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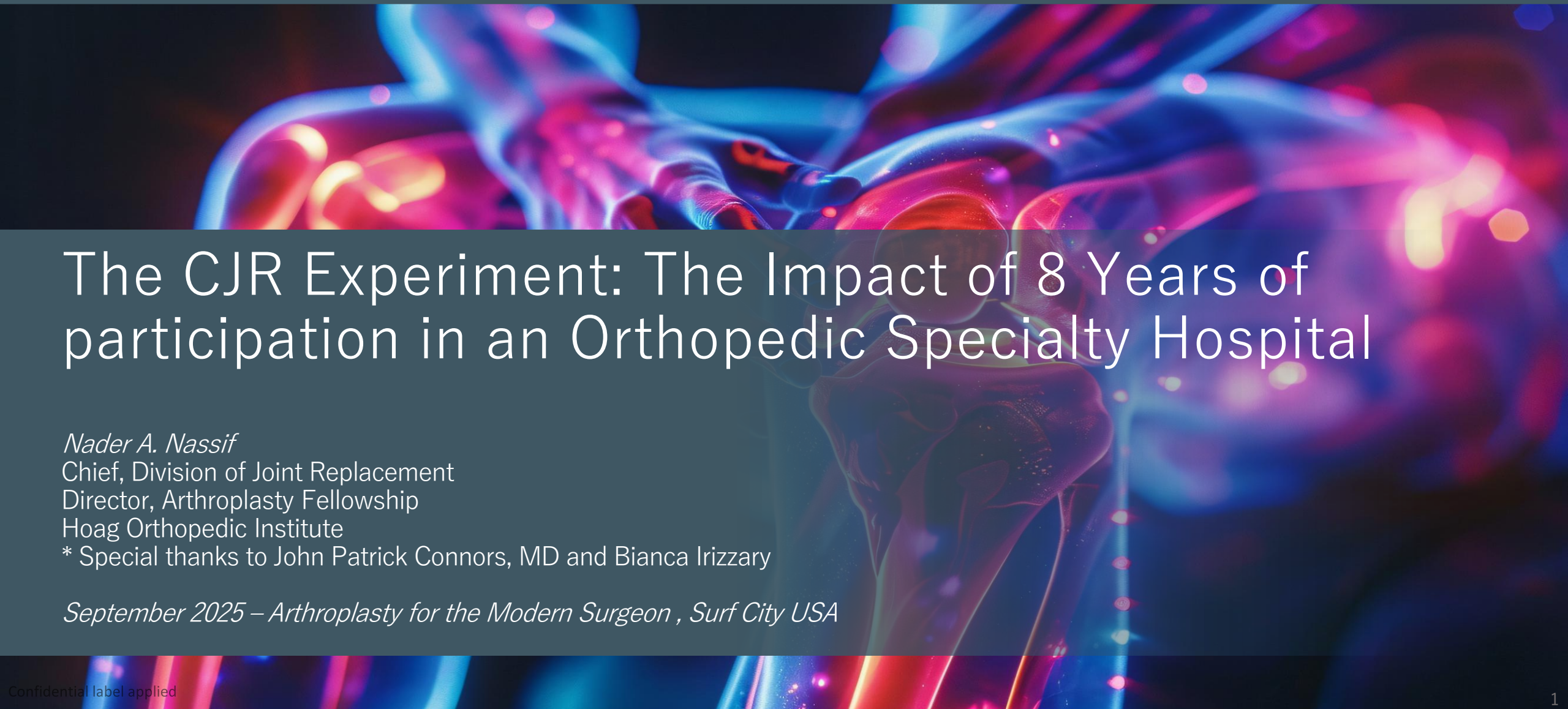

The CJR Experiment: The Impact of 8 Years of participation in an Orthopedic Specialty Hospital

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* Special thanks to John Patrick Connors, MD and Bianca Irizzary

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  - Depuy-Synthes
  - The Hoag Foundation

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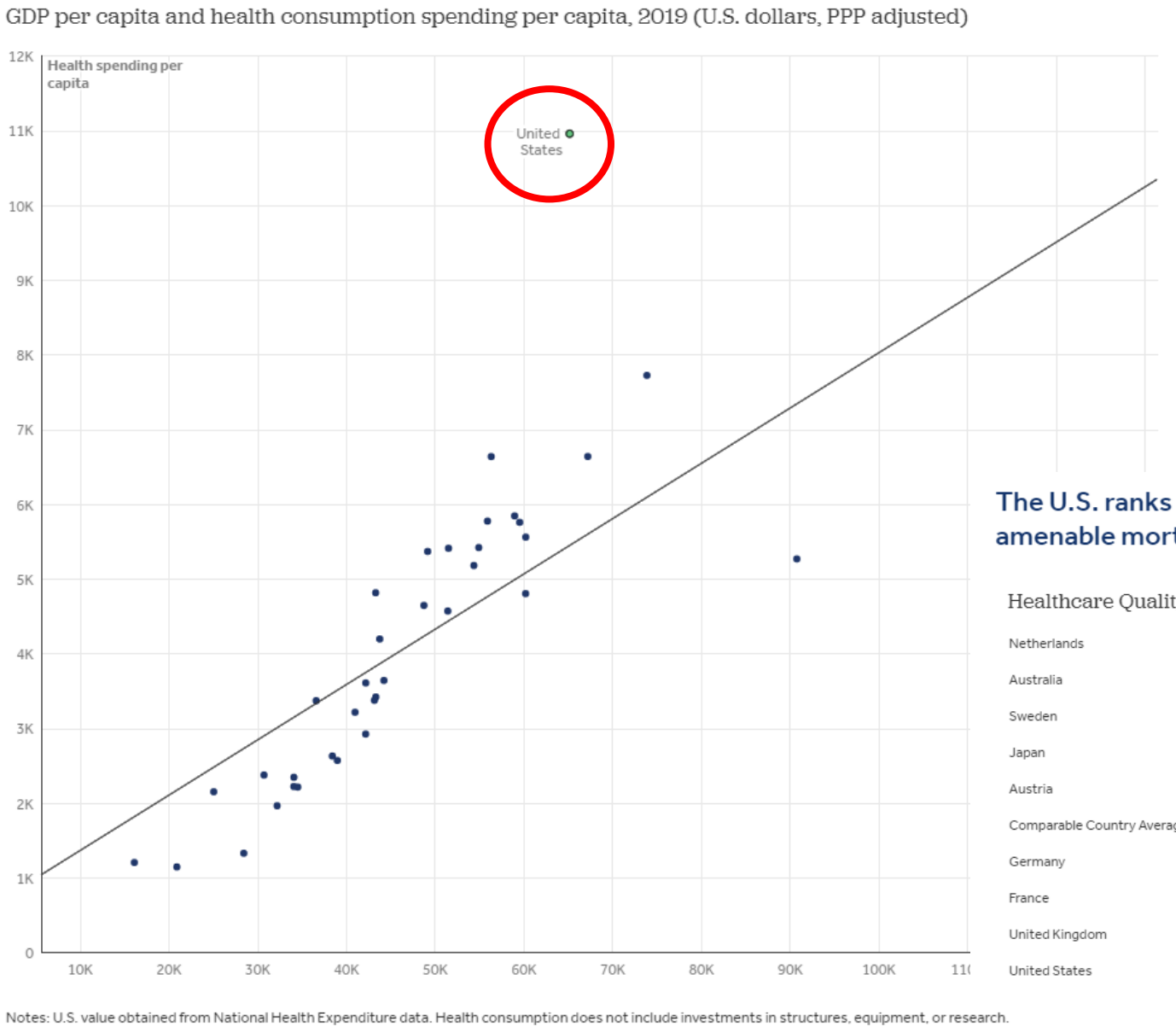
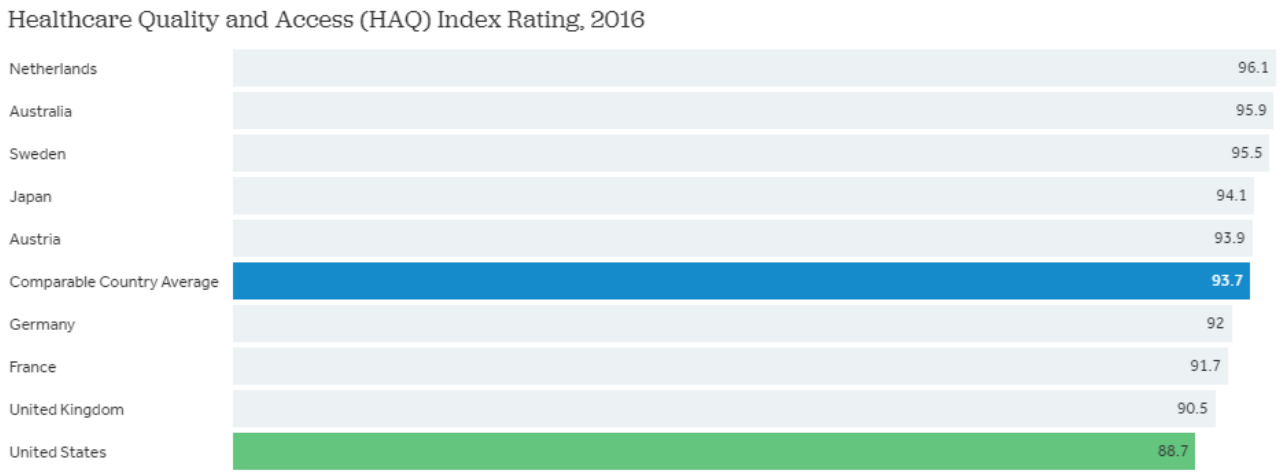
This Leads to.....



