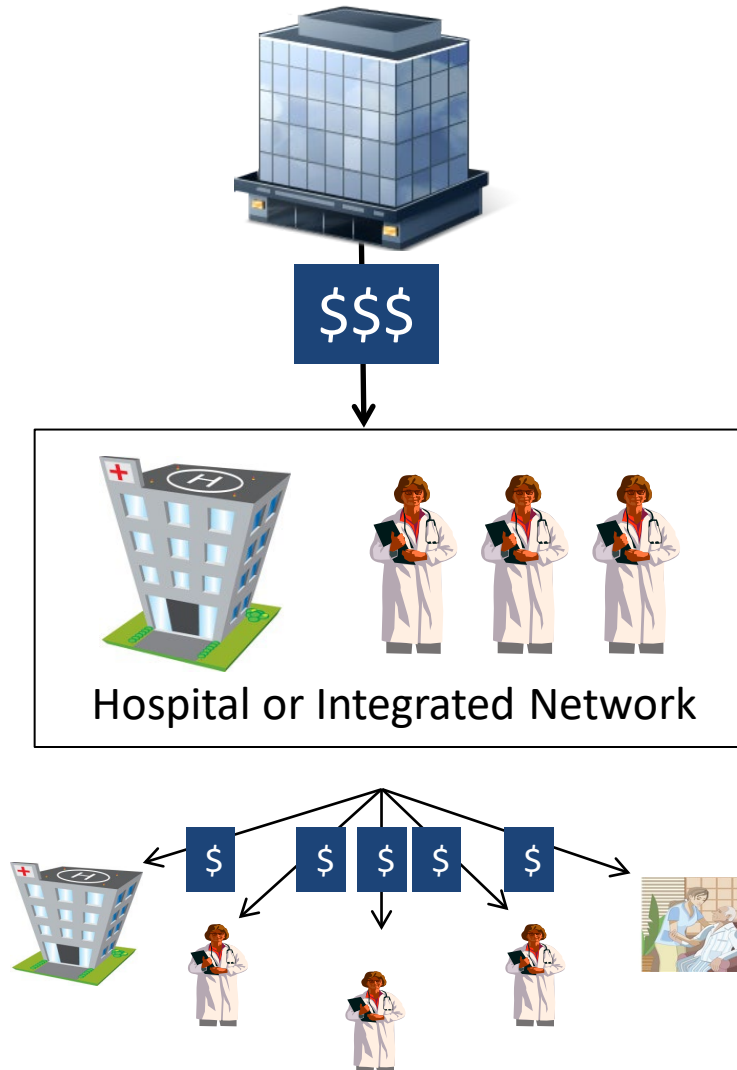* Bundles would likely be mandatory for hospitals but not physicians.

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Evolution of Medicare Bundled Payment

