

Value Based Healthcare 101

*Engaging Independent Specialists
to Gain a Seat at the Table*

Will Harrill, MD FACS

Co-Chair

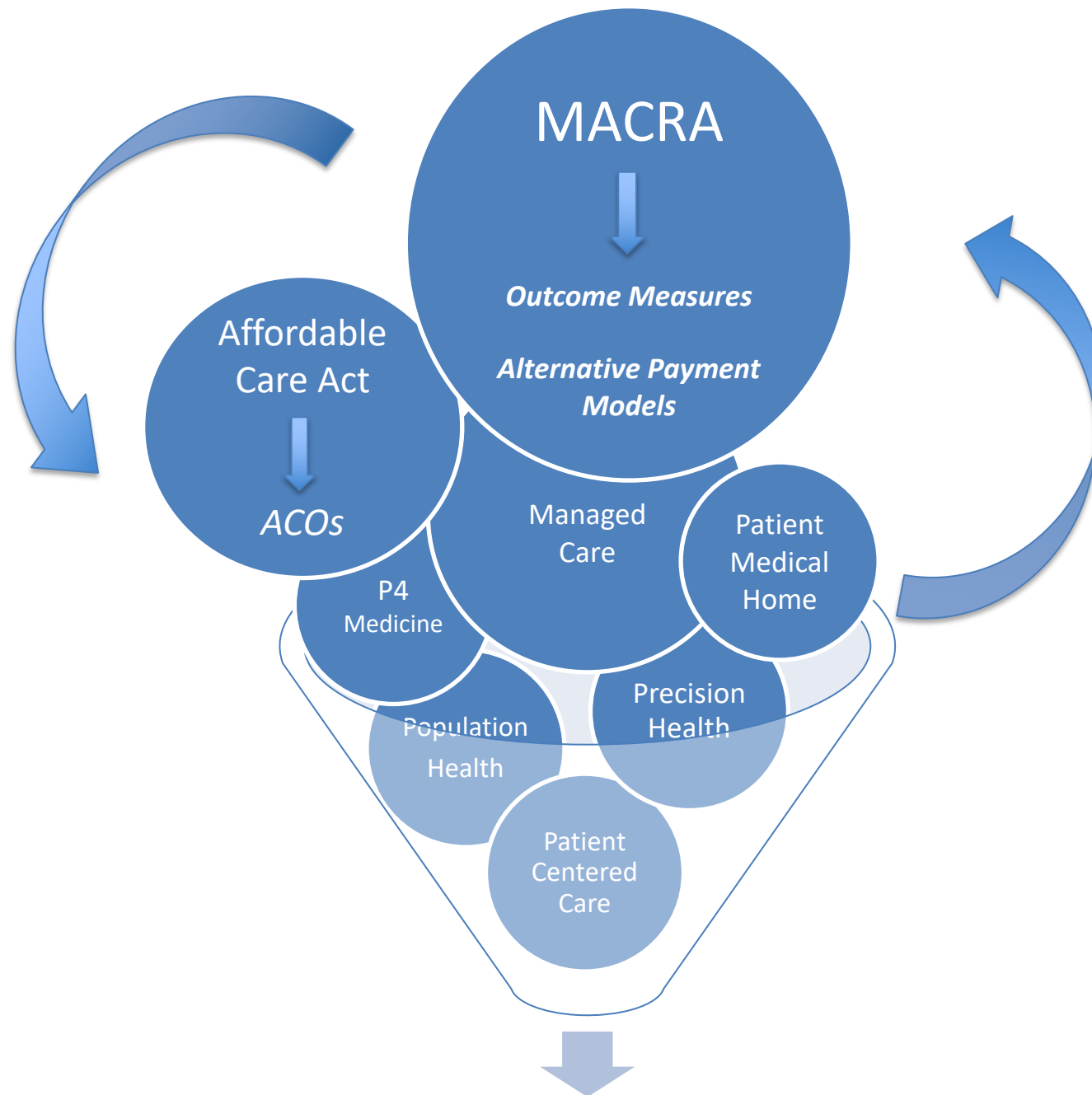
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CAROLINA
EAR NOSE & THROAT
SINUS AND ALLERGY CENTER, P.A.



Value-Based Healthcare

A Three-Dimensional Model

$$\text{Value} = \text{EM}^3$$

Patient Experience Management: EM³

- Management of the ***Patients'*** Experience
 - *PATIENT JOURNEY MAPPING*
 - *COORDINATION OF CARE*
 - *PERCEPTION OF CARE REPORTING (Patient Reviews)*
- Management of the ***Cost*** of that Experience
 - *CLAIMS-BASED QUALITY MEASURES*
 - *EPISODE-OF-CARE*
 - *DISEASE SEVERITY MEDICAL COST VARIANCE*
 - *DISEASE SEVERITY SITE-OF-SERVICE MANAGEMENT*
 - *ALTERNATIVE PAYMENT MODELS (APM)*
- Management of the ***Clinical Outcomes*** of that Experience
 - *PATIENT REPORTED OUTCOME MEASURES*
 - *DIAGNOSTIC REPORTED MEASURES*
 - *Integration of BIG DATA*



Value Based Healthcare Reality Today

Cost Drives “Value”

Patient Stakeholder



\$

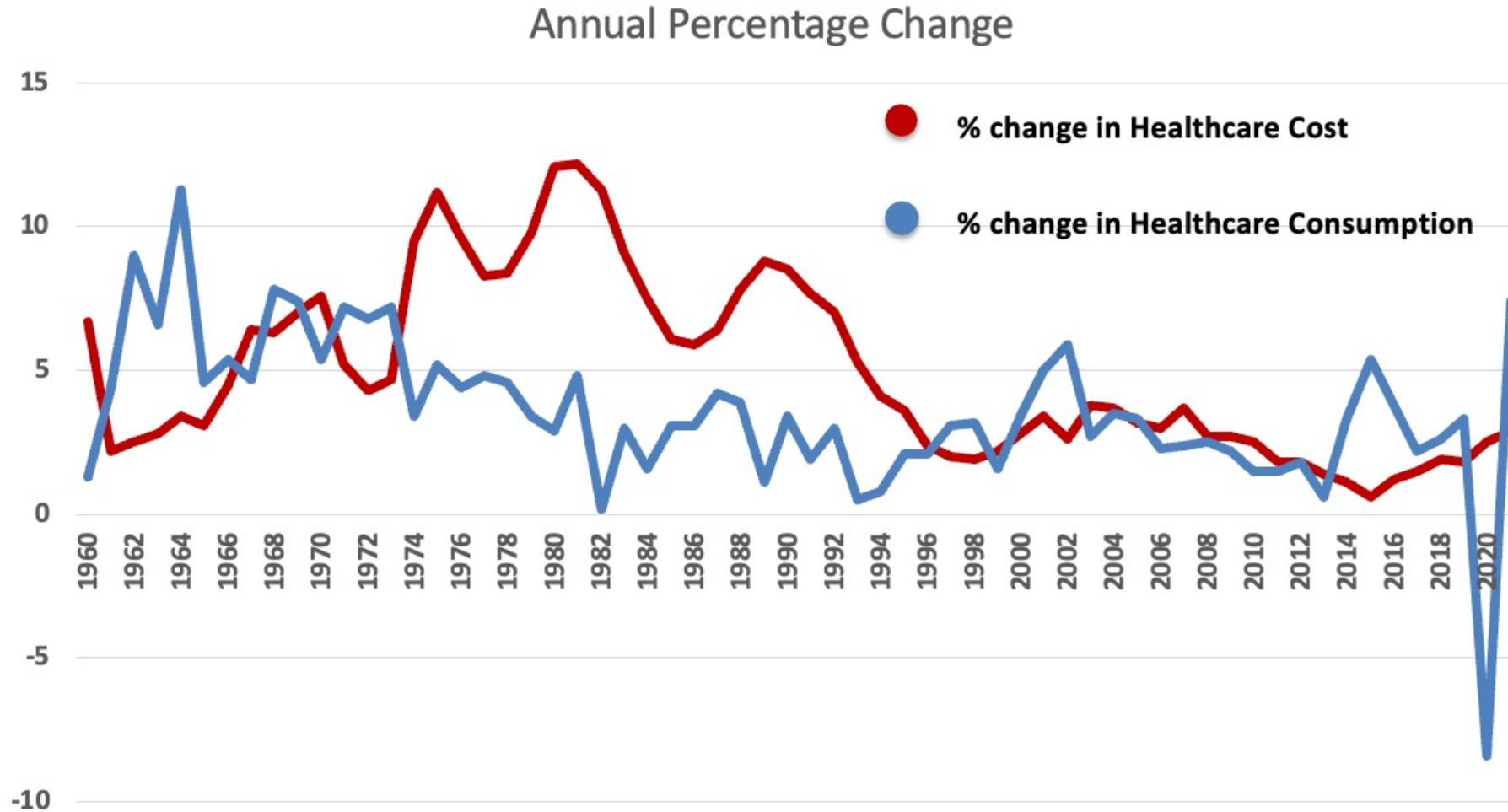
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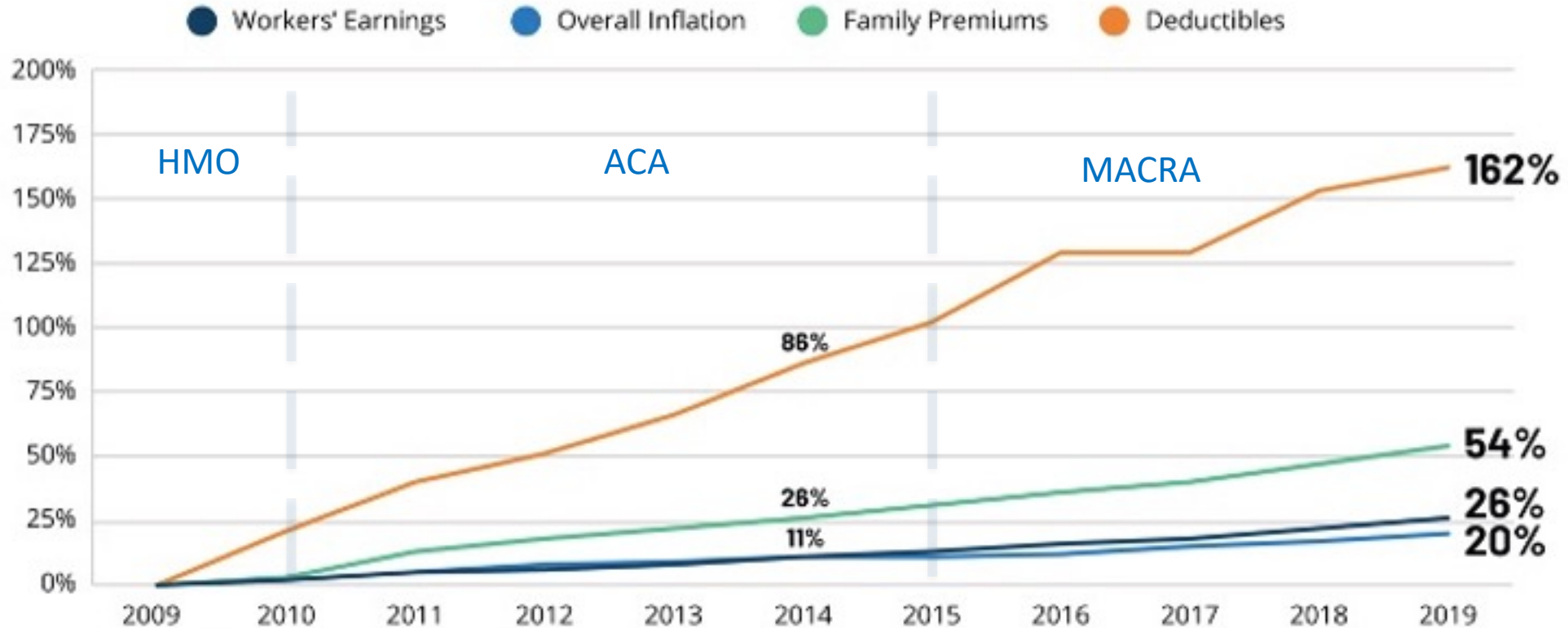