Quantity ≠ Quality

The U.S. ranks last in a measure of health care access and quality, indicating higher rates of amenable mortality than peer countries

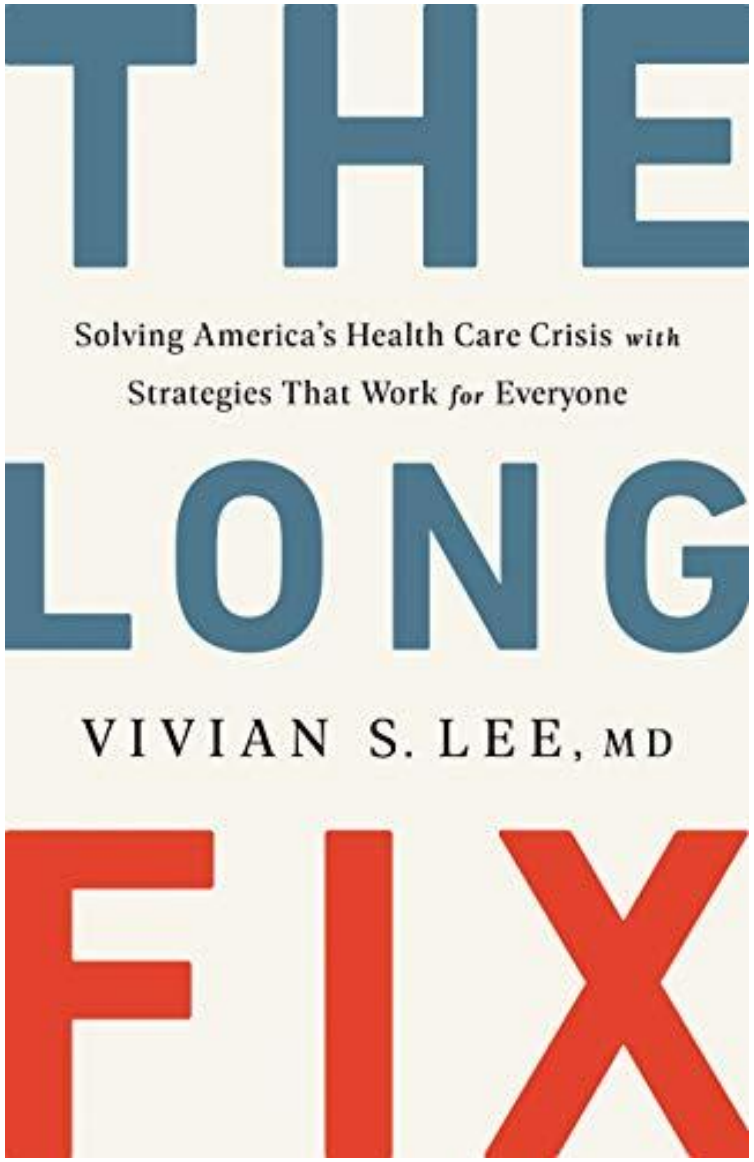


The Solutions:

- *Shifting Risk*
  - creating bundles/episodic payments
  - Pay for value not volume
  - Understanding costs, spending per intervention/surgeon (analytics)

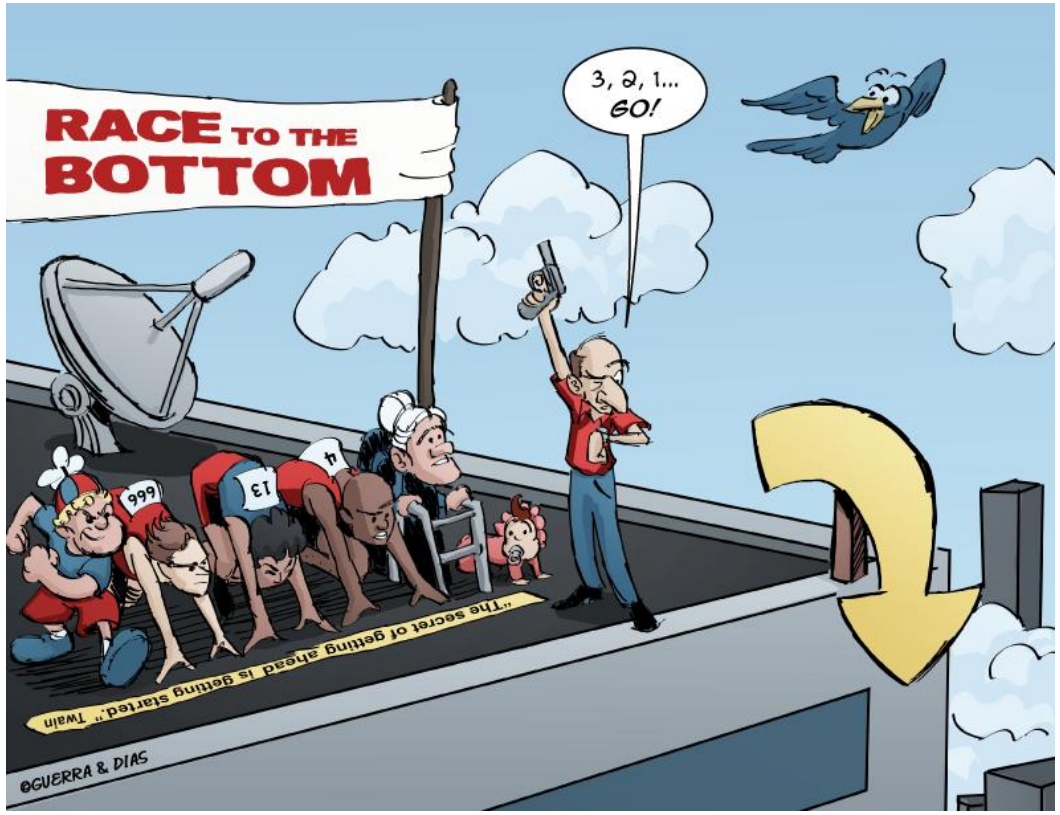
- *Choosing Appropriate site of Care*
  - Transitioning to outpatient or the ASC
  - Picking the right patient for the right Location (predictive analytics)

- *Shifting from quantity to Quality*
  - Collecting Data for MEASURING quality
  - Ensuring that interventions are effective
  - Big Data



Advantages of Bundled Payments

- Coordinated care by all providers/facililties.
- Financial alignment drives continuous process improvement
- Accountability by all providers for the entire episode of care
- Risk sharing with the payor/Physicians/Hospital/CMS
- **DRIVES LOWER COSTS**
- **Promotes INCREASED VALUE.**



- Total Hip (THA) and Knee Arthroplasties (TKA) are expected to grow by over 500% by 2060

- Costs to Centers for Medicare and Medicaid Services (CMS) expected to balloon to > $50 Billion annually on arthroplasties alone

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

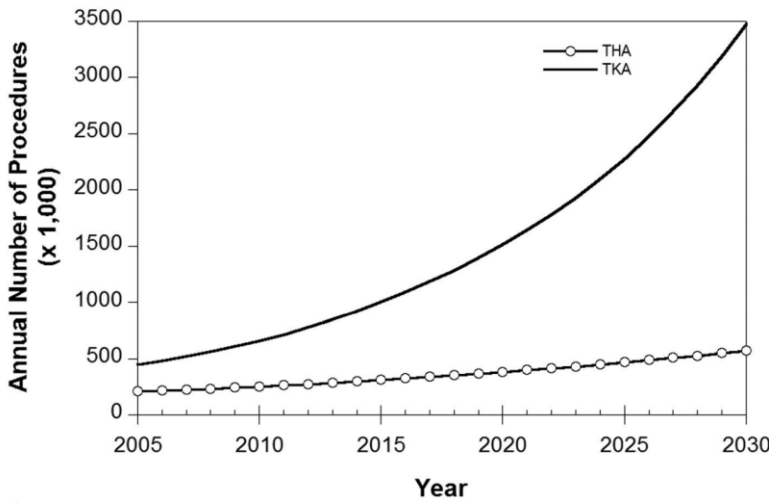


Fig. 1
The projected number of primary total hip arthroplasty (THA) and total knee arthroplasty (TKA) procedures in the United States from 2005 to 2030.