Medicare Bundled Payment
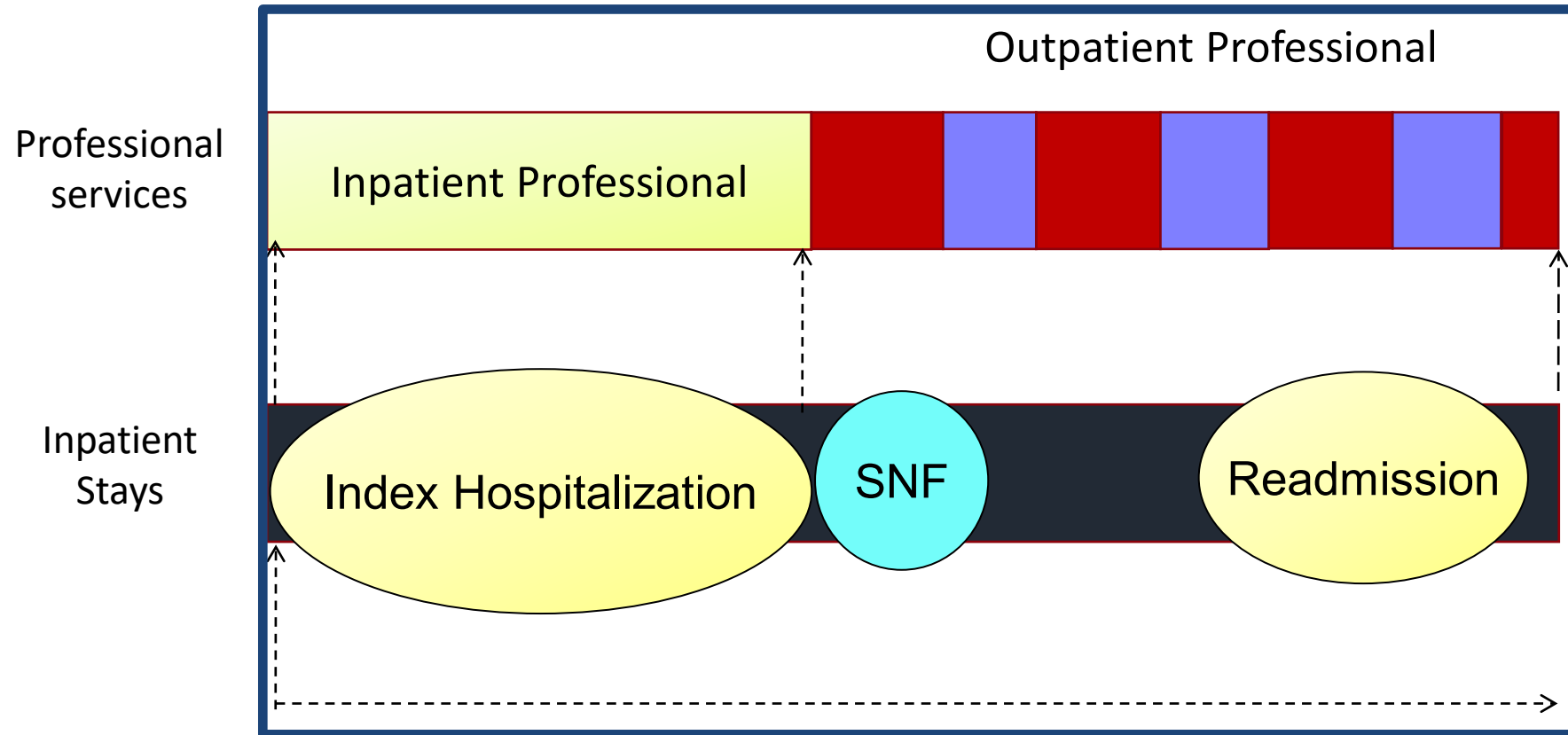
Prospective

$$$

Hospital or Integrated Network
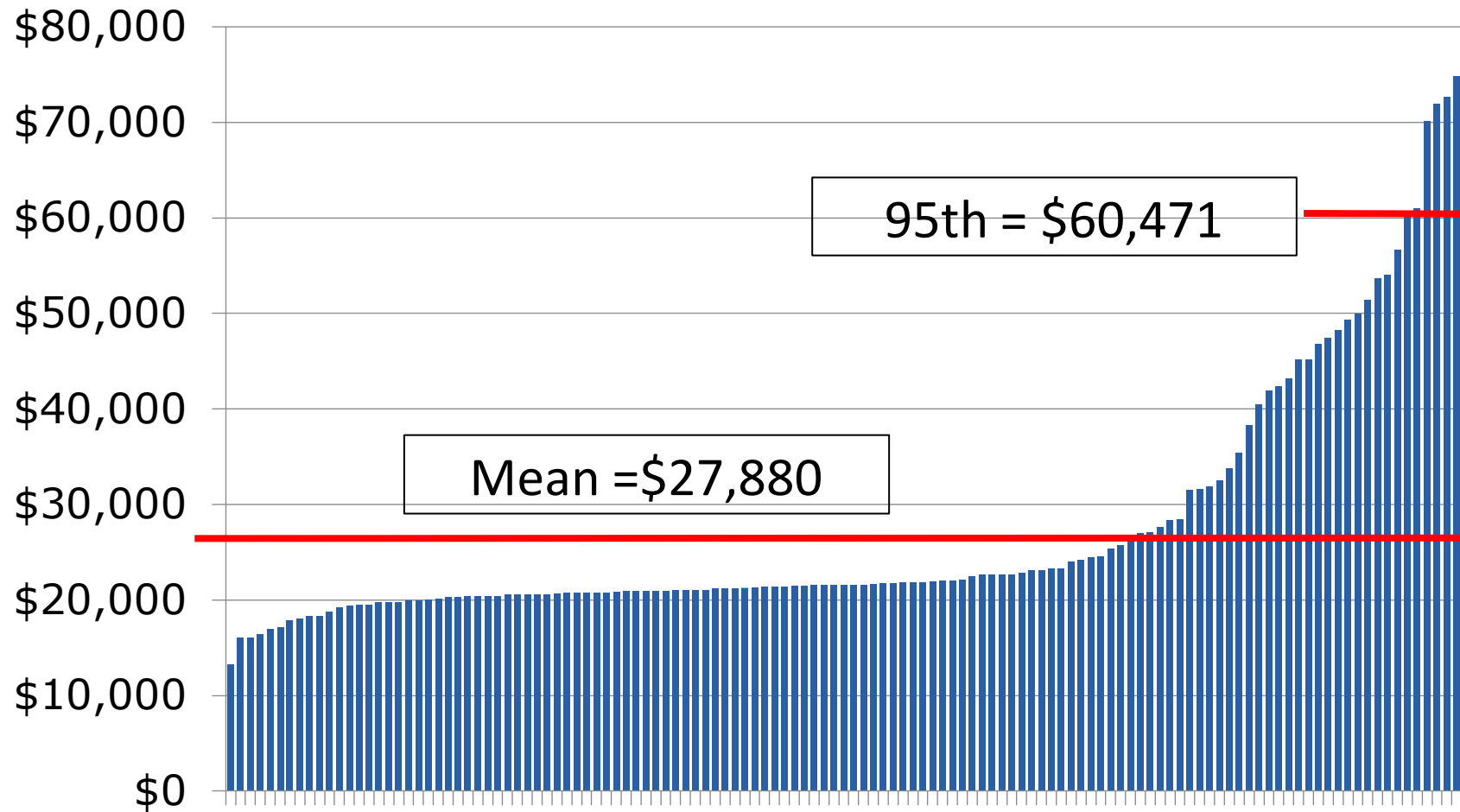
Retrospective

- Target budget for each episode
- All providers paid FFS
- Periodic CMS settlements
  - Distribute surplus
  - Reclaim deficit
- Health system decides
  - Whom to contract with
  - How to distribute bonuses

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Bundle Risk and Risk Mitigation

Medicare Cost per Case for 90-day Total Joint Replacement Episode (DRG 470): Sample Hospital (N=126)

95th = $60,471

Mean =$27,880

Medicare Cost per Case for 90-day Total Joint Replacement Episode (DRG 470): Sample Hospital (N=126)

Cases Shown in Chronological Order

P1 Mean = $29,131
N=63

P2 Mean = $25,515
N=63

P2/P1 = 87.6%

95th

Mean =$27,880

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Evolution of Medicare Bundled Payment Approach

BPCI Original		BPCI Advanced
48 DRG-based clinical episodes (30, 60, 90 day)	→	31 inpatient and 4 outpatient episodes (90-day)
Target prices based on trended historical spending	→	Target prices based on national regression model
No risk adjustment. Only DRG case-mix adjustment	→	Prices adjusted for historical spend, patient characteristics, peer group and DRG mix
No quality measures	→	Gain or losses adjusted for quality (up to 10% of NPRA)
Participants select 1 – 48 episodes	→	Participants select 1 – 8 clinical service line groups (each multiple episodes)

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BPCI Clinical Episode Exclusions

CLINICAL EPISODE EXCLUSIONS

The following are examples of what will be excluded from each Clinical Episode.