U.S Personal Consumption of Healthcare

Percentage Change in Cost vs Utilization
1960-2021



Patient Healthcare Premiums and Deductibles vs Wages and Inflation (2009-2019)



Patient Stakeholder is now a Consumer

Episode-of-Care Cost Management

High-deductible health plan coverage, nationally

Year	% with HDHP	Year	% with HDHP
2015	39.4%	2018	49.1%
2016	42.6%	2019	50.5%
2017	48.7%	2020	52.9%



Bluebook CareConnectSM

Personal guidance to high-value in-network providers and
extraordinary cost savings for high-cost complex procedures

Check out huge price differences in your area!

Colonoscopy (no biopsy)

Fair Price \$2,092

\$817

\$10,403+

● At or Below Fair Price ▲ Slightly Above Fair Price ● Highest Price

GO
HERE

NOT
HERE

- Gastroenterology Associates Endoscopy Unit
- Carolina Digestive Care
- ▲ Caromont Endoscopy Center
- Catawba Valley Medical Center
- Frye Regional Medical Center

Plus a
\$50
Reward

Example procedure reflects prices & facilities in Hickory, NC as of 07/06/2018



Value Based Healthcare Reality Today

Cost Drives “Value”

Payer Stakeholder



\$

\$\$

\$\$\$



Lexicon of Value-Based Care

Fee-for-Service

- **CPT based**
- Payment based on individual units of service
- No Link to quality

Value-based Care

- **ICD-10 based**
- **Moving from Volume to Value:** incentivizing providers to focus on the quality of services provided, not quantity.

Pay-for-Performance (P4P)

- **APM: CPT + ICD-10**
- FSF payments with qualify for metric-based bonus payments, or penalties. **MACRA/MIPS**

Episode-of-Care

- **CPT or IDC-10**
- All services beginning with an initiating event over a specified time period across every care setting

Lexicon of Value-Based Care

Value Based Relationship

- 2021 Stark Defined Relationship
- New exemptions for Value-based enterprises, activities, arrangements that participate in a Value-based enterprise

Clinically Integrated Network

- **Legal partnership between physicians +/- hospitals**
- Deliver evidence-based care, improve quality, efficiency, and coordination of care, and demonstrate value to the market

Accountable Care Organization

- Authorized under the 2010 Accountable Care Act
- Established in 2012 as a Medicare Payment Model
- **Physician and Payer payment relationship**
- Evolved as Primary care and hospital system focused
- Specialists are passive participants

Lexicon of Value-Based Care

Bundled Payments

- **APM: CPT or ICD-10 based** All-inclusive care payment model for defined episodes of care
- **Bundled Payments for Care Improvement (BPCI)**

Shared Savings

- **APM: FSF with ICD-10 based** risk adjusted payment incentives within a population of patients
- **MSSP ACO (Upside), Next Gen ACO(upside and downside)**

Capitated Population-based payments

- **APM: Fixed payments *per patient per month*** for set services (Partial Capitation) or all services (Full Capitation) within a population of patients
- Reconciliation of financial rewards or penalties based on performance. *Reinsurance for downside Required*
- **Medicare Advantage (full upside and downside risk)**

Value Based Healthcare Reality Today

Cost Drives “Value”

Physician Stakeholder



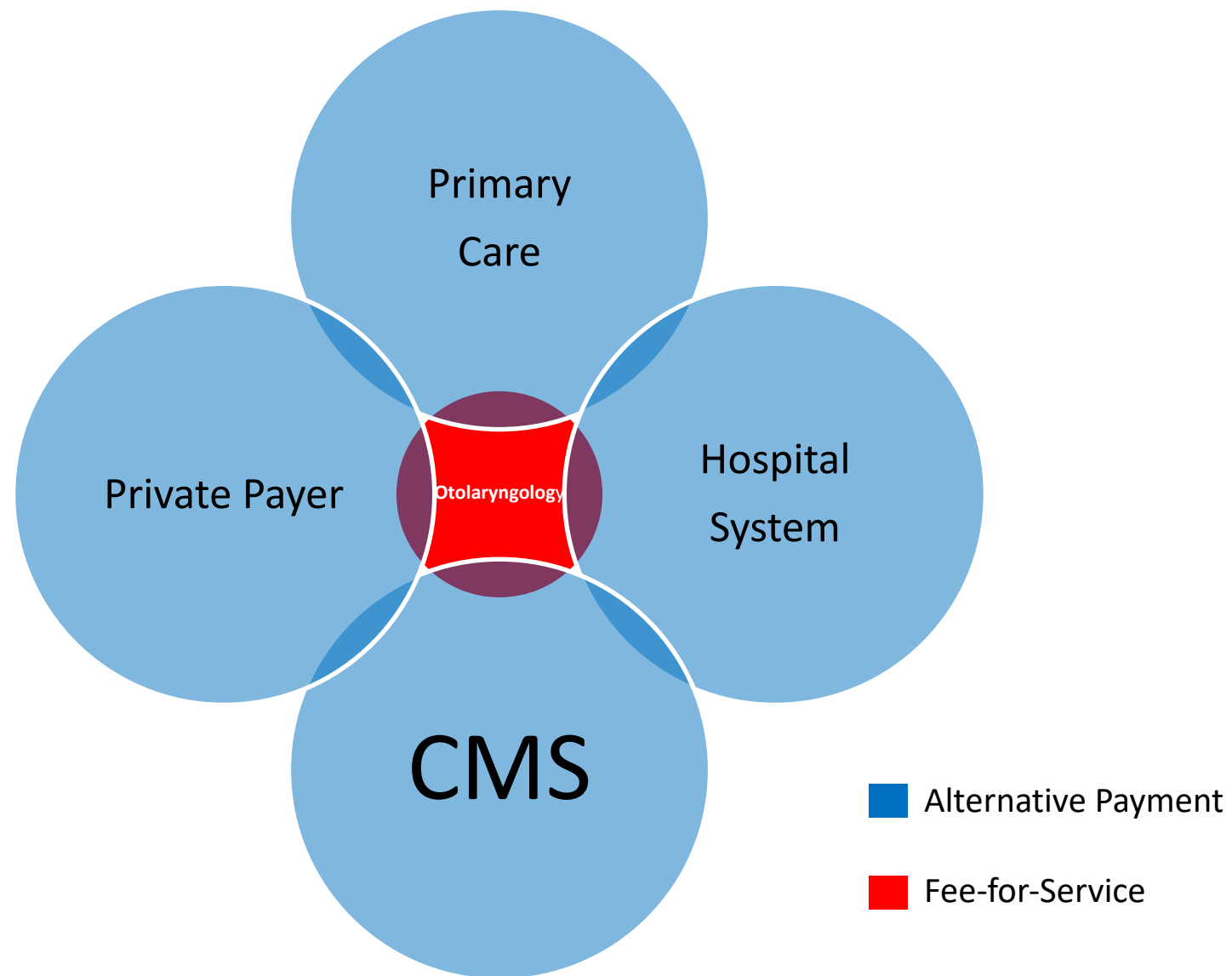
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Value-Based Healthcare 2025



VBH Payment Models

2020 Healthcare Spending Percentages

CATEGORY 1 FEE FOR SERVICE – NO LINK TO QUALITY & VALUE	CATEGORY 2 FEE FOR SERVICE – LINK TO QUALITY & VALUE	CATEGORY 3 APMS BUILT ON FEE-FOR-SERVICE ARCHITECTURE	CATEGORY 4 POPULATION – BASED PAYMENT
	A Foundational Payments for Infrastructure & Operations (e.g., care coordination fees and payments for HIT investments)	A APMs with Shared Savings (e.g., shared savings with upside risk only)	A Condition-Specific Population-Based Payment (e.g., per member per month payments, payments for specialty services, such as oncology or mental health)
	B Pay for Reporting (e.g., bonuses for reporting data or penalties for not reporting data)	B APMs with Shared Savings and Downside Risk (e.g., episode-based payments for procedures and comprehensive payments with upside and downside risk)	B Comprehensive Population-Based Payment (e.g., global budgets or full/percent of premium payments)
	C Pay-for-Performance (e.g., bonuses for quality performance)		C Integrated Finance & Delivery Systems (e.g., global budgets or full/percent of premium payments in integrated systems)
39.3%	19.8%	34.2%	6.7%

73 health plans, five states, Traditional Medicare representing 80.2% of national market in 2020
HCPLAN 2021



Value-Based Healthcare

Alternative Payment Model Goals

	Medicaid	Commercial	Medicare Advantage	Traditional Medicare
2020	15%	15%	30%	30%
2022	25%	25%	50%	50%
2025	50%	50%	100%	100%