Bundled Payments for Care Improvement Advanced | BPCI Advanced

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES
CENTER FOR MEDICARE AND MEDICAID INNOVATION

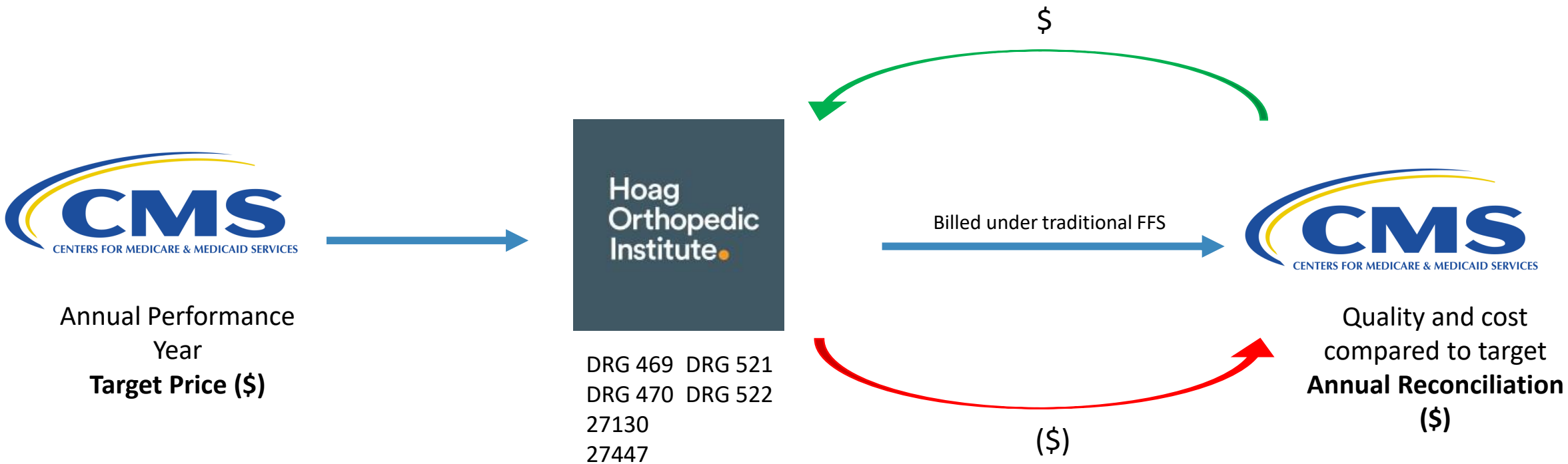
Comprehensive Care for Joint Replacement (CJR) Model

Transforming Episode Accountability Model (TEAM)

CMS' 5-year mandatory model launching January 1, 2026

5 Surgical Procedures	30-day Episodes	Two-sided Risk	ACO Overlap	Quality Measures
Lower Extremity Joint Replacement Surgical Hip & Femur Fracture Treatment Spinal Fusion CABG Major Bowel Procedure	Under the model, acute care hospitals would be accountable for episode costs during the inpatient stay or outpatient procedure and for 30 days following discharge.	One-year guide path to two-sided financial risk with the option to move to Fisk sooner Additionally, certain hospitals, such as safety net hospitals, would have lower levels of risk under the model	The model will allow overlap with Medicare ACOs and will require hospitals to refer patients to primary care services to support continuity of care and positive long-form health outcomes	Three quality measures will be linked to financial gains and losses including Readmissions Patient Safety Patient-reported outcomes

Comprehensive Care for Joint Replacement (CJR)



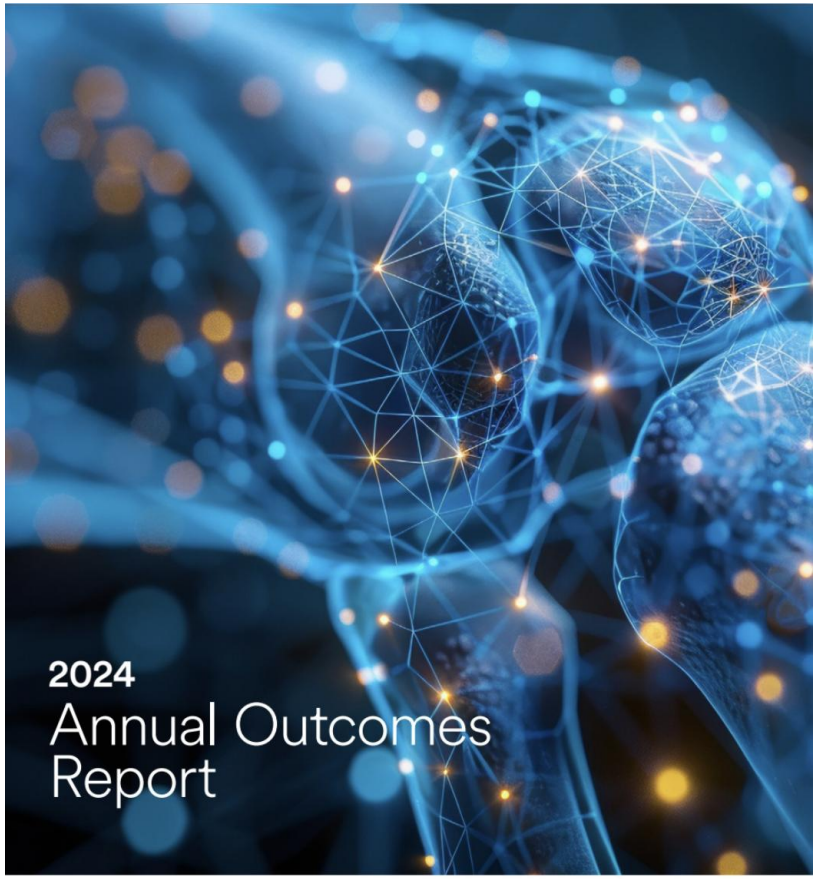
Comprehensive Care for Joint Replacement (CJR)

- Retrospective 90-day Bundle: Hospital controlled, allows for gainsharing with physicians
- 5-year program but was extended for an additional 3 years.
  - April 6th, 2016 – December 31st, 2024
- Initially included all lower extremity joint replacements (DRG 470 and 469) including fractures - inpatient only
- In PY6, eligible outpatient THA and TKA included under CPT 27447 / 27130
- No Initial Risk adjustment, changed in PY6-8
- **Target Price: Gradually moved from hospital-based performance to regional pricing.**

Comprehensive Care for Joint Replacement at Hoag Orthopedic Institute

- Orthopedic-Specialty Hospital
  - Pre-existing cost sensitivity
  - Attention to transparency and quality

- Hospital and physicians entered a gainsharing agreement to reach a mutual goal



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Increasing Value with the CJR program

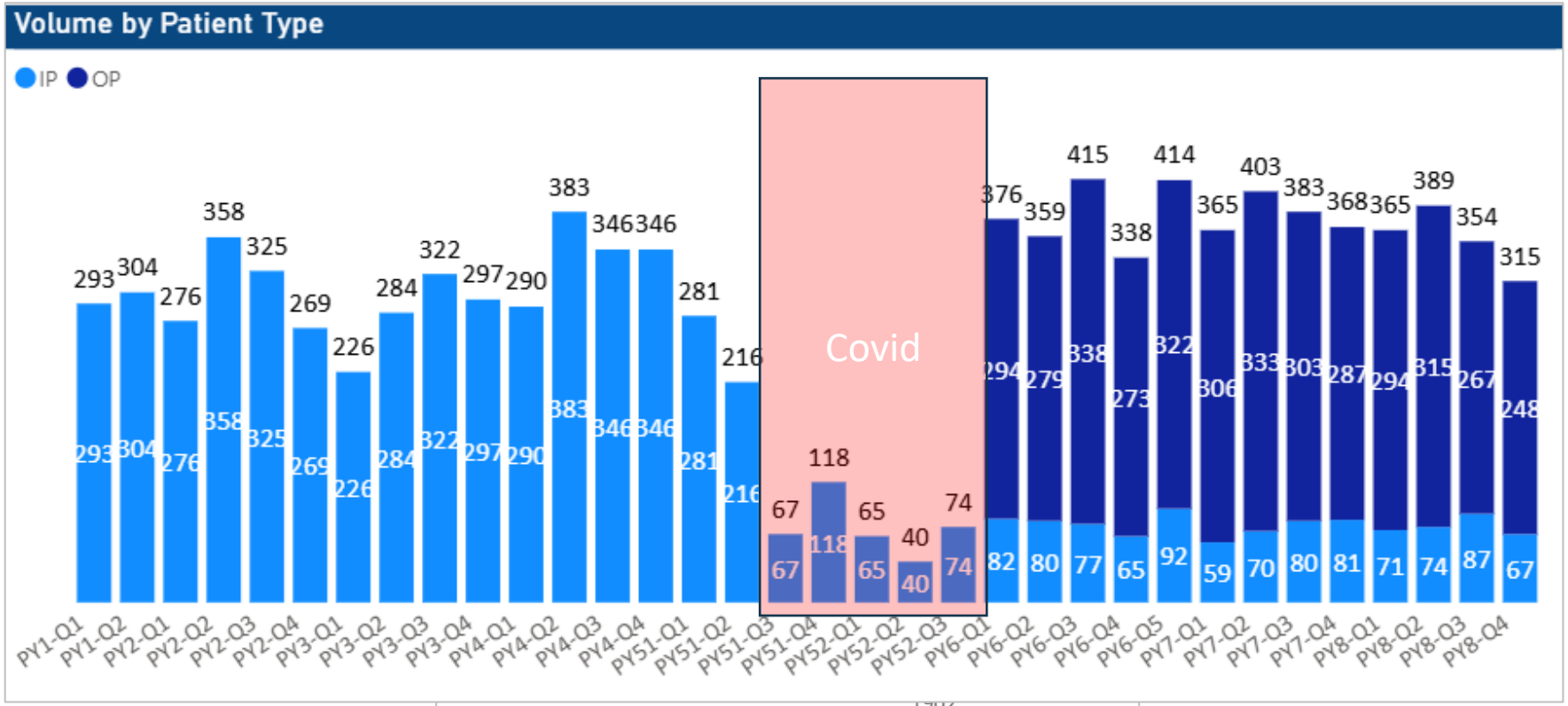
Quality

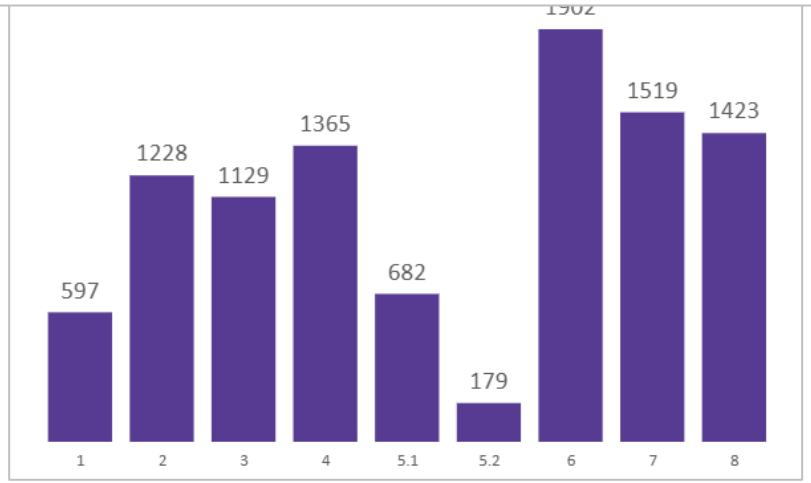
- Length of Stay
- Discharge Dispositions
- 90 Day Complications
- 90 Day Readmissions
- CMS ”Composite Quality Score”
- PROM collection