- **Excluded readmissions–** All Medicare Part A and Part B services furnished to a BPCI Advanced beneficiary during certain specified ACH admissions and readmissions (i.e., ACH admissions assigned at discharge to an MS-DRG for an organ transplant, trauma, cancer-related care, or ventricular shunts)

- **Excluded procedures –** Contralateral procedures with the same MS-DRG (e.g., MJRLE Clinical Episode that has a joint replaced in the opposite leg within 90 Days)

- **Excluded Cardiac Rehab Codes –** Payments for items and services for cardiac rehabilitation and intensive cardiac rehabilitation described in 42 C.F.R. § 410.49

- **Excluded Part B drugs; excluded IBD Part B drugs; excluded Hemophilia drugs**

- New technology add-on payments made pursuant to 42 C.F.R. § 412.87 and 42 C.F.R. § 412.88

- Payments for items and services with transitional pass-through payment status made pursuant to 42 C.F.R. § 419.62 and 42 C.F.R. § 419.66

Please review to the **MY4 Exclusion List** workbook to be posted in the BPCI Advanced website (https://innovation.cms.gov/innovation-models/bpci-advanced) for the specific MS-DRG and HCPCS code exclusions.

CMS reserves the right to modify this list at any time to add or remove MS-DRGs and HCPCS codes.

Precedence Rules

Precedence Rules for Episode Initiators

Potential Clinical Episode is identified.

Is the attending physician NPI associated with a PGP? — Yes → Assign Clinical Episode to that PGP.

No

Is the operating physician NPI associated with a PGP? — Yes → Assign Clinical Episode to that PGP.

No

Does the Anchor Stay/Anchor Procedure occur at a participating ACH? — Yes → Assign Clinical Episode to that ACH.
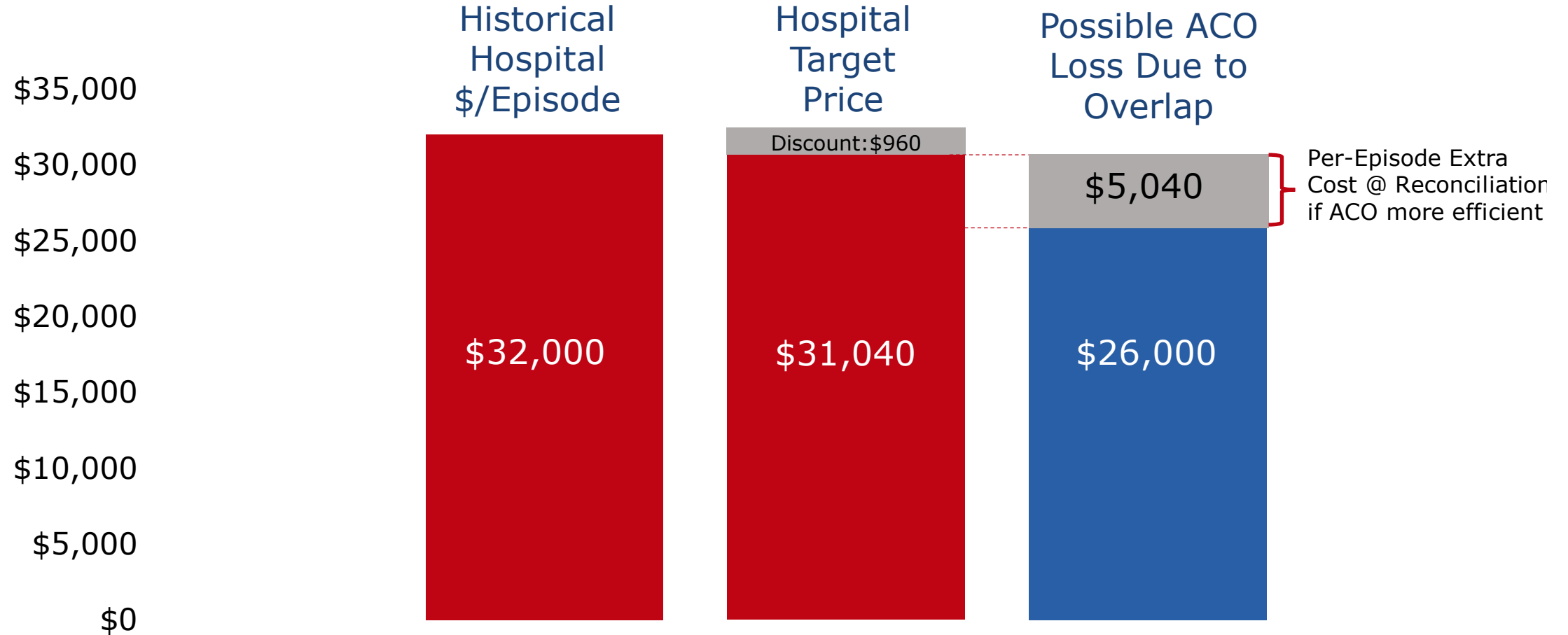
Model Overlap Rules