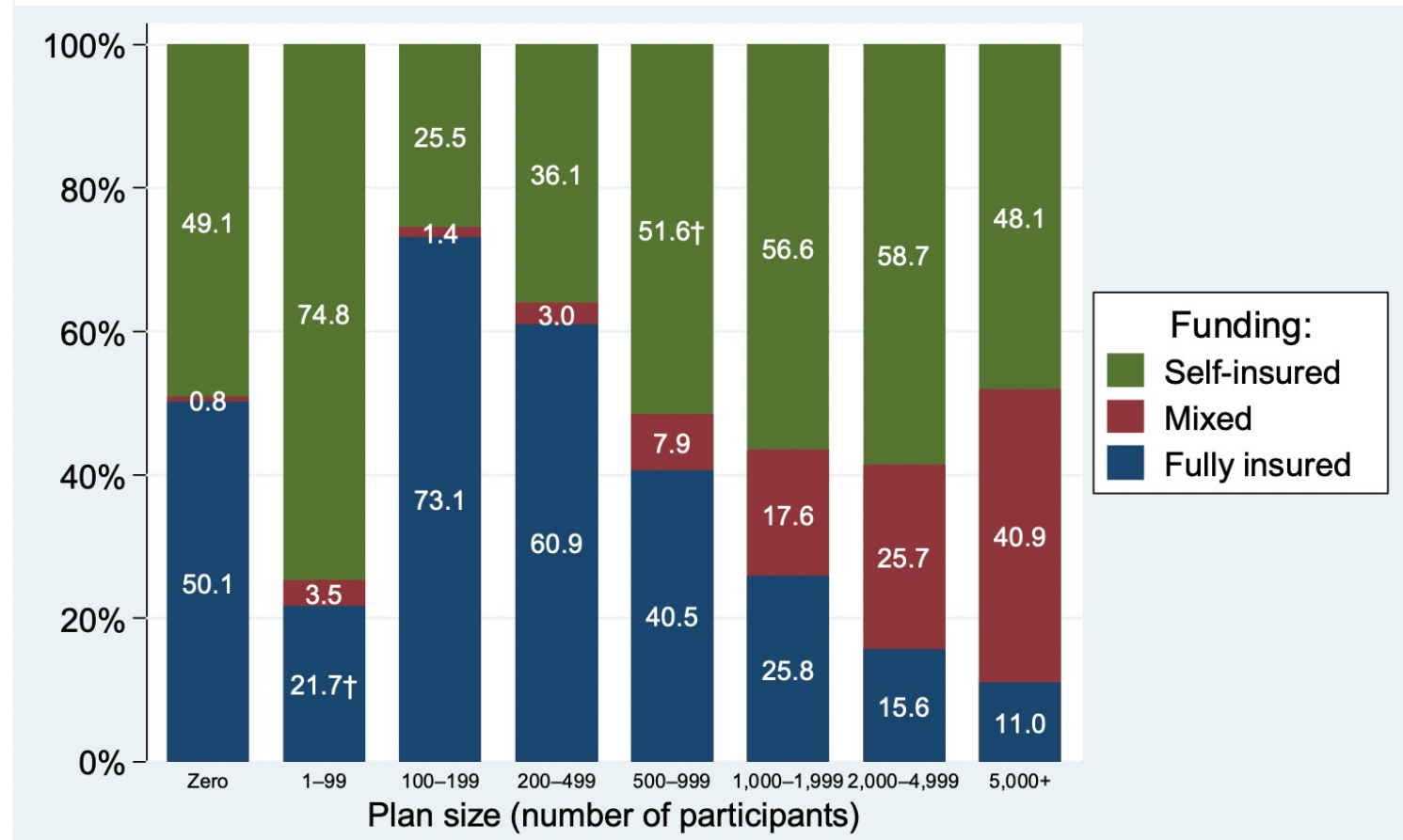
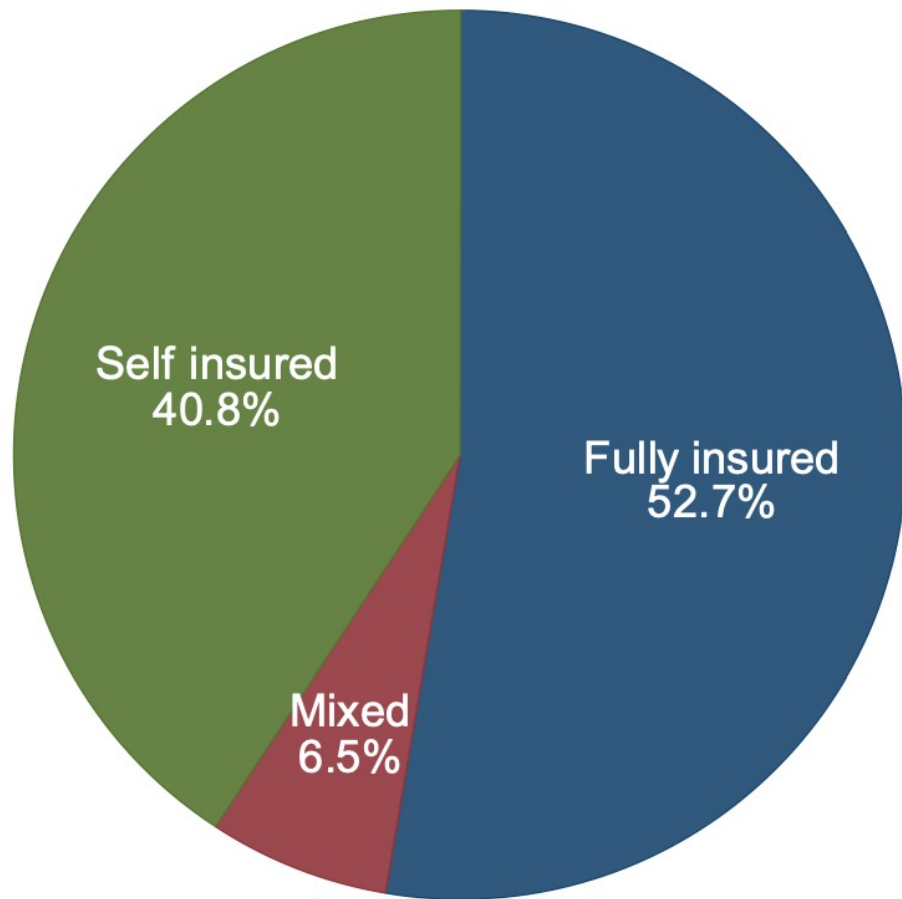
Impacting Value-Based Shared Savings