Cost

- CMS Target Price
- ALL healthcare spending in 90-day period
  - Anchor Hospitalization
  - **Post-Discharge Care**
  - **Any other healthcare costs**

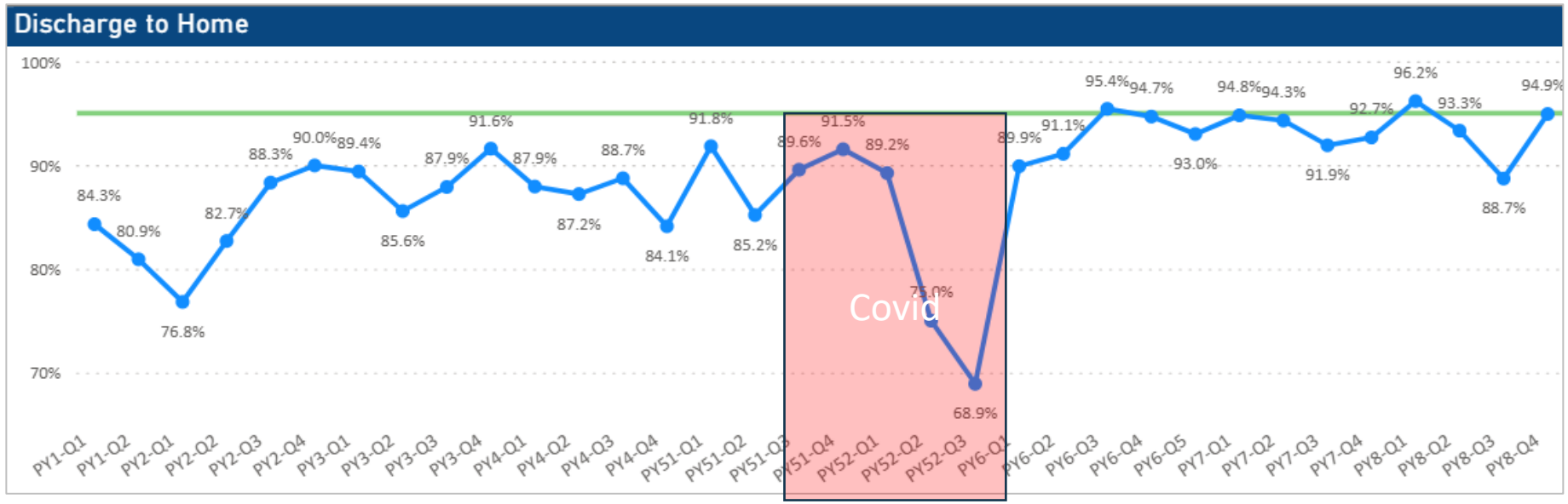
Volume





- Average 1,114 cases per year
- Between PY6-PY8, 80% of cases were outpatient (SDS or <24 hrs)
- 54% TKA, 43% THA, 3% THA-FX

REALITY # 1: Every patient not discharged home is a bundle buster



- LOS decreased and Discharge Home increased in accordance with national trends
  - 3.8 to 1.3 days
  - 84.3% to 94.9% Discharge Home
- No difference in complications or CQS
  - 0.52% to 0.12%
  - “Excellent” at all time points

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Skilled Nursing and Acute Rehabs!

SNF AVGS BY PY

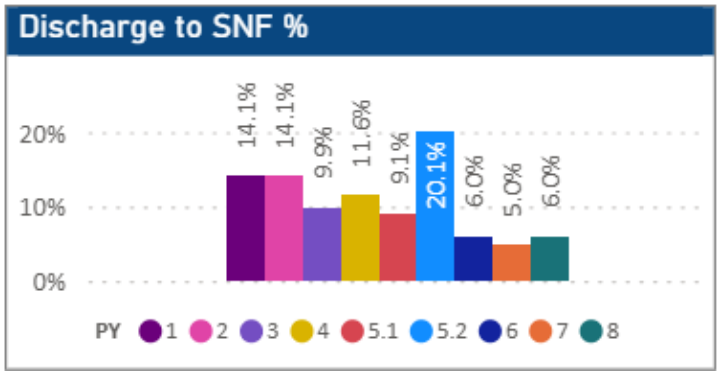
PY	SNF %	SNF Pts	SNF Stays	ALOS	Avg Spend	Total Spend %
1	14.2%	85	89	14.3	$8,638	5.7%
2	15.6%	187	198	14.2	$9,140	6.5%
3	9.9%	110	117	12.9	$8,282	3.9%
4	13.1%	178	192	13.8	$9,172	5.9%
5.1	10.3%	69	71	14.3	$9,230	4.6%
5.2	21.2%	37	40	17.5	$14,430	12.7%
6	6.8%	126	135	16.8	$12,884	4.2%
7	5.4%	79	90	17.6	$14,007	3.7%
8	6.5%	90	93	17.7	$13,117	4.4%
Total	**9.8%**	**961**	**1025**	**15.1**	**$10,494**	**4.9%**

Covid

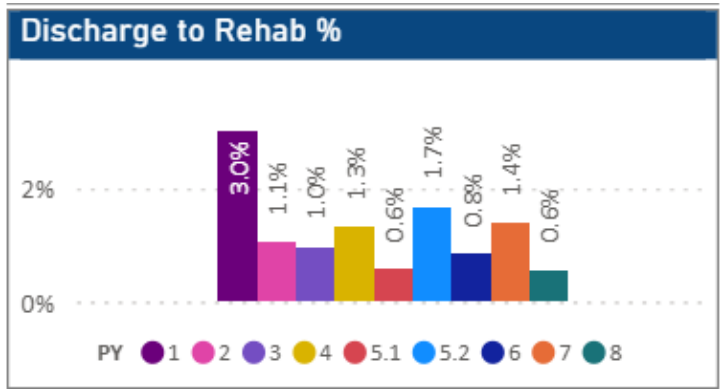
REHAB AVGS BY PY

PY	Rate	# Pts	# Visits	ALOS	Avg Cost	% Total Spend
1	3.5%	21	22	8.59	$15,946	2.4%
2	1.5%	18	18	8.33	$15,710	1.0%
3	1.6%	18	19	9.47	$18,757	1.4%
4	0.8%	11	11	10.64	$19,533	0.7%
5.1	1.0%	7	7	9.00	$18,908	0.8%
5.2	1.1%	2	2	12.00	$24,487	0.9%
6	1.2%	22	23	10.87	$24,837	1.2%
7	2.2%	33	37	11.38	$24,673	2.4%
8	0.7%	10	10	11.10	$25,264	0.8%
Total	**1.4%**	**142**	**149**	**10.10**	**$20,959**	**1.3%**

Covid



- Utilization decreased!! (-54% SNF, -80% ARU)
- Length of stay increased as unhealthier patients were more likely to result in non-home discharge