- Beneficiaries excluded from BPCIA
    - DCE/ACO REACH
    - MSSP Enhanced
    - Vermont and Maryland Models
    - Kidney Care models with downside risk
- Remember … MedPAC recommends no exclusions
- DCE, ACO Reach, MSSP Enhanced can still participate for beneficiaries outside the ACO
- MSSP Basic Track ACO beneficiaries are not excluded but the ACOs are protected because reconciliation timing
- That means that CMS may pay double when overlap occurs

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Calculating Hospital Benchmark Price for Clinical Episodes

Preliminary Hospital Benchmark Price[1] = Standardized Baseline Spending (SBS) * Patient Case-Mix Adjustment (PCMA) * Peer Group Historical Adjustment (PGHA) * Peer Group Trend (PGT)[2]

Standardized Baseline Spending (SBS):

National Average Hospital Cost Per Episode
X
Hospital Historical Adjustment

$$\text{Historical Adjustment} = \frac{\text{Actual Cost}}{\text{Predicted Cost}}$$
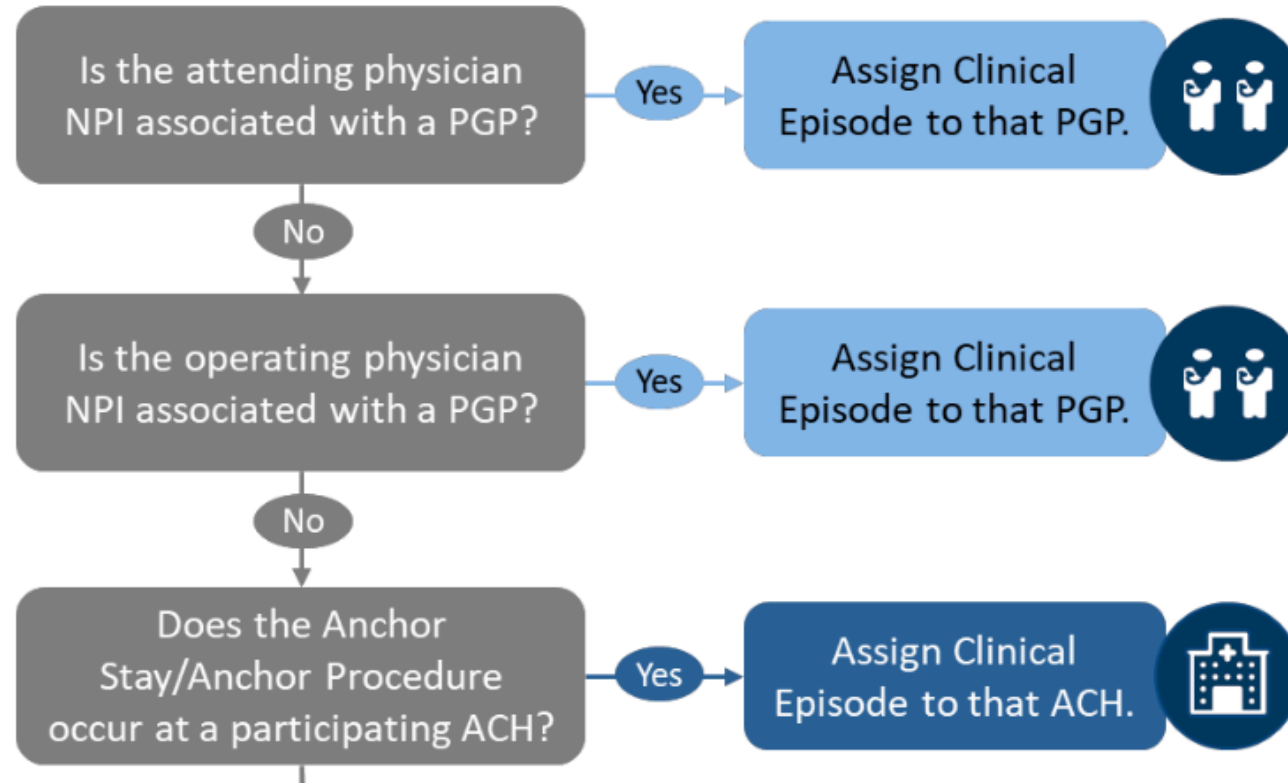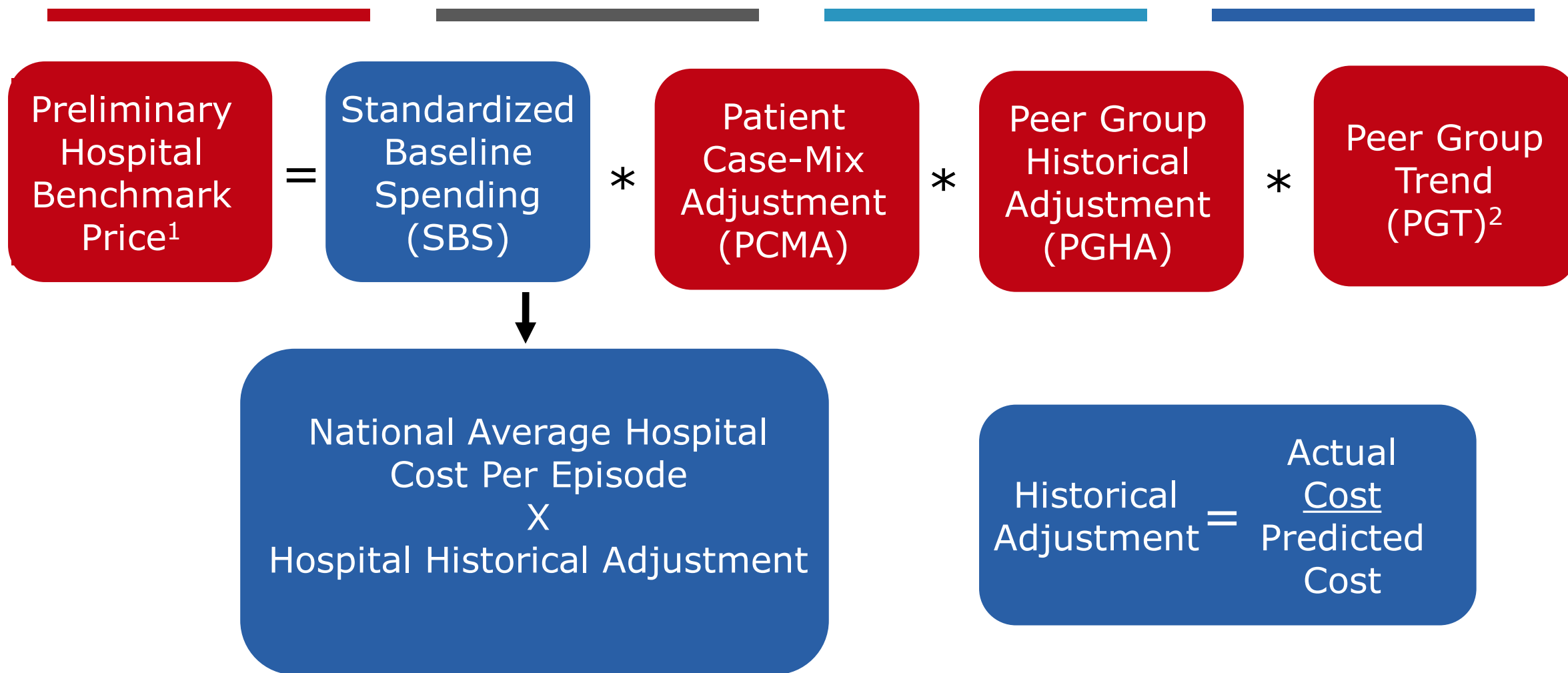
[1] Target price is benchmark price with 3% discount applied.
[2] Peer-group trend is set prospectively but adjusted retrospectively