Referral Episode-of-Care Cost Management



Impacting Employer Self Insured Plans

Direct to Employer Contracting Referrals

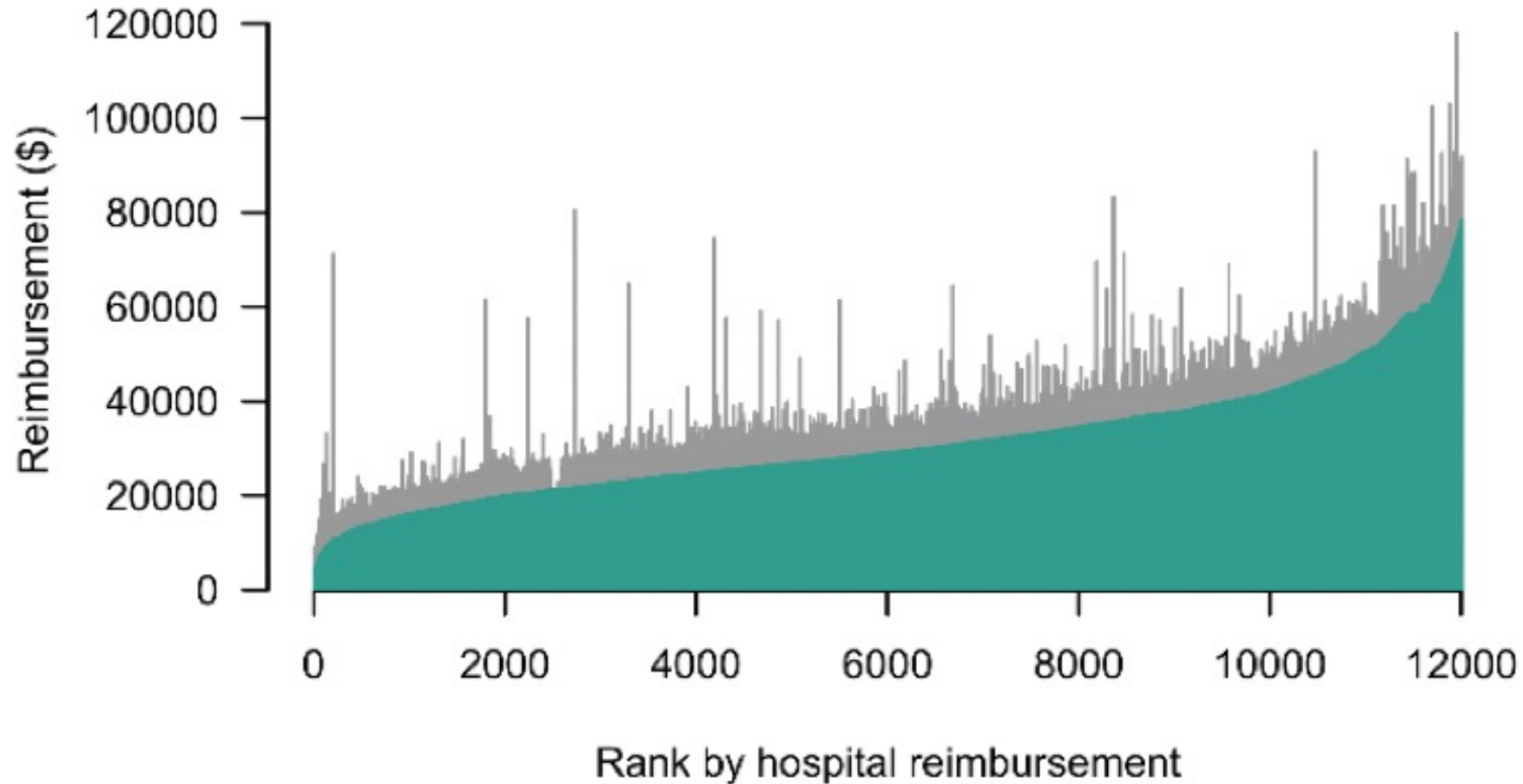


Facility Fees Matter

Total Reimbursement for Service

MarketScan Data

Major joint replacement, lower extremity



PGP Name	Physician	Episode Count	Avg Episode Cost	Avg Comorbid Count	Readmit Rate	IRF Rate	SNF Rate	HH Rate	OP Rate	SNF LOS	HH Avg Visits	Readmit Claims Cost	IRF Claims Cost	SNF Claims Cost	HH Claims Cost	OP Claims Cost
ORTHO Practice A	Total	188	\$19,606	2.7	9.0%	0.0%	12.8%	23.9%	41.5%	20.7	12.8	\$144,816		\$307,810	\$166,025	\$86,619
	A	30	\$15,136	1.5		0.0%	0.0%	0.0%	43.3%							\$10,123
	B	75	\$18,483	2.6	5.3%	0.0%	9.3%	20.0%	34.7%	24.4	12.1	\$27,042		\$110,167	\$53,836	\$43,151
	C	22	\$20,000	2.7	4.5%	0.0%	9.1%	36.4%	90.9%	23.0	9.4	\$7,615		\$17,927	\$24,286	\$7,840
	D	61	\$23,043	3.4	19.7%	0.0%	24.6%	36.1%	31.1%	18.6	14.6	\$110,159		\$179,716	\$87,903	\$25,505
ORTHO Practice B	Total	3,664	\$21,367	2.7	7.0%	0.3%	18.8%	33.1%	49.5%	20.7	10.7	\$3,156,294	\$223,423	\$9,873,416	\$4,057,660	\$2,164,731
	1	80	\$15,591	0.9	2.5%	0.0%	0.0%	3.8%	40.0%		9.7	\$20,076			\$8,078	\$34,281
	2	173	\$16,498	1.6	2.3%	0.0%	4.0%	5.8%	39.9%	24.3	10.7	\$33,092		\$105,462	\$27,452	\$77,802
	3	278	\$16,577	2.7	3.6%	0.0%	2.2%	6.1%	55.4%	20.5	9.7	\$136,904		\$69,086	\$52,962	\$136,095
	4	146	\$17,640	2.1	3.4%	0.7%	4.8%	17.1%	48.6%	24.7	14.2	\$26,248	\$27,040	\$112,188	\$99,365	\$85,361
	5	115	\$17,748	3.2	7.8%	0.0%	5.2%	7.0%	47.8%	15.0	9.5	\$91,248		\$54,874	\$23,448	\$98,566
	6	69	\$18,653	3.4	4.3%	0.0%	14.5%	8.7%	52.2%	20.9	8.5	\$28,905		\$134,426	\$17,800	\$29,966
	7	100	\$18,930	2.0	3.0%	1.0%	12.0%	14.0%	41.0%	31.9	9.9	\$26,180	\$18,143	\$241,225	\$42,391	\$42,054
	8	276	\$18,998	2.1	5.1%	0.4%	12.0%	26.4%	51.4%	16.6	11.4	\$169,313	\$16,875	\$329,964	\$226,951	\$206,365
	9	129	\$19,353	2.9	5.4%	2.3%	11.6%	16.3%	45.7%	18.1	14.9	\$118,141	\$50,735	\$159,099	\$85,922	\$54,324
	10	84	\$19,683	3.0	9.5%	0.0%	9.5%	9.5%	60.7%	23.1	14.6	\$104,888		\$120,090	\$33,485	\$78,459
	11	61	\$19,706	2.6	8.2%	1.6%	14.8%	18.0%	57.4%	17.0	13.4	\$45,577	\$16,108	\$97,340	\$45,584	\$25,917
	12	132	\$19,999	2.7	3.0%	0.8%	13.6%	94.7%	30.3%	15.4	12.1	\$42,300	\$22,248	\$186,413	\$405,903	\$35,056
	13	144	\$23,055	3.8	10.4%	0.0%	22.2%	24.3%	54.2%	23.2	13.3	\$202,815		\$529,544	\$134,084	\$90,893
	14	149	\$23,590	2.9	11.4%	0.0%	28.2%	27.5%	45.0%	22.9	11.1	\$199,300		\$656,823	\$152,300	\$71,966
	15	12	\$23,854	3.9		0.0%	58.3%	58.3%	50.0%	15.1	9.1			\$72,400	\$20,773	\$3,592
	16	180	\$25,576	2.8	8.9%	0.0%	36.7%	79.4%	55.6%	19.7	8.1	\$179,531		\$894,912	\$435,464	\$127,728
	17	11	\$25,820	4.0		9.1%	27.3%	45.5%	72.7%	28.3	10.8		\$15,684	\$57,599	\$19,345	\$5,169
	18	13	\$26,173	5.0	7.7%	0.0%	23.1%	69.2%	69.2%	17.0	13.6	\$6,081		\$33,676	\$31,631	\$16,594
	19	20	\$26,311	2.1		0.0%	25.0%	20.0%	40.0%	18.4	18.0			\$59,499	\$13,879	\$8,193
	20	21	\$27,502	3.8	9.5%	0.0%	38.1%	33.3%	61.9%	25.3	14.6	\$29,886		\$125,119	\$27,418	\$11,482
	21	53	\$27,602	2.7	5.7%	0.0%	35.8%	67.9%	43.4%	28.8	8.3	\$51,495		\$380,674	\$108,154	\$21,364
	22	50	\$30,732	2.9	14.0%	0.0%	42.0%	38.0%	50.0%	23.1	13.1	\$88,078		\$457,444	\$64,795	\$30,814
	23	19	\$32,139	4.2	5.3%	0.0%	52.6%	78.9%	52.6%	25.6	12.5	\$18,319		\$165,715	\$56,946	\$11,558
	24	22	\$42,390	4.8	18.2%	4.5%	77.3%	45.5%	50.0%	28.2	10.9	\$48,068	\$26,978	\$349,813	\$34,698	\$8,926
	25	13	\$48,529	4.2	7.7%	0.0%	69.2%	23.1%	69.2%	28.8	8.0	\$37,692		\$275,805	\$9,701	\$13,131
	26	16	\$49,130	5.0	18.8%	0.0%	93.8%	50.0%	50.0%	29.5	17.6	\$62,088		\$299,442	\$40,586	\$5,141

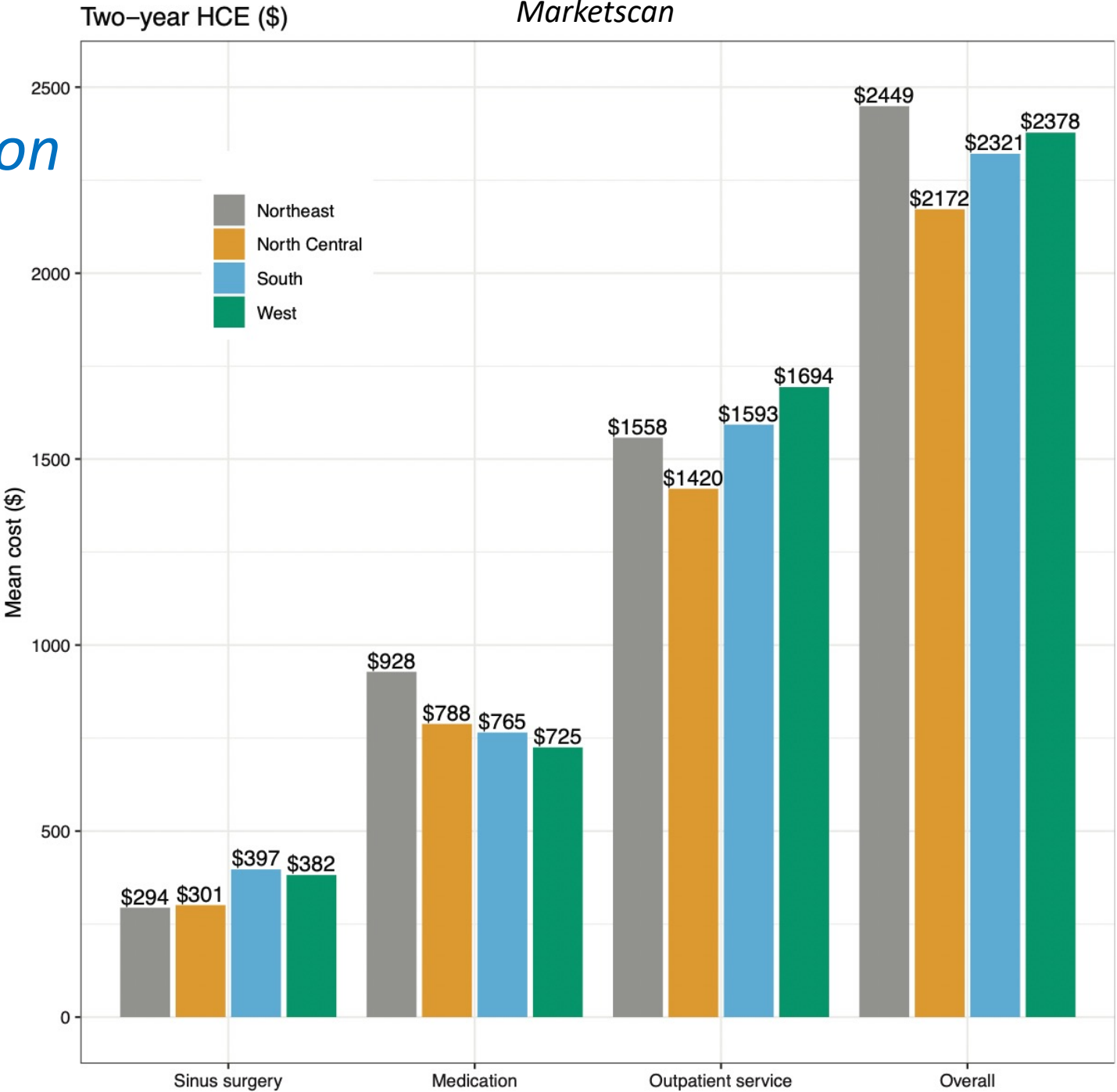
Service Line: Orthopedics

Clinical Episode: Major Joint Replacement of the Lower Extremity

Data Source: Medicare Claims LDS (2018 & 2019)

Chronic Rhinosinusitis

Physician Regional Cost Variation



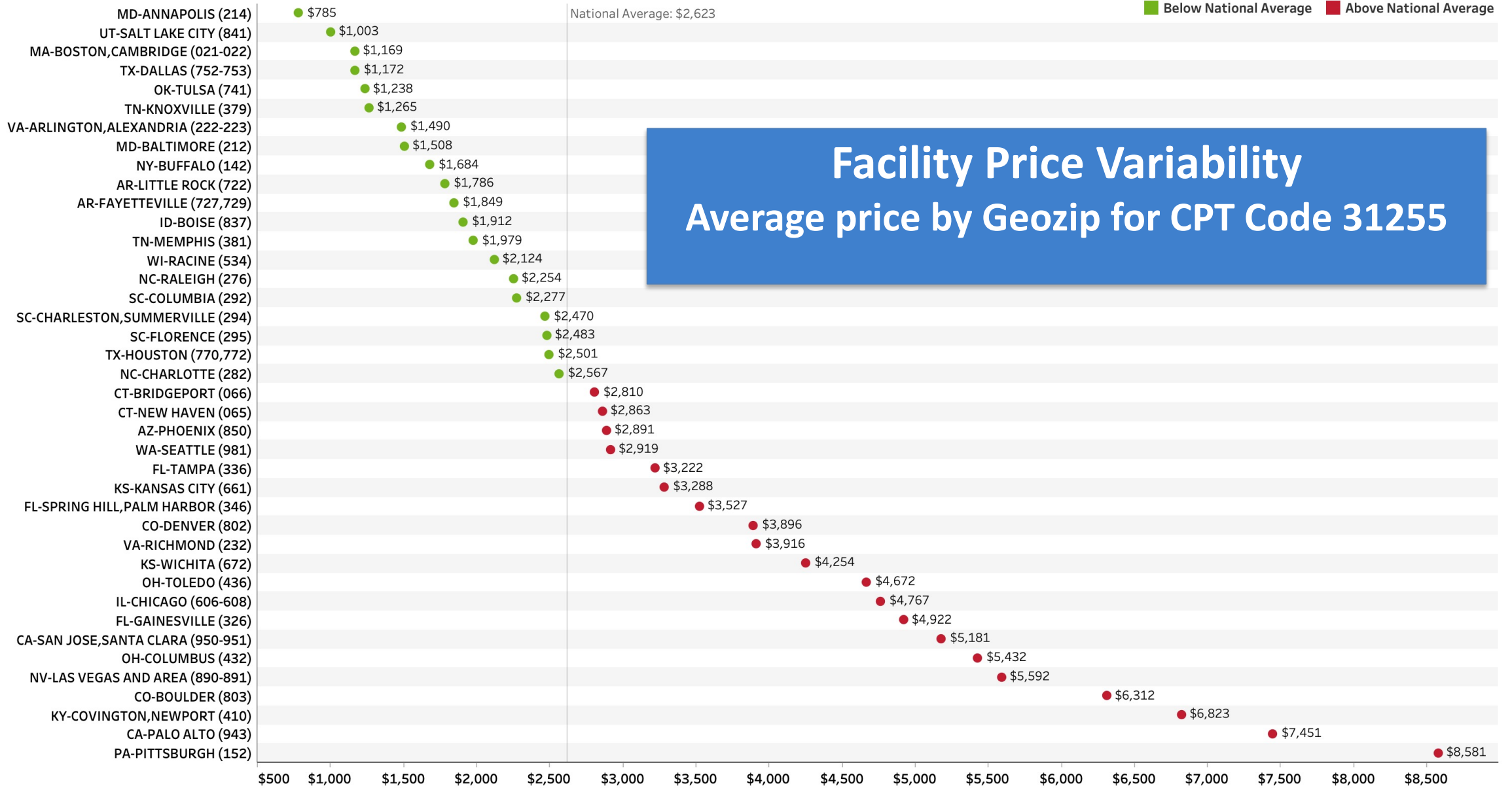


VARIABILITY COST INDEX[®]

Engaging physicians in Facility Navigation

Averify applies its licensed data, public data, and de-identified claim data for normative, reference prices to compare provider facility records that contractually bind providers to employer claim adjudications for assessing health plan efficiency. The Data does not constitute a Fee Schedule or a recommendation of fee schedules for facilities. The Averify validation process permits the use of its applicable data for normative financial comparison of their services to their local region health delivery to employers. Any provider contracted by Averify is limited to the use of Averify's reporting for internal purposes and is solely applicable to each client facility's contribution to employer plan efficiency.