Getting Patients home = It takes a village

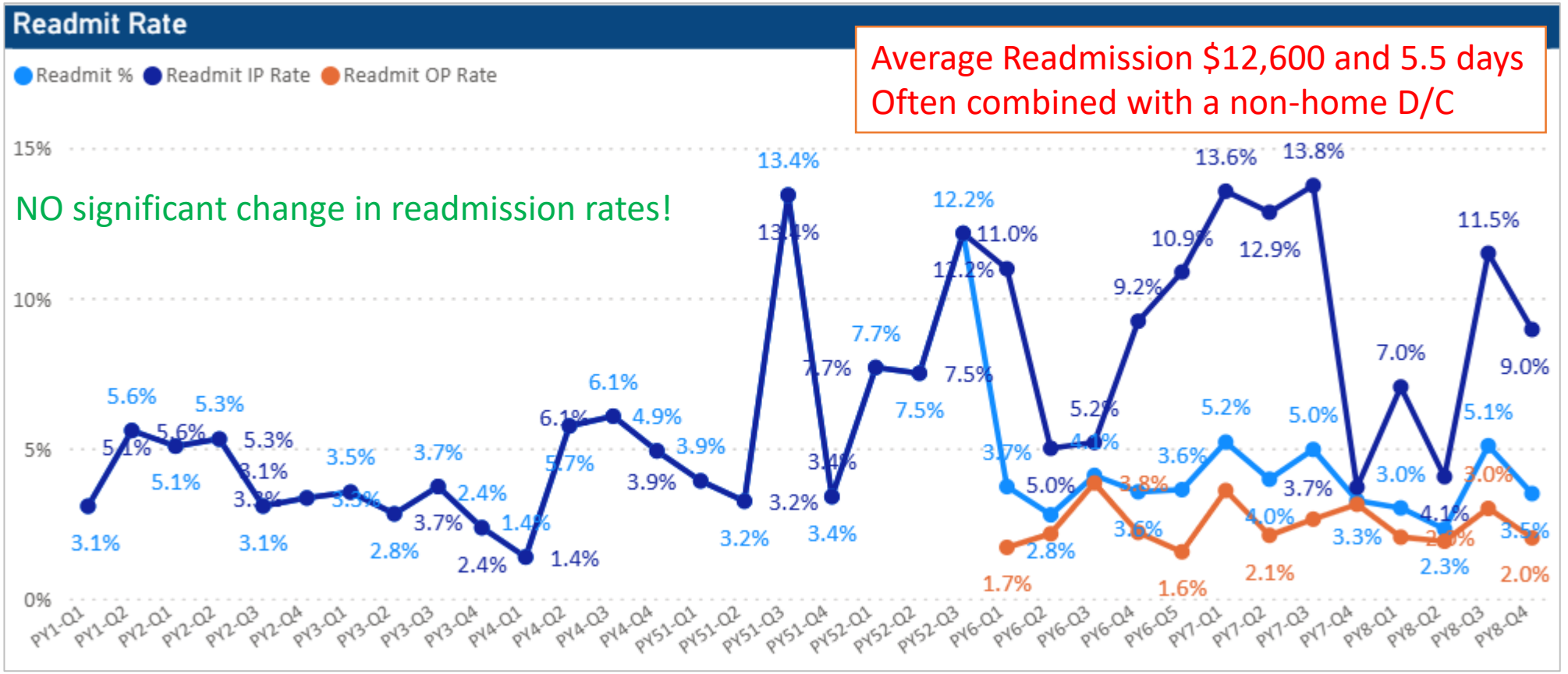
- A LOT of pushback from patients but COVID was a big motivator
- Family or Friend buy-in is essential
- A consistent message from the surgeon, staff and physical therapist, hospital
- Ensure patient has resources to be successful at home, reduce anxiety to both patient and family.

Pre-Operative Education = ER visit and Re-admission Insurance

- Rehab (use of walker, stairs, car)
- Medication use
- Medication Side effects
- Nausea Management
- Swelling Management
- Hydration/Nutrition (Protein Rich foods, Healthy Meals)
- Getting the Home ready
- Fall Prevention

REALITY # 2: Anchor stays didn't have much waste but we worked at it

- Not a lot of Juice to squeeze!
- Decreased unnecessary utilization
  - Hospitalist for healthy patients
  - Optimized Implant pricing
- Increased same day discharges
- Optimized Patients/Surgeon efficiency to decrease readmissions



4.1% readmissions rate between 0-90 days

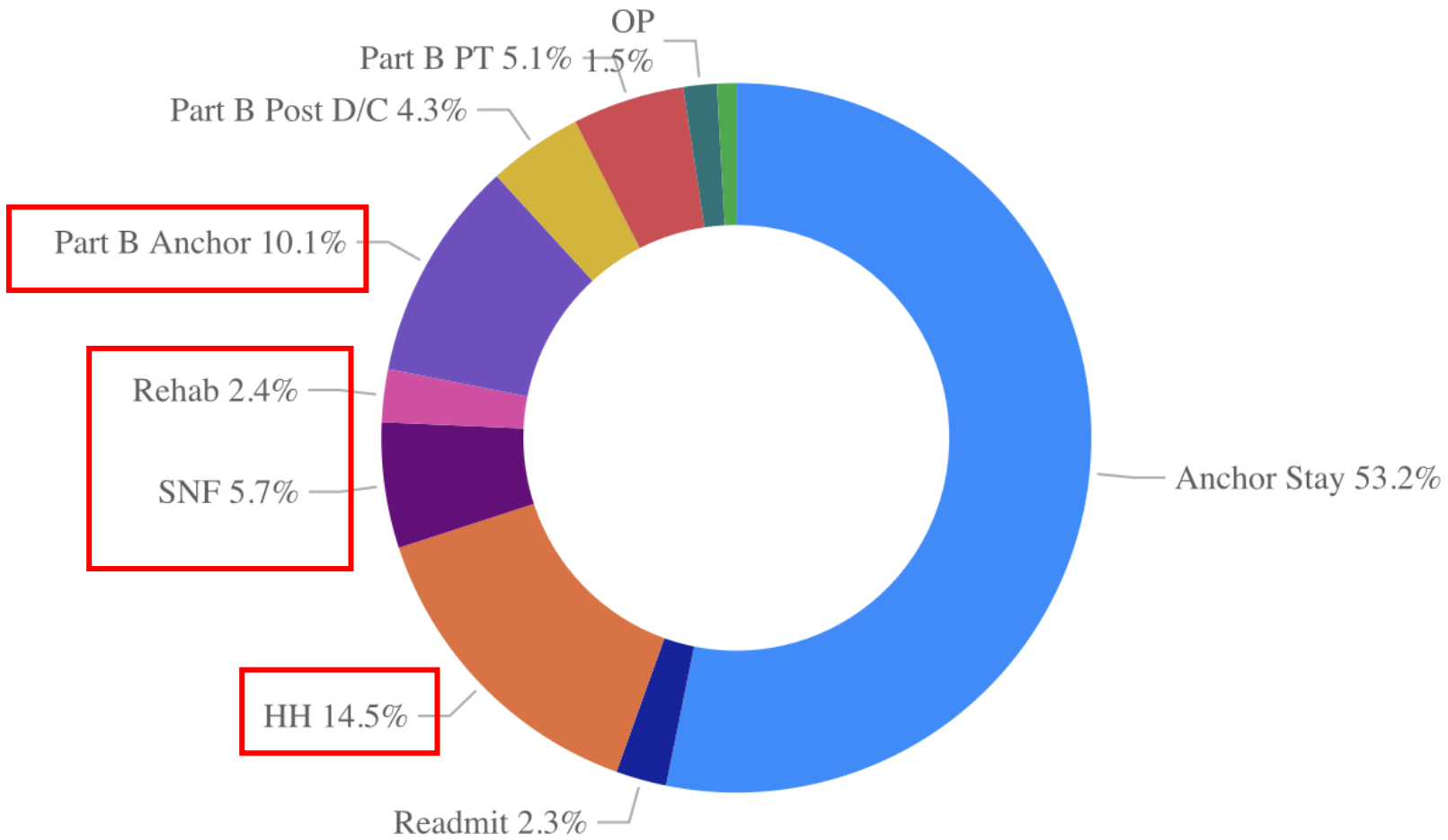
5.1% inpatient readmit rate 0-90 days

2.5% outpatient readmit rate 0-90 days

59% of readmissions were within 30 days

32% readmitted outside our hospital system

REALITY # 3: Post Acute Care was a big driver of cost

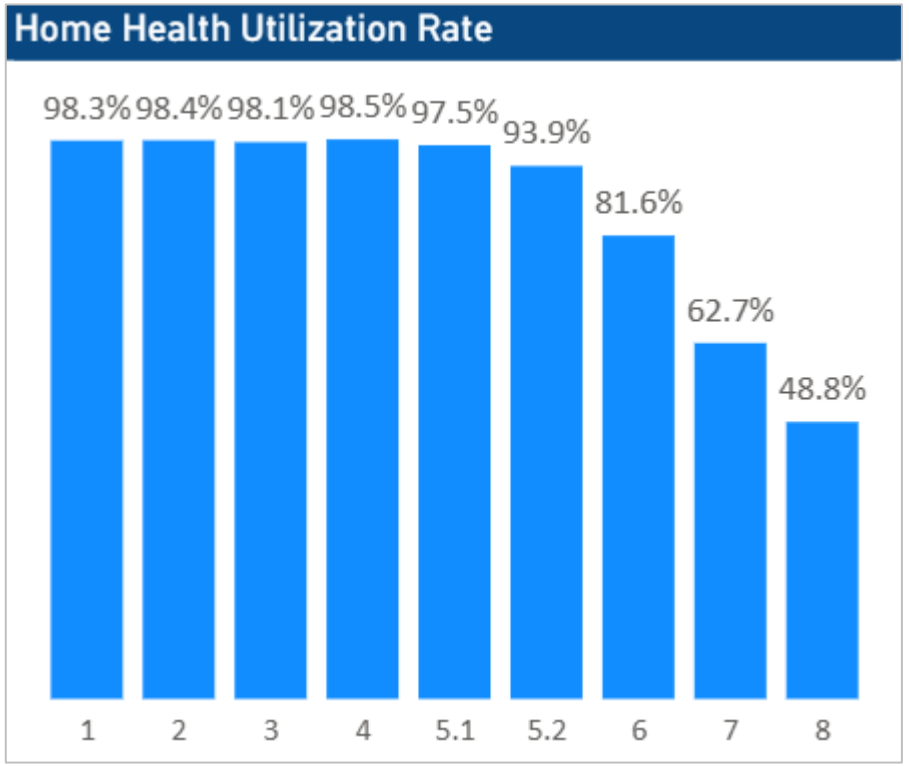


Home Health Utilization

Home Health Utilization

PERF_YEAR	HH Rate	# Pts	Total Visits	Avg Visits	Avg Cost/PT	Avg Cost/Day	HH % Spend
1	98.3%	587	5485	9.34	$3,076	$350	14.5%
2	98.4%	1208	11073	9.17	$2,975	$342	14.2%
3	98.1%	1107	9552	8.63	$2,909	$362	14.7%
4	98.5%	1345	10341	7.69	$2,672	$376	13.3%
5.1	97.5%	665	4989	7.50	$2,329	$364	12.1%
5.2	93.9%	166	1637	9.86	$2,221	$354	10.8%
6	81.6%	1554	10522	6.77	$2,054	$363	9.0%
7	62.7%	925	6109	6.60	$1,984	$368	6.7%
8	48.8%	696	4233	6.08	$1,602	$328	4.5%
Total	**82.6%**	**8253**	**63941**	**7.75**	**$2,441**	**$360**	**10.5%**