Calculating PGP Benchmark Prices

PGP	Hospital	Hospital Benchmark Price	PGP Relative Case Mix*	Episodes	PBP-ACH Bench-mark Price
PGP 1	Hospital 1	$32,000	0.92	55	$29,440
PGP 1	Hospital 2	$28,000	0.99	35	$27,720
PGP 1	Hospital 3	$26,000	1.02	102	$26,520
PGP 1	Hospital 4	$42,000	0.84	14	$35,280
PGP 1	All				$28,099

*Ratio of PGP Patient Case Mix Adjustment (PCMA) Divided by Hospital PCMA

- BPCI-A Previously Had a Historical Adjustment for PGPs
- Adjustment reduced target prices for PGPs that were more efficient than the hospitals where they practice.
- A similar ACO "historical adjustment" is key for a "Fair" Overlap Policy

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Policy Options for Integrating Episodes

	ACO Beneficiaries	Non-ACO Beneficiaries
ACO Providers	Option: ACO Precedence for Episodes	Option: Include Under ACO Financial Model
External Providers	Ensure Fair Overlap Policy or Require ACO Contract	NA

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Considerations for Participating in Episodes

- Are your ACO's hospitals and specialist physicians prepared for bundles?

- Is your ACO open to taking additional bundle risk for beneficiaries that are not in the ACO?

- Can you negotiate reasonable gainsharing arrangements with your hospitals and specialists?

- Can you use your participation to recruit new (engaged) specialists into your ACO?

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Engaging Medical Specialists with Episodes of Care

Why Episodes?

- Provides information about cost and quality variation in specialty care
  - Engaging internal specialists
  - Profiling external specialists

- Insight into services and cost for acutely ill patients
  - Examine rates of acute events/procedures
  - Optimize care trajectories over time

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Options

- Home grown definitions

- CMMI Bundle Payment for Care Improvement (BPCI) bundles

- Consulting firm groupers (e.g., Millman)

- Commercial tools (e.g., ETGs, Cave)

- Patient Centered Episode System (PACES, open source)

Not All Episode Groupers are Created Equal

- Individual bundles versus a full system
  - The bloated episode problem
- Triggering episodes on diagnosis or procedure, not an inpatient stay
  - Reward those who avert inpatient stays
  - Capture a broad view of the cohort of interest
- Different methods for allocating services to episodes (one of the trickiest parts of grouping!)
- Transparency

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PACES Core Concepts

- **Comprehensive** clinical taxonomy – every code has a home
- **Transparency** – definitions and rules are totally open for review
- **Patient-Centered** episodes – provider and setting agnostic
- Episodes are constructed using a consistent set of **robust and parsimonious rules**
- Recognizes **relationships among episodes**
  - Procedure episodes are "nested" within their indications
  - Episodes include their sequelae
- Expected costs are adjusted using patient level information
- **No double counting** of costs or savings