Average Price of CPT 31255, by Geozip

Based on 8,982 hospital outpatient claims (facility charges only) with dates of service between October 1, 2019 and September 30, 2020.

PHYSICIAN ACTIONS DETERMINE COST

CHRONIC
RHINOSINUSITIS:
MSA Cost Variability

National Geozip Map

- 249 Urban
- 216 Urban & Rural
- 27 Rural
- 492 Total GeoZip areas

VARIABILITY COST INDEX ¹ ® (Minimum-Maximm Average)									
Facility Costs: Hospital/HOPD/ASC									
CPT	Urban Only			Urban & Rural			Rural Only		
	Avg	Min Avg	Max Avg	Avg	Min Avg	Max Avg	Avg	Min Avg	Max Avg
31253	\$3,049	\$731	\$16,112	\$2,593	\$387	\$10,508	\$2,266	\$1,014	\$4,139
31259	\$2,427	\$555	\$14,910	\$1,883	\$294	\$10,323	\$1,703	\$693	\$3,140
31257	\$2,551	\$679	\$13,402	\$2,224	\$359	\$9,146	\$2,113	\$1,307	\$3,841
31276	\$2,489	\$563	\$14,382	\$2,018	\$289	\$12,397	\$1,752	\$786	\$3,463
31255	\$2,903	\$785	\$11,026	\$2,507	\$415	\$12,300	\$2,397	\$1,084	\$4,441
31267	\$2,593	\$658	\$9,278	\$2,234	\$348	\$9,683	\$2,269	\$1,066	\$5,402
31254	\$2,768	\$643	\$9,622	\$2,298	\$405	\$6,150	\$2,265	\$842	\$842
31288	\$2,246	\$599	\$5,407	\$1,965	\$317	\$6,873	\$1,861	\$1,153	\$3,389
31287	\$1,943	\$583	\$5,299	\$1,682	\$275	\$4,181	\$1,616	\$322	\$4,888
31256	\$2,226	\$489	\$7,375	\$1,990	\$323	\$6,438	\$1,898	\$1,035	\$1,035
Average	\$2,520	\$629	\$10,681	\$2,139	\$341	\$8,800	\$2,014	\$930	\$3,458

NORTH CAROLINA: Facility cost sample pulled from employer data

Facility ID	Total Paid	Net VCI	Net VC	Counts	
				Claims	Facilities
North Carolina (continued on next page)					
1897991	\$88,049	-24%	-\$21,381	10	
1388513	\$76,349	-153%	-\$116,776	4	
1388519	\$24,340	-11%	-\$2,595	4	
19941023	\$7,007	-39%	-\$2,741	4	
1750392	\$2,761	-34%	-\$951	4	
135276271	\$2,725	-247%	-\$6,733	1	
126636141	\$2,171	-60%	-\$1,309	1	
11650271	\$2,090	-28%	-\$593	1	
115137851	\$2,085	-243%	-\$5,066	1	
114795533	\$1,895	-116%	-\$2,194	1	
1750391	\$1,570	-22%	-\$347	1	
168453941	\$1,225	-212%	-\$2,600	1	
114795531	\$368	-175%	-\$642	3	
123572121	\$330	-150%	-\$495	1	
18968391	\$270	-28%	-\$76	2	
127017983	\$216	-47%	-\$101	1	
127017984	\$216	-47%	-\$101	1	
114795532	\$139	-460%	-\$641	1	
114795534	\$139	-460%	-\$641	1	
1482296	\$102	-23%	-\$23	1	
1388515	\$100	-83%	-\$84	3	
122924881	\$93	-34%	-\$32	1	
1756511	\$49	-170%	-\$83	2	
1388512	\$6	-171%	-\$9	1	
State Total	\$214,294	-78%	-\$166,216	51	24

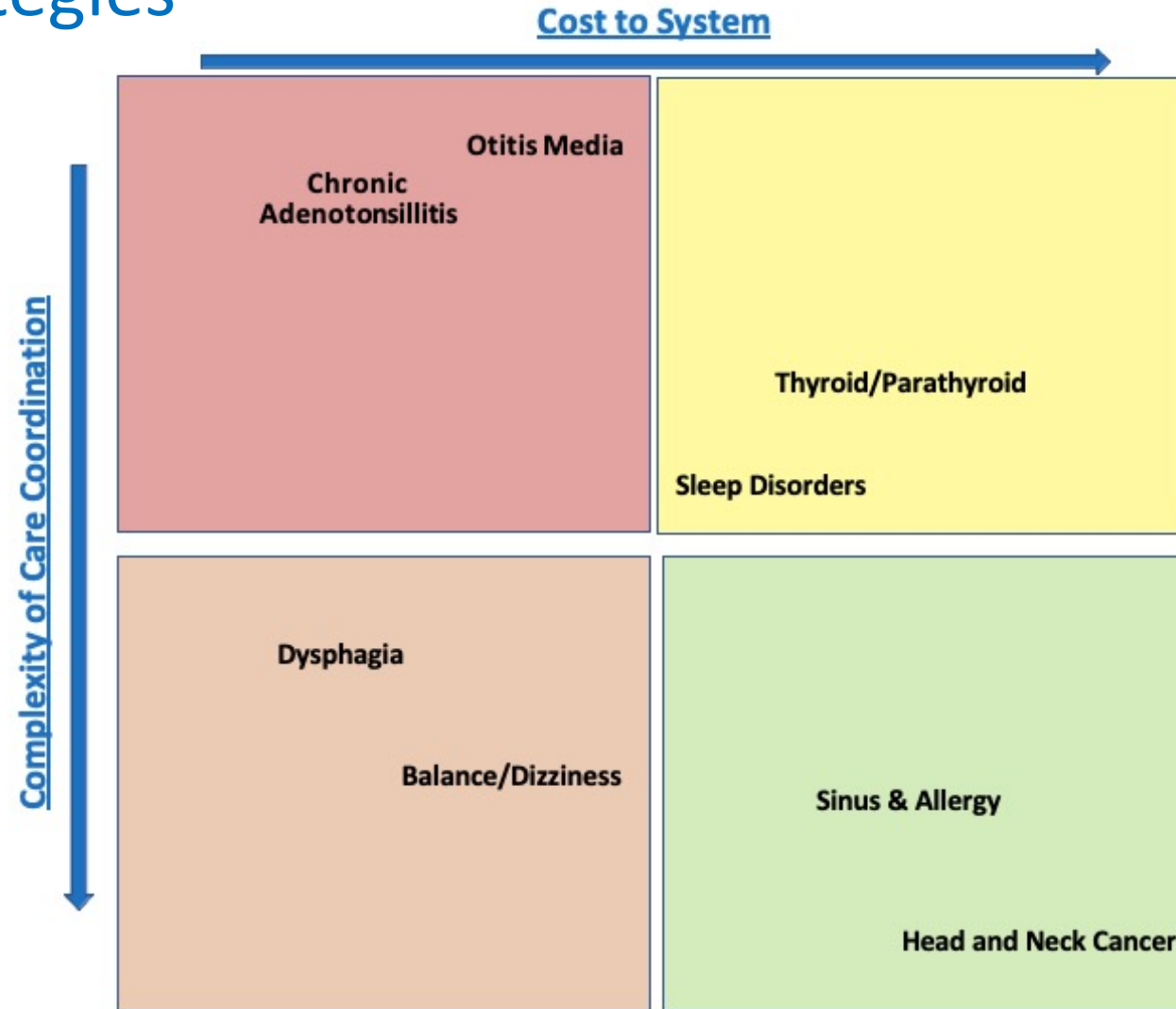
Facility ID	Total Paid	Net VCI	Net VC	Counts	
				Claims	Facilities
113079523	\$414,749	60%	\$247,535	119	
170916143	\$135,654	55%	\$75,282	37	
11333162	\$86,417	44%	\$38,180	31	
1482295	\$75,244	40%	\$30,246	8	
127056661	\$40,050	30%	\$11,877	3	
174503341	\$30,063	63%	\$19,009	3	
127017982	\$29,809	9%	\$2,750	2	
127017981	\$21,940	33%	\$7,298	11	
170916141	\$16,313	57%	\$9,232	9	
1482292	\$15,784	30%	\$4,673	8	
170916142	\$13,693	49%	\$6,766	7	
127127912	\$13,029	43%	\$5,575	10	
13885114	\$12,544	5%	\$642	4	
127056662	\$11,662	18%	\$2,065	1	
139899264	\$10,733	59%	\$6,354	2	
162256111	\$10,721	16%	\$1,734	5	
128236481	\$10,562	19%	\$1,979	4	
135302001	\$7,874	41%	\$3,214	2	
15100221	\$7,706	26%	\$1,995	9	
127015562	\$7,653	38%	\$2,871	3	
139899262	\$7,524	59%	\$4,426	1	
174324091	\$7,484	2%	\$152	2	
19941021	\$5,691	18%	\$1,010	7	
15100222	\$5,528	56%	\$3,098	4	
13885111	\$4,835	50%	\$2,411	1	