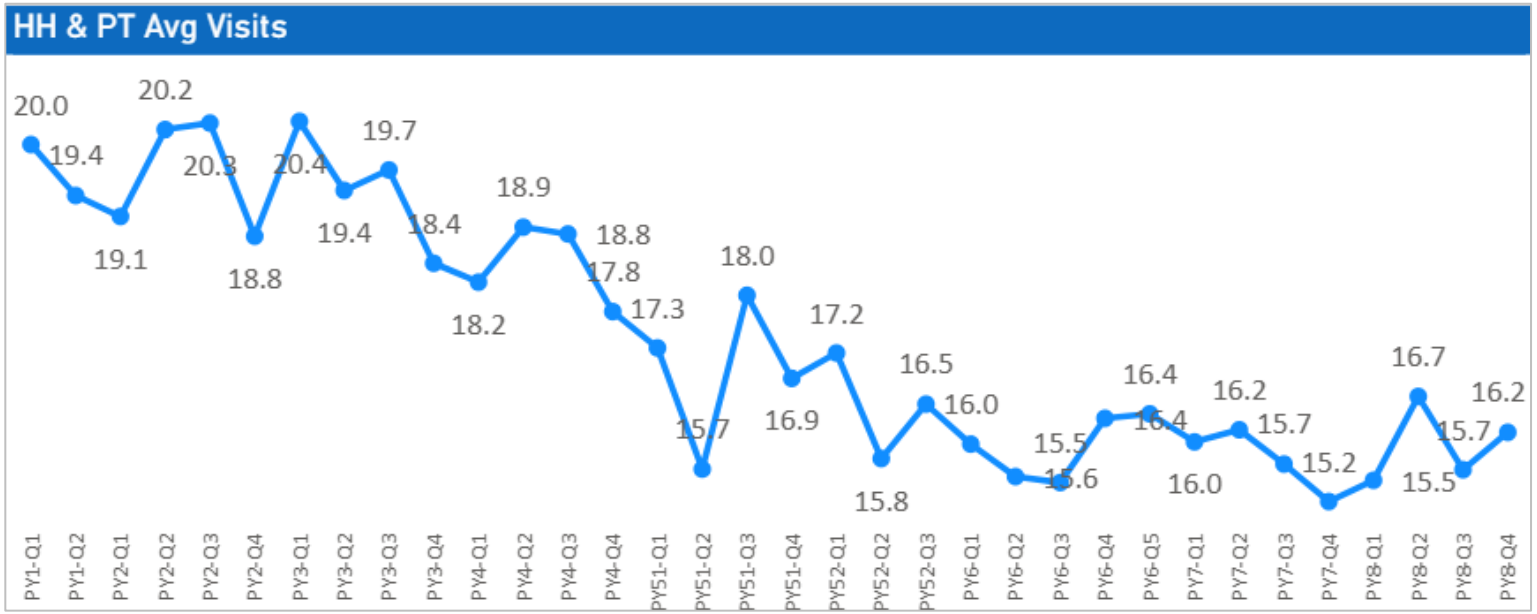
Covid



- Average visits per patient have decreased since PY1
- Knee patients utilize home health more than hips
- Total spend per patient declined by almost 50%
- Transitioned to outpatient PT at home for cost savings

Home Health & PT Combined

HH & PT Avg Visits



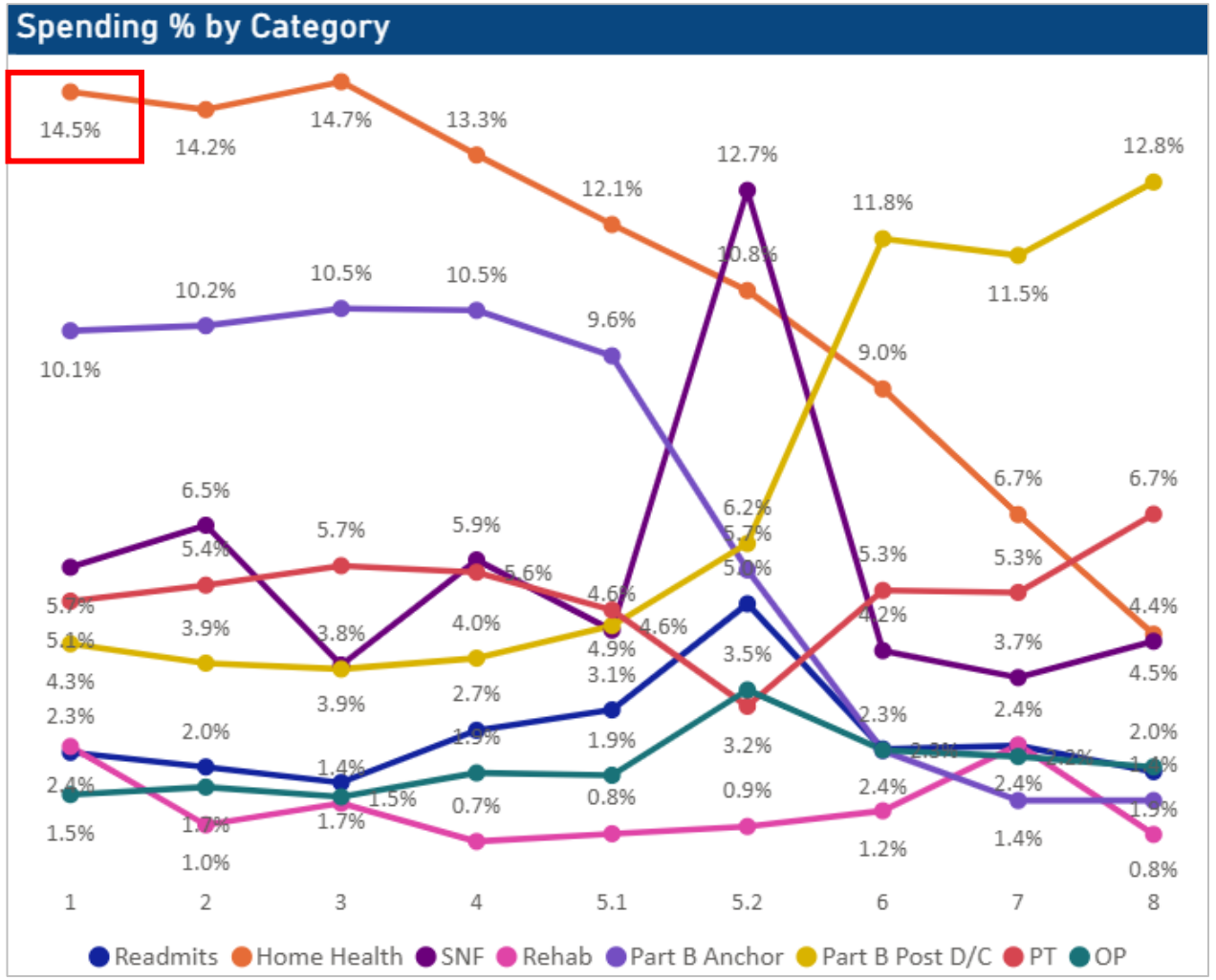
Overall, **47%** reduction of combined PT (HH and outpatient)