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The Whole vs the Sum of its Parts
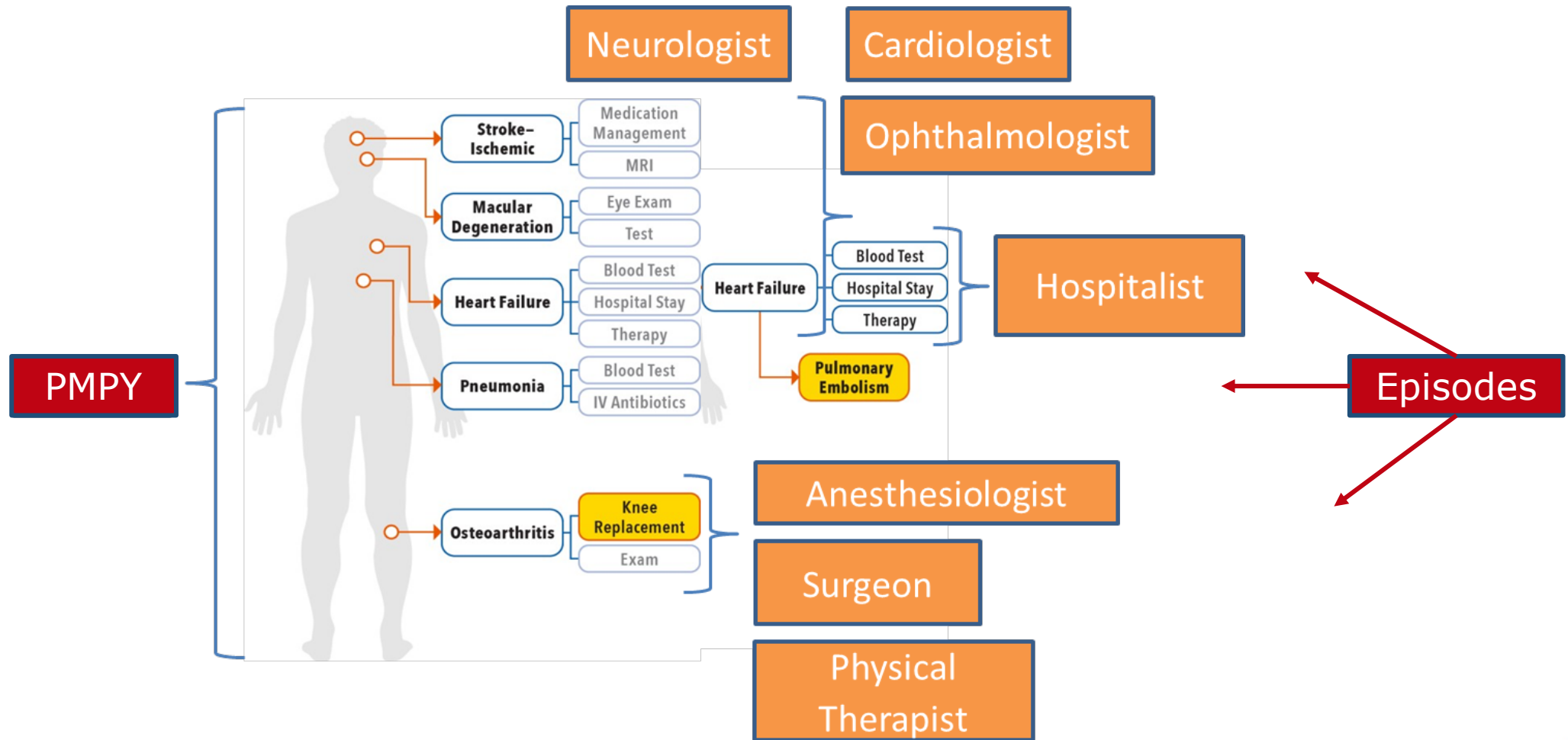
Nesting Episodes

Condition Episode → Colon Cancer Chronic Condition Episode of Care

June 1
Diagnosis,
Colonoscopy
Dr. Smith, GI

June 3
Pathology
Dr. Jones, Pathologist

★ Dx ★

Nested Episodes →

Surgery ★

July - December
Colectomy
Dr. Pink,
Oncologist

January -
December
Colectomy
Dr. Pink,
Oncologist

June 15
Colectomy
Dr. Green, General
Surgeon

★ ★ Chemotherapy ★ ★

★ Monitoring ★

★ Indicates visits

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Number of Clinicians for Selected Procedural Episodes

Procedural Episode	Average Count of Unique Clinicians per Episode	Range
CABG	21	8-48
Colectomy	13	3-44
Mastectomy	9	4-16

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PACES Example: Background

- Large metropolitan hospital referral region (HRR)
- 2012-Q3 2015
- Colectomy procedure episodes
- Filters:
  - Zero dollar and low dollar cases
  - No inpatient stay assigned
  - (minimum service set)

Key stratifications – surgical episodes of care

- Elective Case vs. Urgent/Emergent
- Indication
- Presence/absence of sequelae (proxy for quality)
- Clinical severity of the patient
- Resource use (low versus high)