1388511	\$4,593	44%	\$2,008	1	
177649031	\$4,446	4%	\$179	1	
112624341	\$4,297	52%	\$2,217	1	
139899261	\$3,971	57%	\$2,273	1	
112391441	\$3,880	30%	\$1,157	1	
13885113	\$3,645	24%	\$871	1	
128378941	\$3,445	63%	\$2,185	1	
13885112	\$2,879	20%	\$571	5	
177429611	\$2,850	40%	\$1,148	1	
127015561	\$1,784	27%	\$489	1	
139899263	\$1,703	75%	\$1,278	2	
176940251	\$1,682	30%	\$509	1	
139899265	\$1,666	78%	\$1,303	1	
162244872	\$1,503	25%	\$369	1	
1388518	\$1,160	34%	\$400	2	
112624342	\$1,004	51%	\$508	6	
15100223	\$643	46%	\$296	1	
112359532	\$599	63%	\$375	1	
112359531	\$391	63%	\$246	1	
1482291	\$386	34%	\$131	3	
113079521	\$324	78%	\$254	1	
174564791	\$267	7%	\$19	1	
127017985	\$176	17%	\$30	1	
1482293	\$149	14%	\$21	1	
19941022	\$141	87%	\$122	1	
11333161	\$131	24%	\$32	1	
112359533	\$69	48%	\$33	1	
113079522	\$37	84%	\$31	1	
State Total	\$1,051,082	48%	\$509,430	333	53

Value-Based Healthcare

Otolaryngology Strategies

Strengths



Melon, DE 2019



Value-Based Healthcare: *Surgical Site-of-Service*

Fee-for-Service Category 1 Strategies

Goal

Prior Authorization

- De-Escalation

Value=EM³

Patient Experience Management: M³

- Management of the **Patient's Experience**
 - PATIENT JOURNEY MAPPING
 - COORDINATION OF CARE
 - PERCEPTION OF CARE REPORTING (Patient Reviews)
- Management of the **Cost** of that Experience
 - CLAIMS-BASED QUALITY MEASURES
 - EPISODE-OF-CARE
 - DISEASE SEVERITY MEDICAL COST VARIANCE
 - DISEASE SEVERITY SITE-OF-SERVICE MANAGEMENT
 - ALTERNATIVE PAYMENT MODELS (APM) SHARED SAVINGS
- Management of the **Clinical Outcomes** of that Experience
 - MIPS VALUE PATHWAYS (MVP)
 - PATIENT REPORTED OUTCOME MEASURES
 - DIAGNOSTIC REPORTED MEASURES
 - APM PRE-DETERMINED QUALITY MEASURES

Tools

Site-of-Service: Surgery

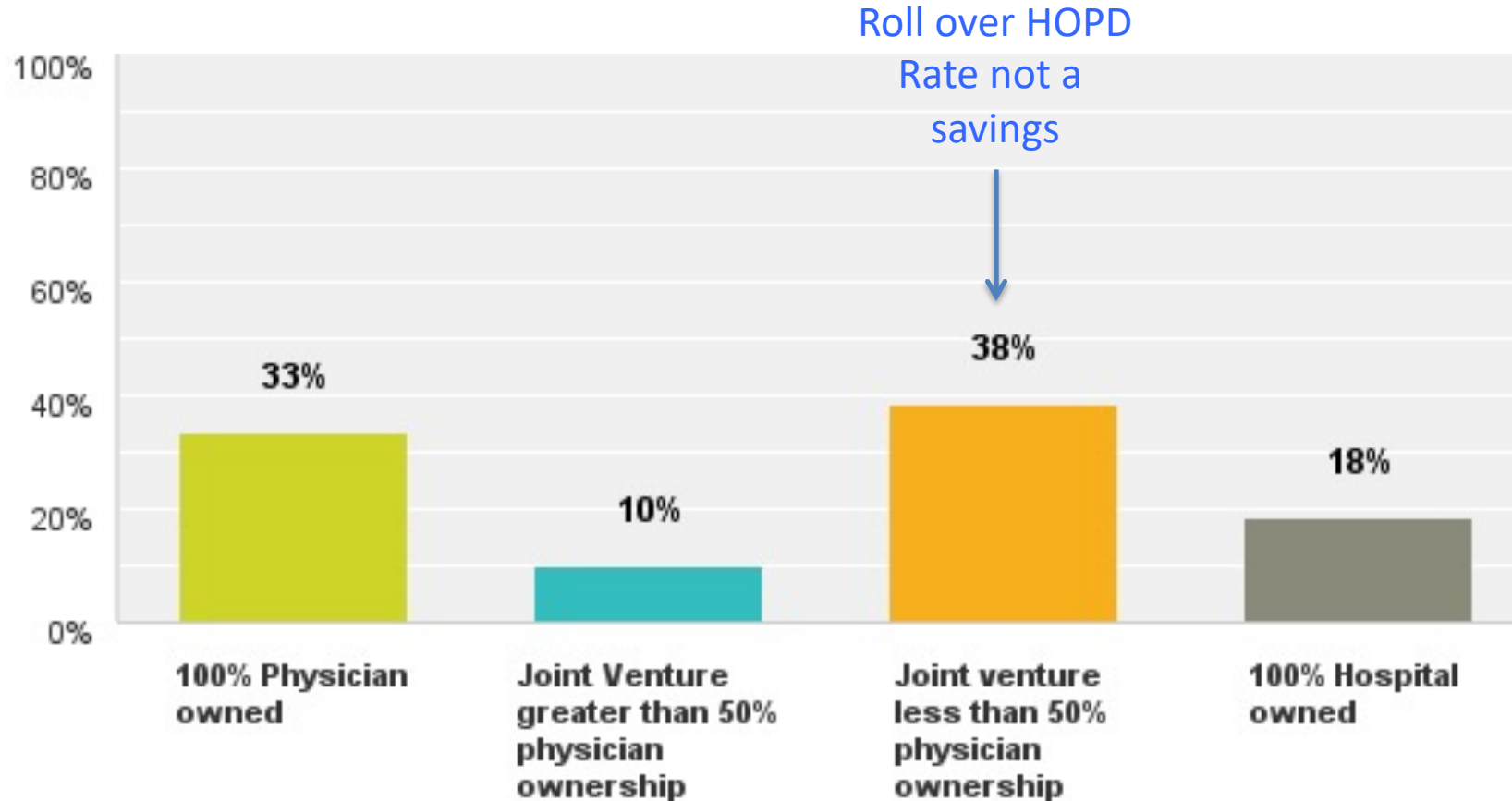
- UnitedHealthcare

*ASC (NO PRIOR AUTH) vs HOPD/Hospital
(PRIOR AUTH REQ)*

- 42820 T&A <12 42825
Tonsillectomy < 12
- 42821 T&A > 12 42826
Tonsillectomy > 12
- 42830 Adenoidectomy <12
- 42831 Adenoidectomy >12
- 30520 Septoplasty
- 30801 Turbinate reduction



ASC Corporate Structure Matters



Value-Based Healthcare: *Office Site-of-Service*

Fee-for-Service Category 2 Strategies

Goal

Value-based Referrals

- ACO Influenced


$$\text{Value} = \text{EM}^3$$

Patient Experience Management: EM³

- Management of the **Patient's Experience**
 - PATIENT JOURNEY MAPPING
 - COORDINATION OF CARE
 - PERCEPTION OF CARE REPORTING (Patient Reviews)
- Management of the **Cost** of that Experience
 - CLAIMS-BASED QUALITY MEASURES
 - EPISODE-OF-CARE
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 - DIAGNOSTIC REPORTED MEASURES
 - APM PRE-DETERMINED QUALITY MEASURES

Tools

Episode-of-Care

- Physician EOC Value Rank 
- Site-of-service shared savings with Payer & ACO
 - Diagnostic Tests
 - » In-office CT & Ultrasound
 - Surgery
 - » HOPD vs ASC vs In-Office

Site-of-Service: Diagnostic Imaging

- Free Standing Preferred Payments
 - Cigna 2021
 - United Healthcare 2019
 - Anthem 2018



Otolaryngology Site-of-Service

Comparison of NC/SC 2016 and AOA 2017 Ancillary Services by Group Size.

		1-3 OPG	4-9 OPG	10 + OPG
CT	NC/SC 2016	33%	77%	77%
	AOA 2017	35%	57%	81%
U/S	NC/SC 2016	19%	36%	82%
	AOA 2017	6%	33%	48%
TNE	NC/SC 2016	7%	18%	68%
	AOA 2017	12%	24%	62%

OPG: Otolaryngologists per group

V= EM³: Does this trend create VALUE?



Point-of-Service CT

Imaging Modality	Radiation Dosage (mSv)	Equivalent Radiation Exposure at Sea Level
Chest x-ray	0.1	10 days
Mini-CAT CT Sinus 600 Frame	0.17	20 days
Mammogram	0.7	3 mo
CT sinus	1	4 mo
CT head	2	8 mo
CT chest	8	2 yr
CT pelvis	10–20	3–6 yr

Source: Adapted from XoranTechnologies (www.radsafe.xorantech.com/).

V = EM³: Does this trend create VALUE?



Value-Based Healthcare: *Clinical Integration*

Fee-for-Service Category 1 & 2 Strategies

Goal

Pay-for-Reporting

Pay-for-Performance

$$\text{Value} = \text{EM}^3$$

Patient Experience Management: EM³

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Tools

Payments for Reporting Data

- Reported Outcome Measures
- Patient Compliance
- Care Coordination

Direct to Employer Contracting

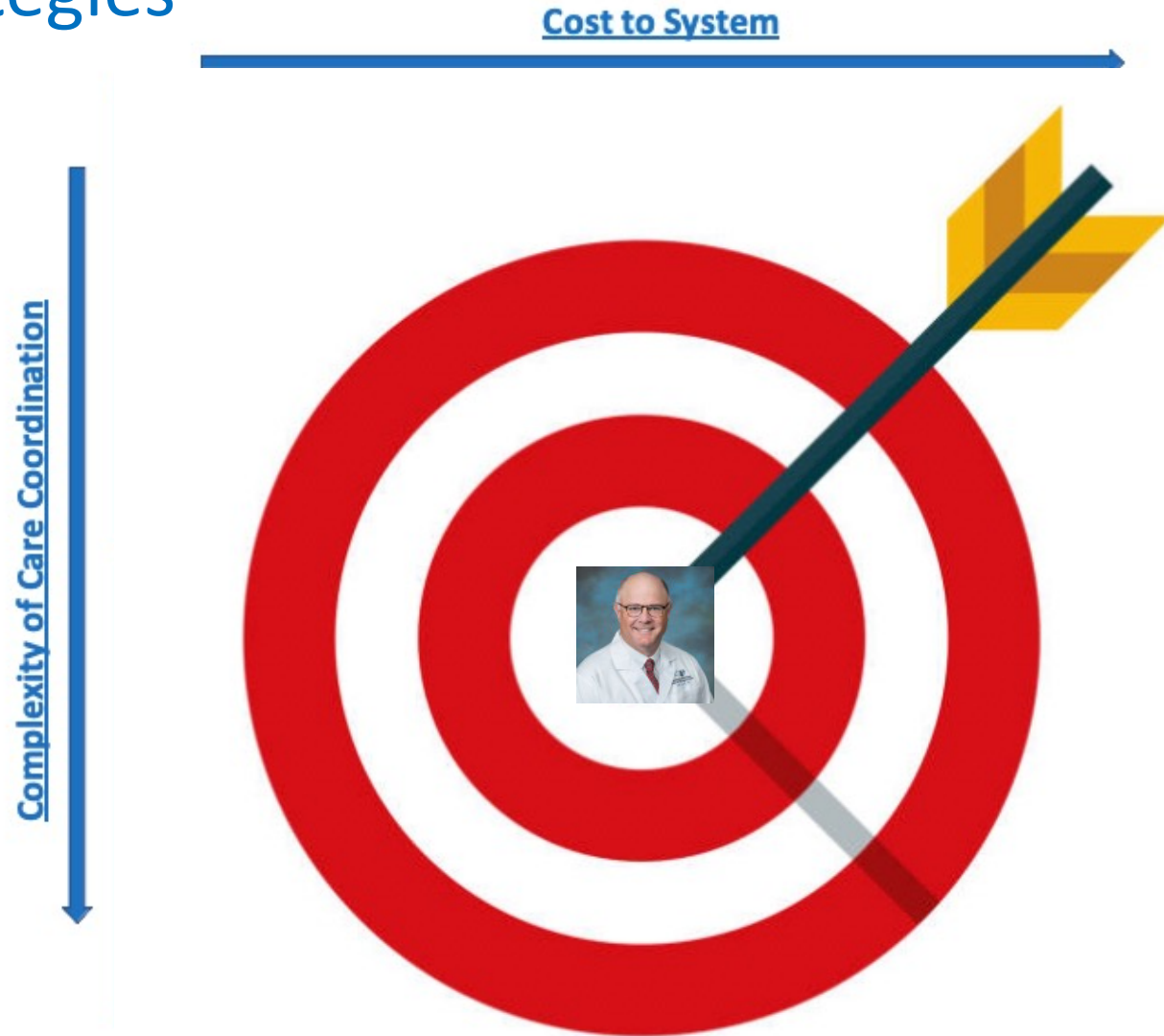
- National Multispecialty Clinically Integrated Physician Network