$4,270 → $2,232

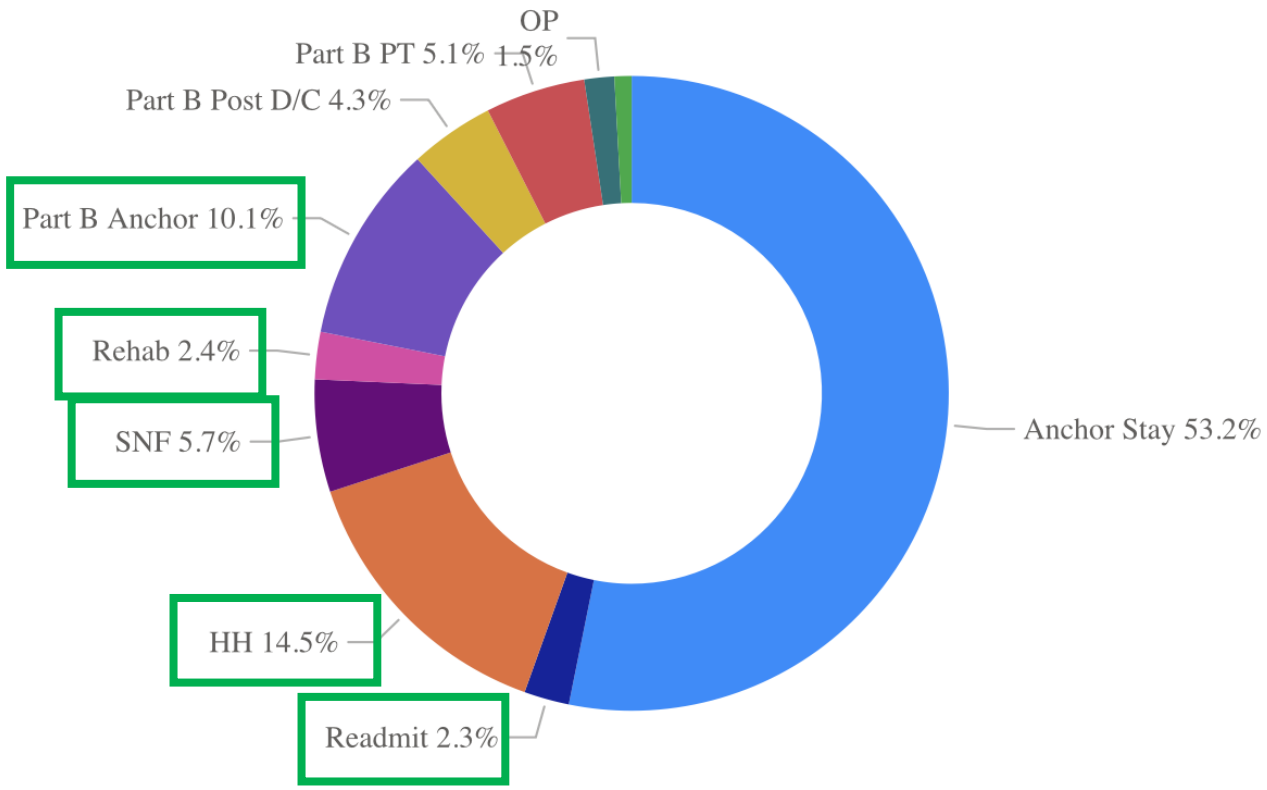
HH & PT by Performance Year

PY	Rate	# Pts	% Total Spend	Avg Spend	# Visits	Avg Visits	HH/PT Pt Rate
8	97.6%	1389	11.2%	$2,232	22235	16.01	33.6%
7	92.7%	1408	11.8%	$2,607	22273	15.82	41.3%
6	98.6%	1875	14.3%	$2,953	29932	15.96	56.0%
5.2	96.1%	172	13.8%	$3,478	2862	16.64	51.4%
5.1	99.0%	675	17.0%	$3,501	11336	16.79	63.0%
4	99.2%	1354	19.0%	$3,927	25002	18.47	70.6%
3	98.9%	1117	20.4%	$4,157	21705	19.43	71.5%
2	99.7%	1224	19.6%	$4,163	24102	19.69	72.6%
1	98.7%	589	19.6%	$4,270	11601	19.70	71.0%
Total	**97.8%**	**9803**	**16.0%**	**$3,350**	**171048**	**17.45**	**57.6%**

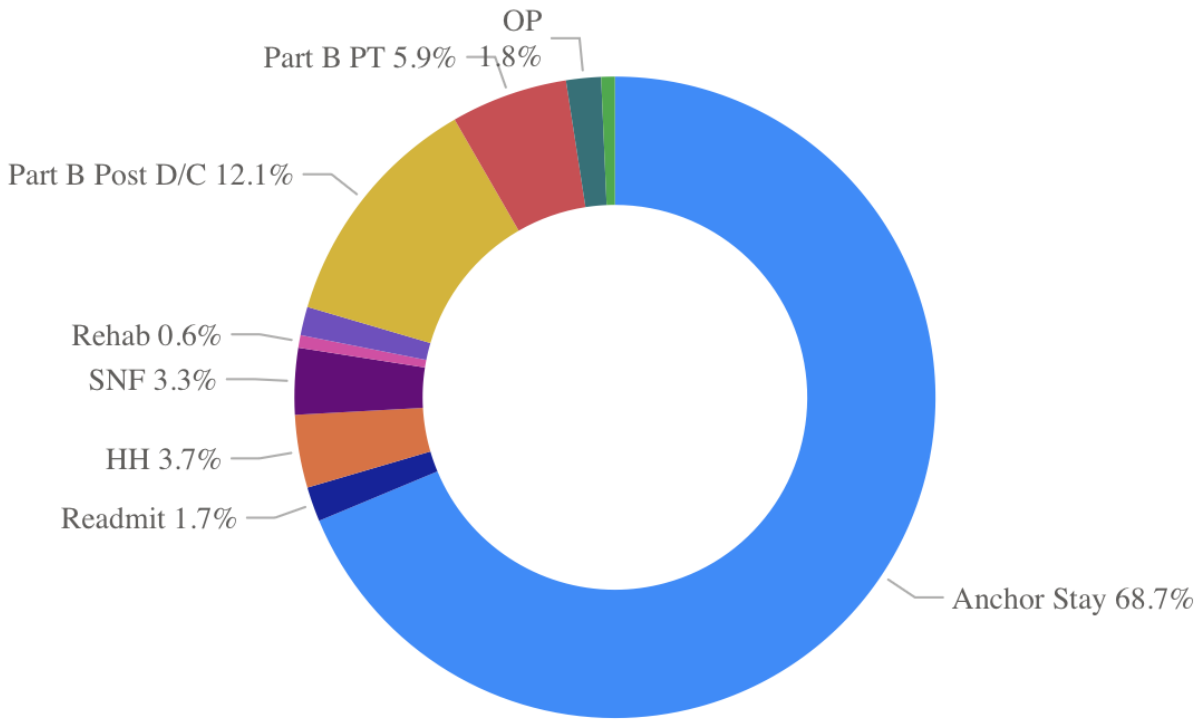
REALITY #4: With effort Post Acute Care Spending can be managed



How did our Episodes change?