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Profiling: Distribution of Observed Costs for Colectomy Episodes, Large Metropolitan HRR
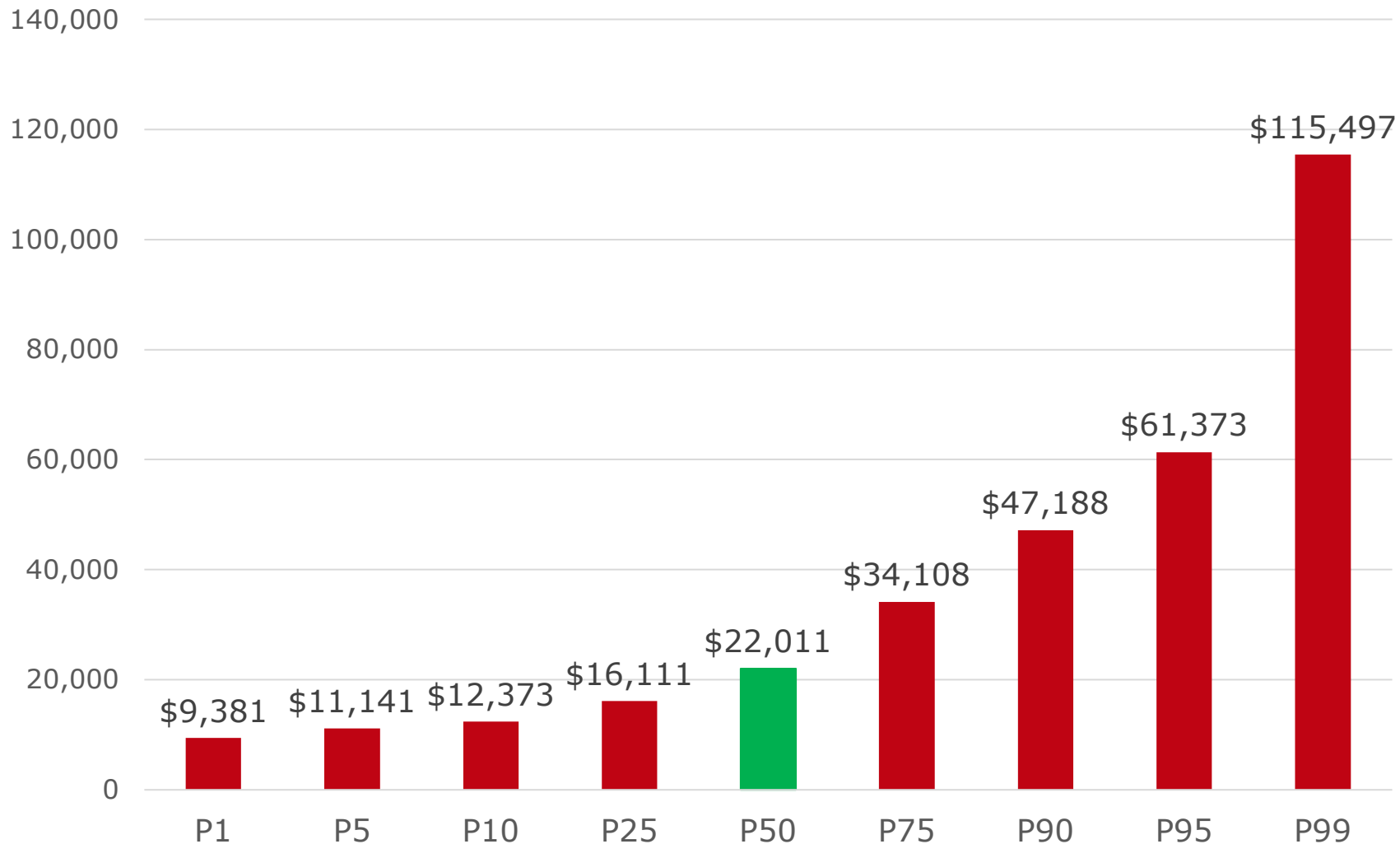
Key Points:
- The interquartile range is almost $18,000 and the upper one percent of cases cost over $100,000
- This suggest room to improve efficiency

Percentile	Value
P1	$9,381
P5	$11,141
P10	$12,373
P25	$16,111
P50	$22,011
P75	$34,108
P90	$47,188
P95	$61,373
P99	$115,497

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Variation in Resource Use by Patient Severity

Spending Profile for Colectomy Episode in Sample HRR

	Quartiles are Based on Patient HCC Scores			
	Low Risk	Medium Low Risk	Medium High Risk	High Risk
Number	639	640	640	639
Mean	$20,834	$27,081	$34,666	$49,086
StdDev	$7,940	$11,995	$16,140	$31,325
P25	$15,372	$19,824	$22,887	$28,882
P50	$19,957	$23,731	$30,954	$41,110
P75	$21,993	$31,284	$42,323	$55,079

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Variation in Mean Colectomy Resource Use by TIN
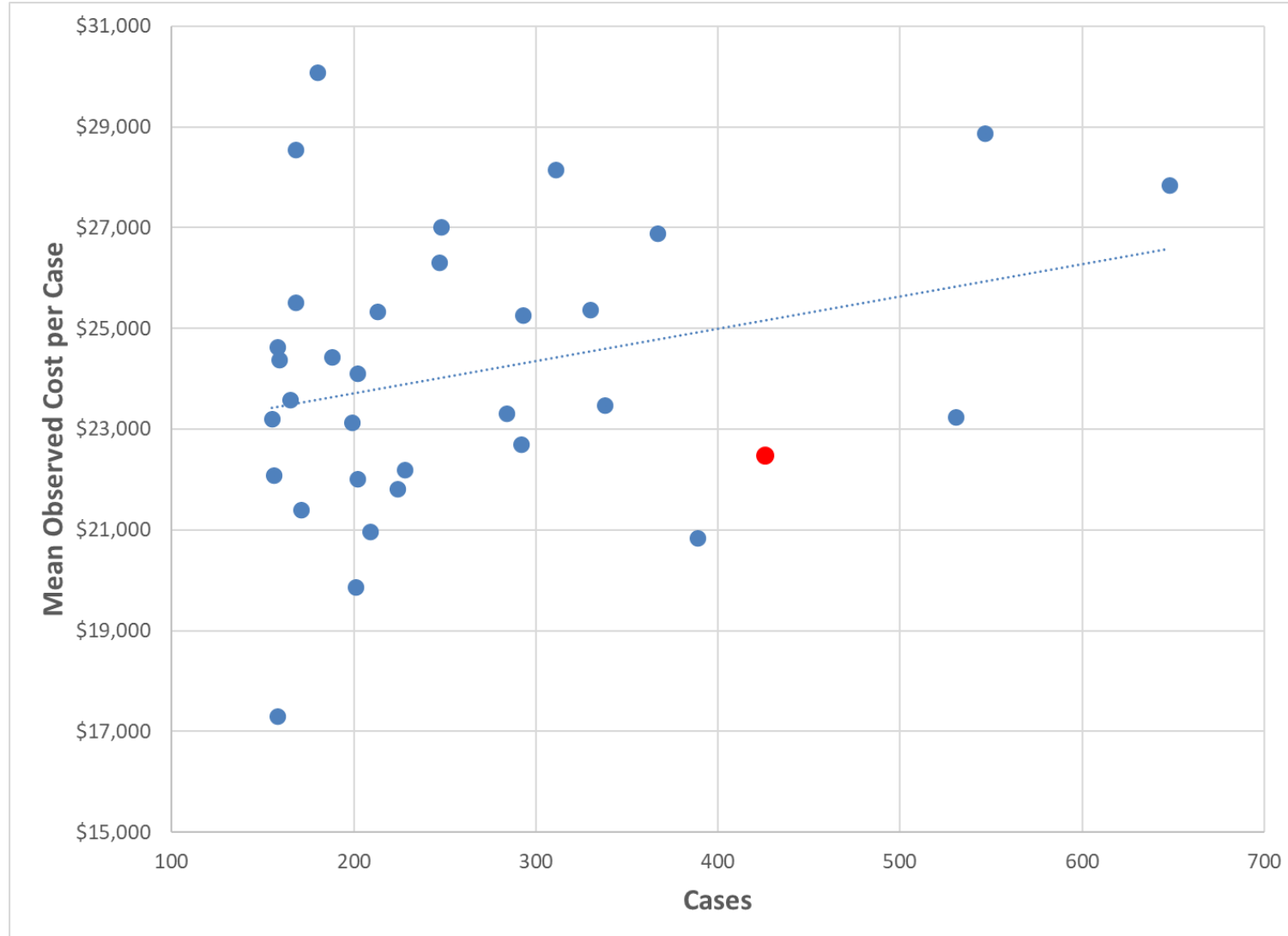
Observed-to-Sequalae Rate by TIN