Value-Based Healthcare

Otolaryngology Strategies

Weakness



Value-Based Healthcare: *New Technology*

Episode-of Care Cost Implications

Goal

Episode-of-Care
Cost Reduction

Tools

Sinus Stents
Biologics

$$\text{Value} = \text{EM}^3$$

Patient Experience Management: EM³

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Chronic Sinusitis

Steroid vs Non-Steroid Eluding Stents

250,000 annual FESS cases per year²

Sinus Application	50% utilization	25% utilization
Steroid Eluding Pack	\$200,000,000	\$100,000,000
Non-Steroid Eluding Pack	\$45,000,000	\$23,000,000
CMC Foam	\$21,250,000	\$10,625,000
Hemostatic MPH	\$20,000,000	\$10,000,000

V = EM³: What Strategy creates VALUE?

¹Rudmik L, Smith TL. Economic Evaluation of a Steroid-Eluting Sinus Implant following Endoscopic Sinus Surgery for Chronic Rhinosinusitis. Otolaryngol Head Neck Surg. 2014 Aug;151(2):359-66.

²Pynnonen MA, Davis MM. Extent of sinus surgery, 2000 to 2009: a population-based study. Laryngoscope. 2014;124(4):820-825. doi:10.1002/lary.24335



Chronic Sinusitis with Nasal Polyps

Biologics

Biologic ¹	Responder Rate	Non-responder Rate	Wholesale acquisition cost per year
Dupilumab	62%	38%	\$38,110
Omalizumab	55%	45%	\$39,048
Mepolizumab	42%	48%	\$37,293

V = EM³: What Strategy creates VALUE?

Treatment ²	36-year Cost
FESS	\$50,436.99
Dupilumab	\$536,420.22

¹<https://www.biopharmadive.com/news/icer-asthma-biologics-price-final-report/542342/>

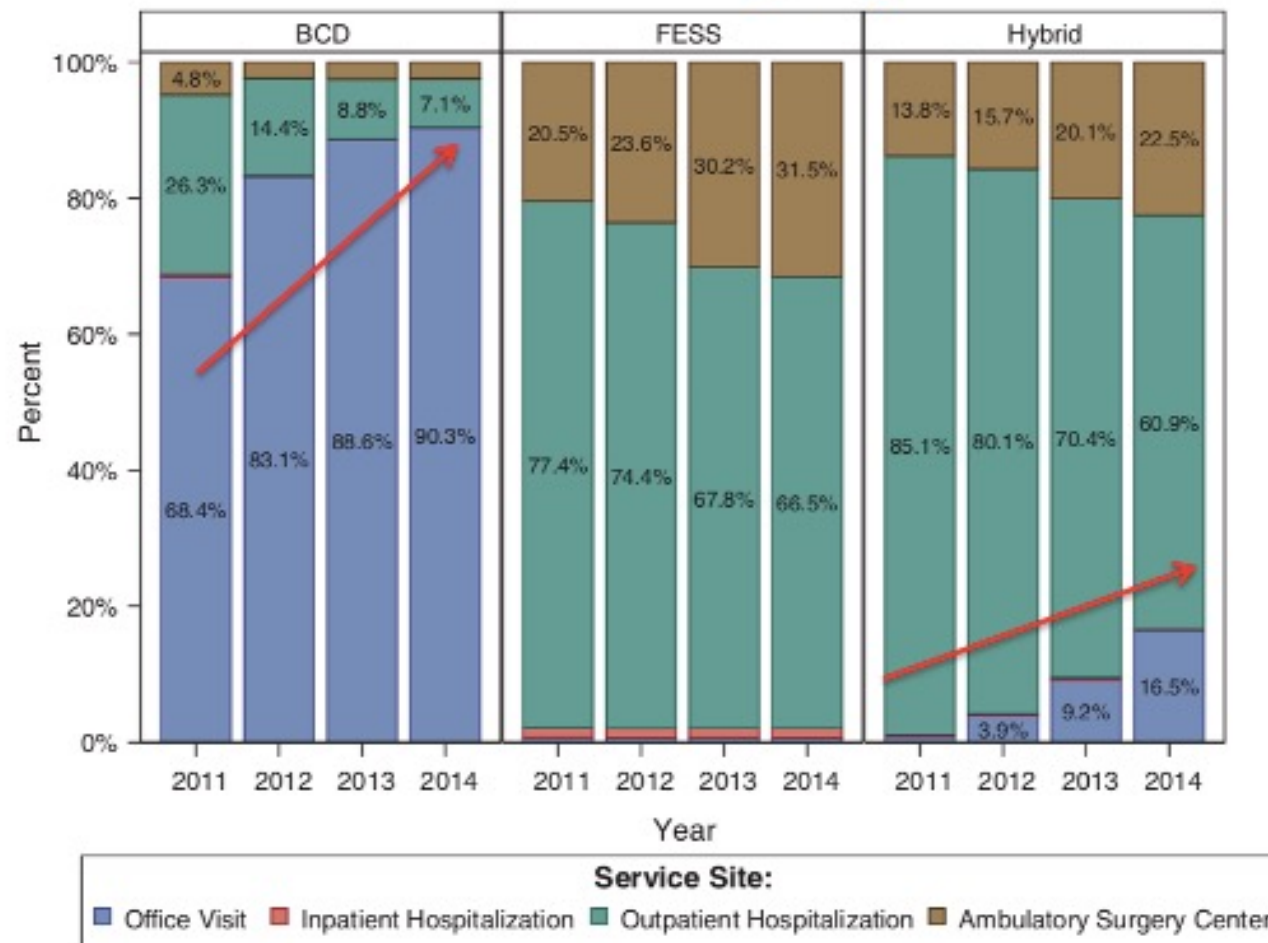
²Utility Analysis of Dupilumab Versus Endoscopic Sinus Surgery for Chronic Rhinosinusitis With Nasal Polyps. Laryngoscope. 2021 Jan;131(1):E26-E33



Otolaryngology

Site-of-Service Trends

Sinus Surgery



Otolaryngology

Site-of-Service Trends

Sino-nasal surgery

Medicare

TABLE VI.
Ethmoid Procedures and Septoplasty Procedures by Location.

Year	Ethmoid Procedures OR	Ethmoid Procedures In-Office	In-Office Percentage of Total	Septoplasty OR	Septoplasty In-Office	In-Office Percentage of Total
2012	5,097	29	0.6%	5,690	117	2.0%
2013	5,240	156	2.9%	5,969	264	4.2%
2014	5,039	345	6.4%	5,667	371	6.1%
2015	5,319	749	12.3%	5,745	431	7.0%
2016	5,382	988	15.5%	5,744	612	9.6%

OR = operating room.

V = EM³: Does this trend create VALUE?



Site-of-Service Quality Standards

Standards Oversight	Hospital/ASC/HOPD Clinic	Non-HOPD Office-Based
Facility Standards	Joint Commission	OSHA
Credentials	Medical Executive Committee	?
Case Review/Adverse Event	Surgical Review Committee	?
Infection Control	Infection Control Committee	?
Professional Standards	Physician Affairs Committee	?
Reporting Standards	Surgical Review Committee	?

V= EM³: Does this trend create VALUE?





Value-Based Healthcare: *Alternative Payments*

Fee-for-Service Category 3 Strategies



Goal

Bundled Payments

$$\text{Value} = \text{EM}^3$$

Patient Experience Management: EM³

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Tools

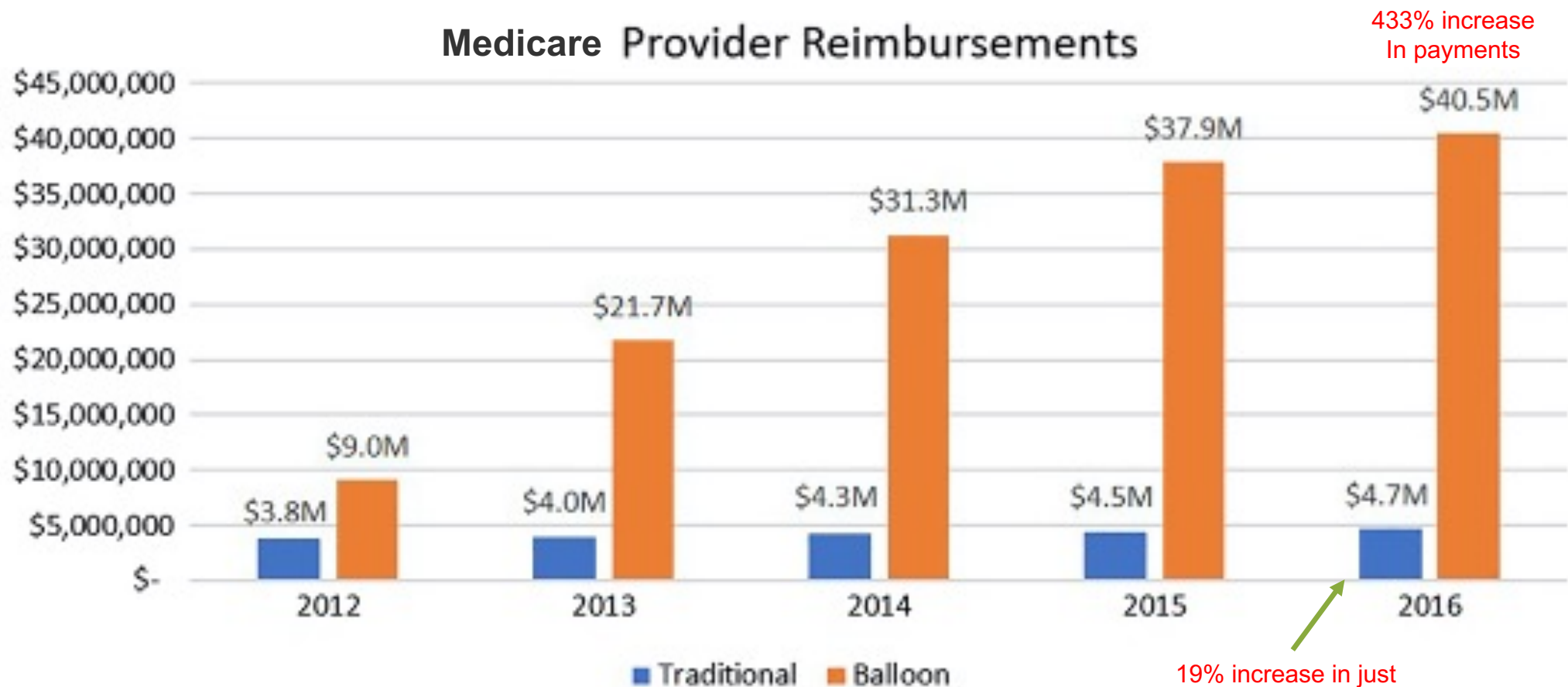
Balloon Sinuplasty
Balloon Eustachian Tube
Dilation