PY1



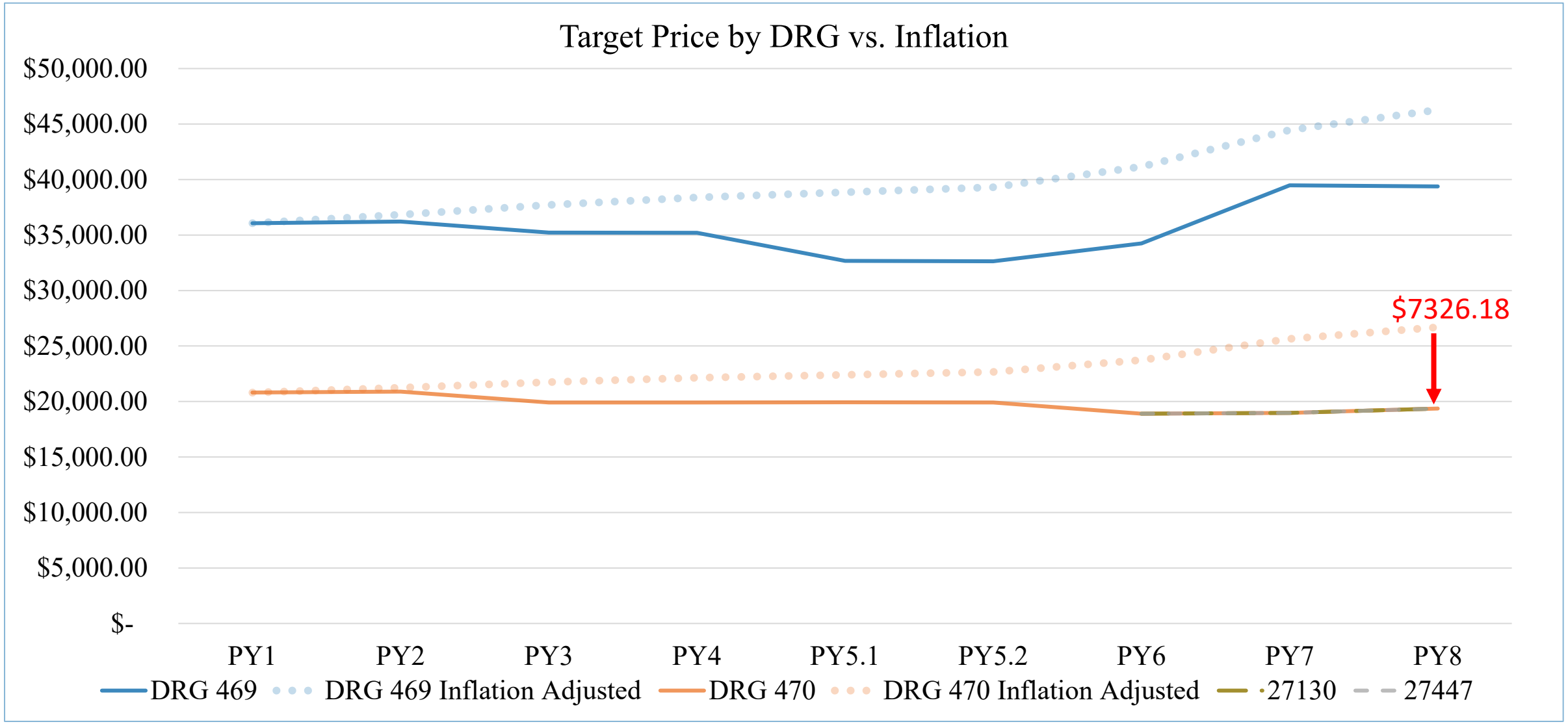
PY8

REALITY #5: A moving Target made it hard to stay ahead

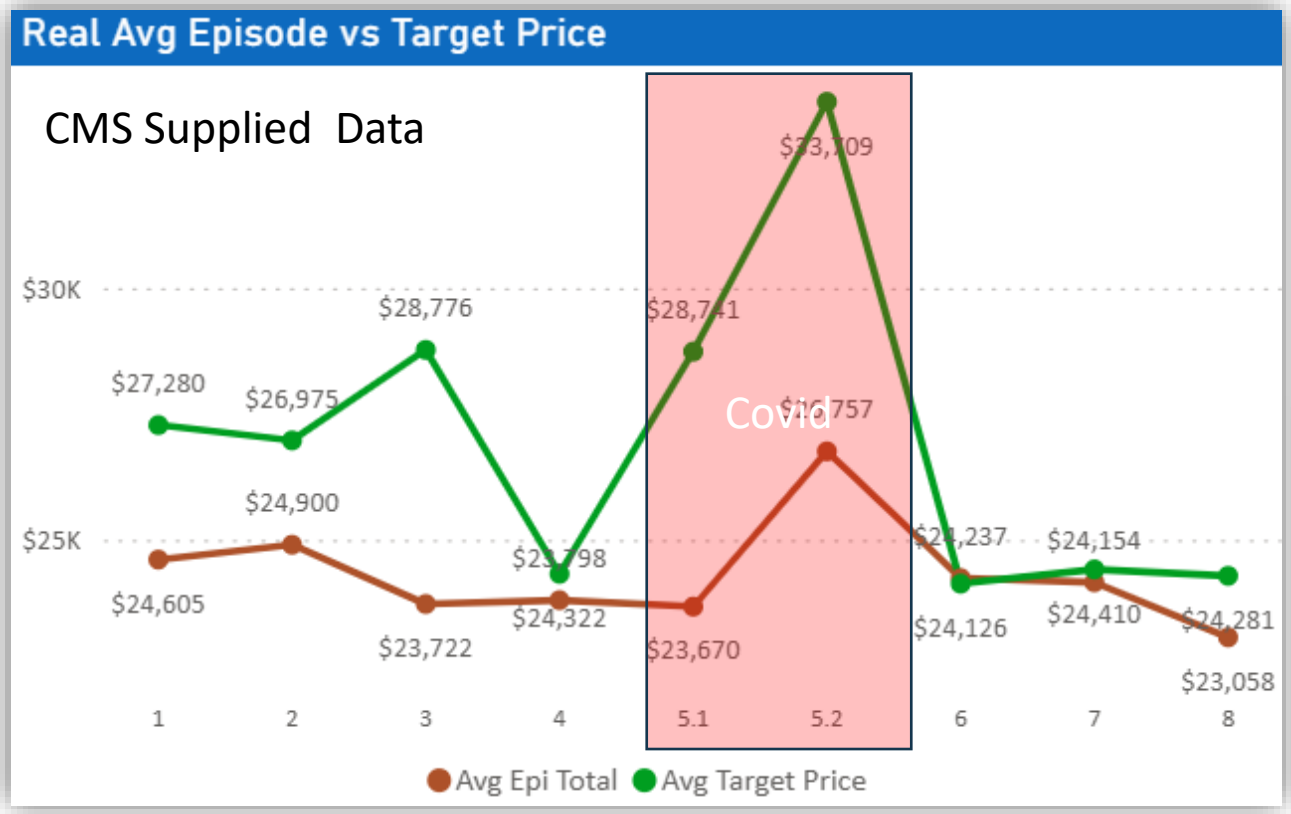
PY	Hospital-Specific	Regional	DRG 470 Target
PY1	67%	33%	$21,125
PY2	67%	33%	$21,217 $21,135
PY3	33%	67%	$19,989 $19,983
PY4	0%	100%	$19,887 $19,908
PY5.1	0%	100%	$19,891 $19,927
PY5.2	0%	100%	$19,965 $19,906
PY6	0%	100%	$18,902
PY7	0%	100%	$18,976
PY8	0%	100%	$19,364

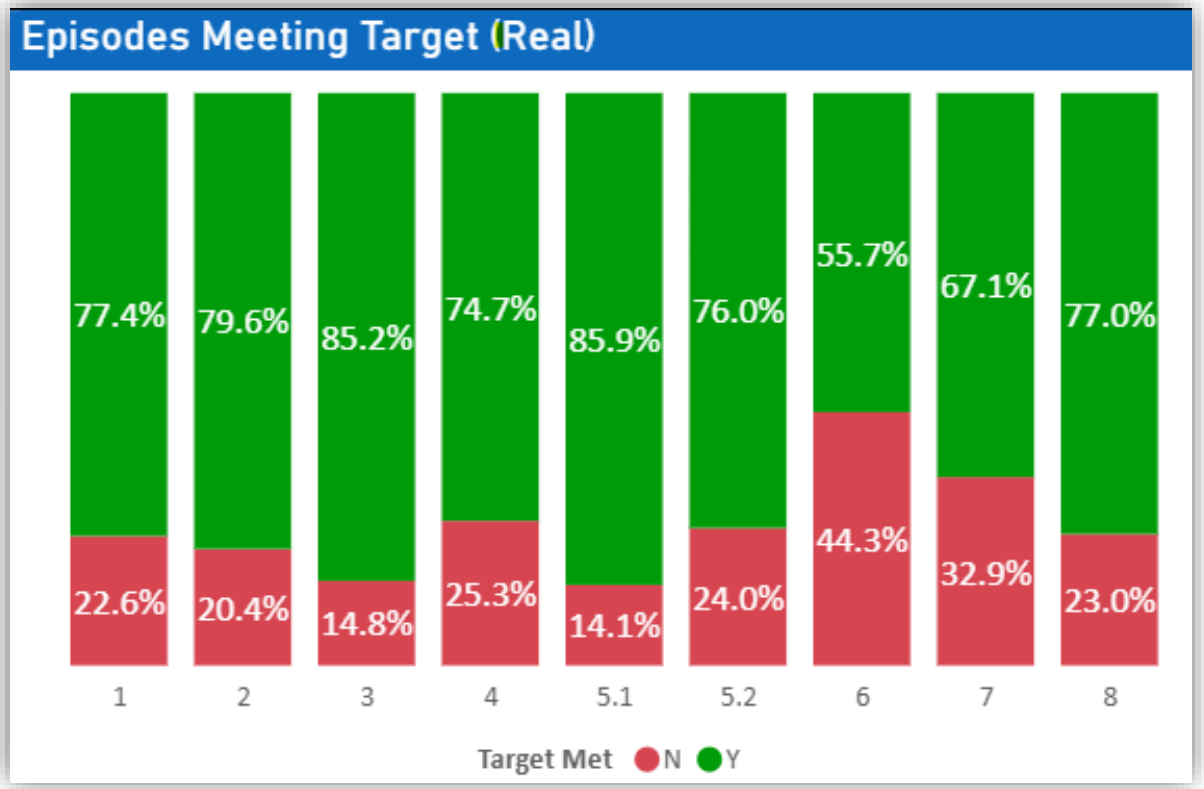
- PY1-PY5 baseline period based on 3 years of historical claims data.
- PY6-PY8 baseline period is based on most recent year historical claims data.
- Target price decreased about $2,000 since start of CJR program

Target Price didn't match economic reality



Episode Spending





CJR off the rails

- The bundle was a blunt instrument
- Minimal adjustment for risk and preoperative morbid conditions
- Increased financial risk for more medically complicated patients
- Appeals were unsuccessful
- All medical expenditures counted against the bundle:
  - Mammograms & other routine health maintenance spending
  - Chronic maintenance chemo agents
  - Remote Medical conditions that occurred within the 90 day global periods (e.g. MI at day 80).
  - Psychiatric hospitalizations.

CJR across the nation

	# of hospitals	TOTAL # OF EPISODES	TOTAL RECONCILIATION	average reconcilation	% +
PY1	688	47,426	$ 35,541,774	$ 749	52%
PY2	718	101,377	$ 91,824,862	$ 905	68%
PY3	471	65,212	$ 60,985,763	$ 935	53%
PY4	474	74,510	$ 83,644,370	$ 1122	49%
PY5.1	465	50,825	$ 141,972,247	$ 2793	72%
PY5.2	440	26,746	$ 71,985,280	$ 2691	68%
PY6	319	55,624	$ (4,153,941)	$ (74)	46%
PY7	319	47,278	$ (18,354,408)	$(388)	**37%**

Covid

https://www.cms.gov/priorities/innovation/innovation-models/cjr

Takeaways

For this Orthopedic Specialty-Hospital:

1. CJR participation trigger some improvements in care quality as measured (LOS, Home discharges), but likely was going to happen anyway due to COVID

2. CJR target prices failed to match even inflation of USD over study period
   - Prices more than $6,000 under projections by PY8

3. Without significant risk stratifications and exclusion of pre-morbid conditions, THA/TKA on higher risk patients maybe a big financial liability which can threatens access to care for our sickest patients

4. Gamesmanship with new programs to give yourself room to improve depending on the yardstick CMS uses.

Future Directions

Future payment models should better align physicians, payors, and institutions to ensure both financial longevity for all parties and continued quality patient care.

- Quality
  - Reimbursement for collection of PROMs for inclusion in quality assessment
  - Alternative quality metrics to limit Floor/Ceiling effect of CQS
- Cost
  - Inflationary and real-time adjusted target prices
  - Improved risk adjustment to limit need for hospital “risk-adjustment”

Thank you!

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