TIN	N	Mean Total Episode Reimbursement, Observed	Mean Total Episode Reimbursement, Expected	Observed/Expected Ratio	Percent Reimbursement, Sequelae
434XXX	648	$29,050	$25,328	1.15	4.0%
428XXX	547	$30,085	$25,101	1.20	4.3%
391XXX	531	$24,441	$24,436	1.00	4.8%
370XXX	426	$23,346	$26,464	0.88	3.0%
421XXX	389	$21,773	$23,146	0.94	3.5%
222XXX	367	$29,408	$23,725	1.24	5.0%
427XXX	311	$29,624	$24,295	1.22	4.5%
621XXX	292	$23,585	$27,215	0.87	63.4%

- Four TINs with observed costs that are lower than expected cost
- 370701328 stands out for a low O/E ratio and low sequelae reimbursement

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Episode ID	Sequelae Episode Name	How many times this COND is a sql of a TX episode?
345	Electrolyte ds	42
74	Reparatory failure	41
643	Sepsis, SIRS	41
206	Fluid ds hypo/hyper-volemia	39
141	Post-op hemorrhage/hematoma	38
1570	Acute kidney failure	36
641	Post-op infection	35
29	Pneumonia	31
982	Anemia acute	28
32	Pneumonia aspiration	27
165	Acute myocardial infarction	26
248	Cellulitis, trunk and extremities	26
660	Surgical complctn nos	25
1548	UTI	23
880	Intestinal obstruction	18
2177	Heart failure (acute)	16

Sequelae at an Institutional or Provider Level

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Colectomy by Indication

	All	Colorectal neoplasm malignant				Diverticulitis of colon			
	N	N	Observed	Expected	O/E	N	Observed	Expected	O/E
428XXX	547	219	$27,794	$23,803	1.17	76	$25,688	$22,420	1.15
391XXX	531	180	$22,031	$22,658	0.97	78	$26,299	$25,768	1.02
370XXX	426	202	$21,807	$23,871	0.91	70	$23,592	$25,766	0.92
421XXX	389	140	$21,807	$22,811	0.96	72	$18,394	$23,687	0.78
222XXX	367	125	$23,687	$21,597	1.10	58	$25,369	$21,975	1.15
427XXX	311	119	$27,466	$22,342	1.23	62	$28,729	$23,628	1.22
621XXX	292	115	$21,558	$23,771	0.91	37	$21,855	$24,853	0.88

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TIN Comparison – Colectomy for Cancer

	TIN 043XXX	TIN 042XXX	TIN 391XXX	TIN 370XXX
N	312	245	187	209
Pre-operative phase				
E&M	$198	$208	$135	$140
Imaging/lab	$301	$326	$237	$388
Other	$231	$292	$66	$161
Intra-operative phase				
Index Inpatient Facility	$17,185	$18,090	$13,840	$14,038
Index Facility Outlier Payment	$1,081	$1,135	$188	$883
Index OP Facility Charges	$3	$4	$35	$13
Operating Clinician	$1,945	$1,964	$1,768	$1,757
Anesthesia	$473	$456	$365	$436
Imaging/lab	$229	$294	$248	$180
Other	$28	$52	$52	$22
Post-operative phase				
Inpatient Facility/Readmissions	$196	$788	$999	$451
PAC	$1,285	$1,874	$255	$578
Other	$1,807	$1,422	$1,026	$723
Sequelae	$4,793	$4,450	$3,106	$2,612
Total	$27,947	$29,934	$21,293	$21,660

- Focal TIN also performed well on cancer surgery
- Strengths appear to be low readmissions and complications costs

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Challenges/Considerations

- Severity mix within episodes
  - Episode focused risk models, not generalized HCC models
- Low volume specialist groups
  - Pool multiple years of data to increase N
  - Look at multiple bundles for the same group

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Questions and Comments

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