Otolaryngology Alternative Payment Model

Balloon Sinuplasty: An APM without Quality Metrics

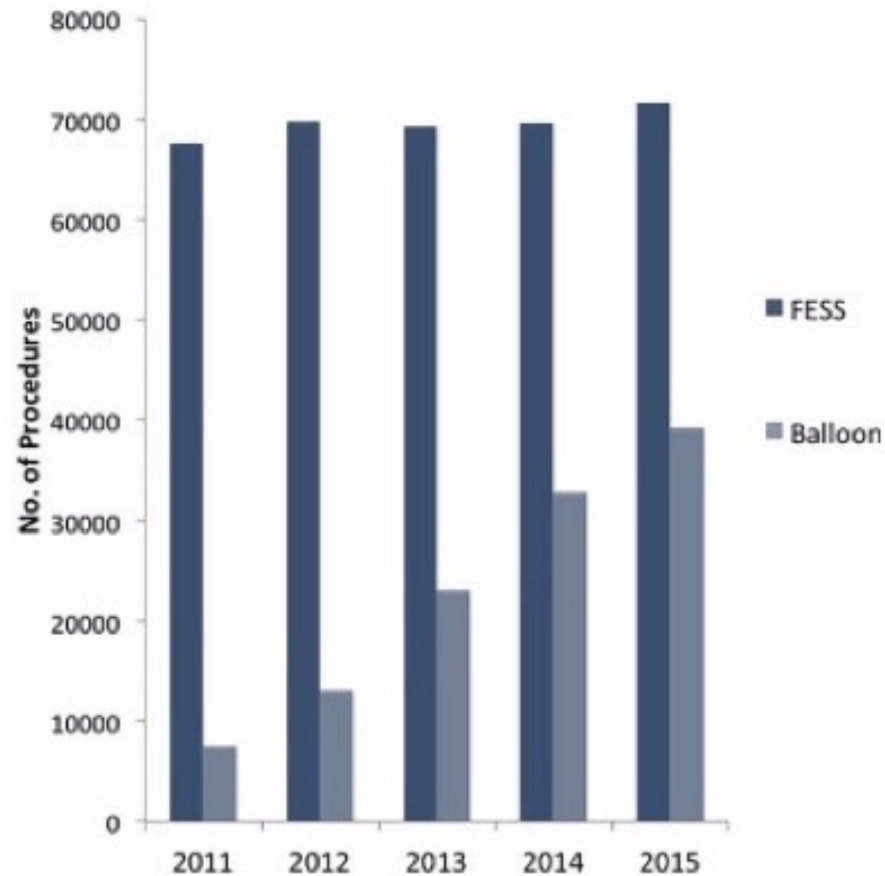
V = EM³: Does this trend create VALUE?



Impact of Linking APM to Quality

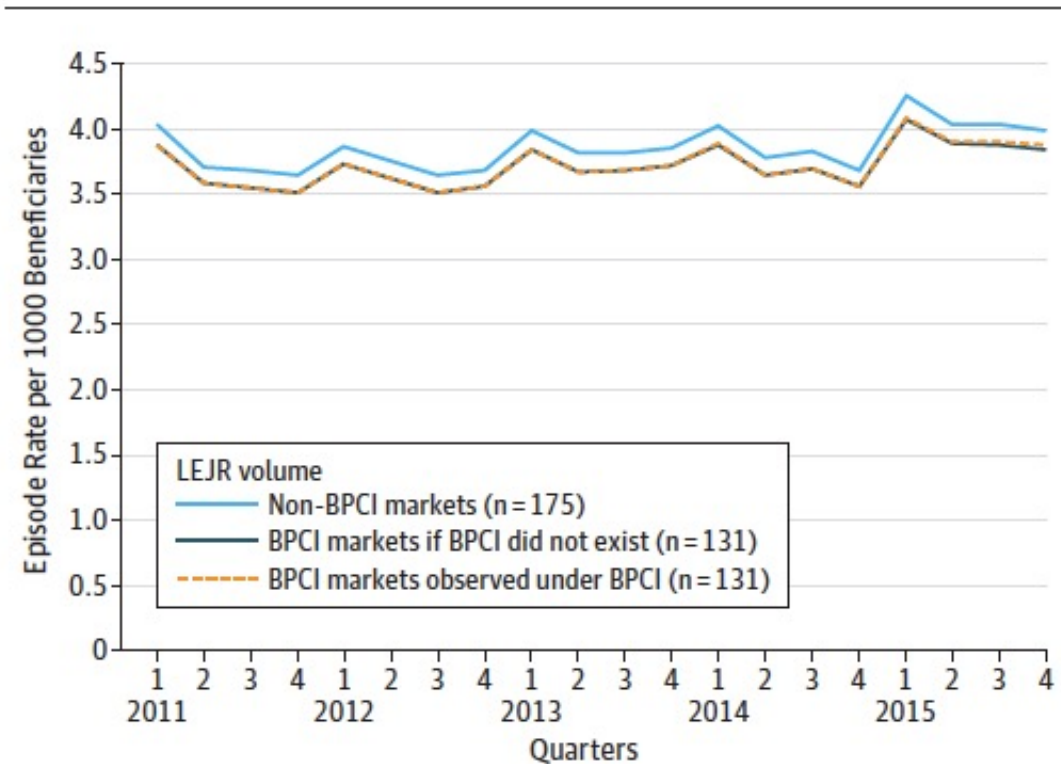
Sinus Procedures vs Joint Replacement

*Medicare FESS & Balloon Sinuplasty
Bundle Payments*



Snider et al Laryngoscope. 2018

Medicare's Bundled Payments for Care Improvement

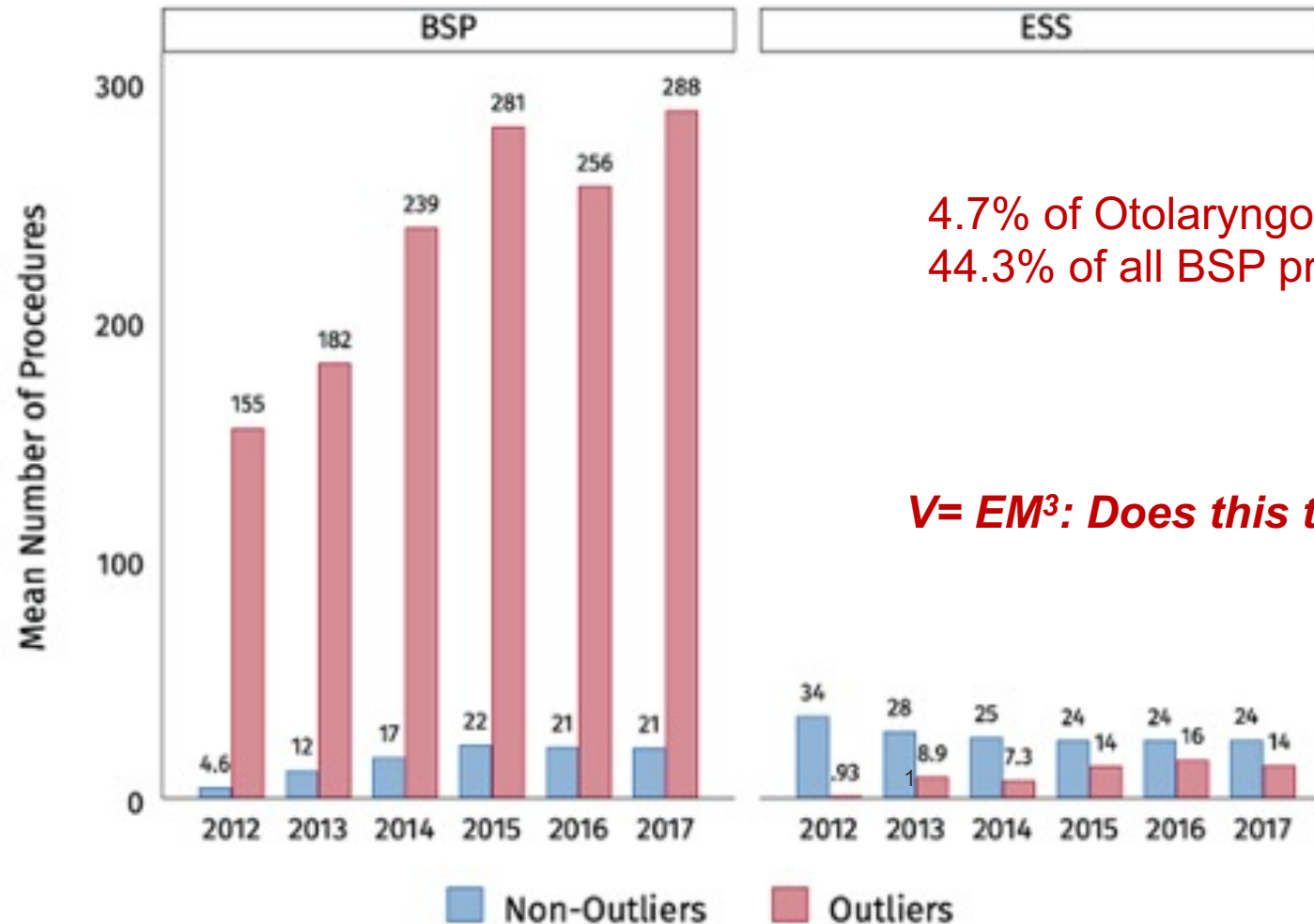


Navathe et al JAMA. 2018



Establishing VALUE in BSP Bundled Payments

Medicare Data



4.7% of Otolaryngologists¹ accounted for 44.3% of all BSP procedures

V= EM³: Does this trend create VALUE?

¹Outlier status was defined as performing a total number of BSP procedures in a year that is >2 SDs above the cohort mean between 2012 and 2017



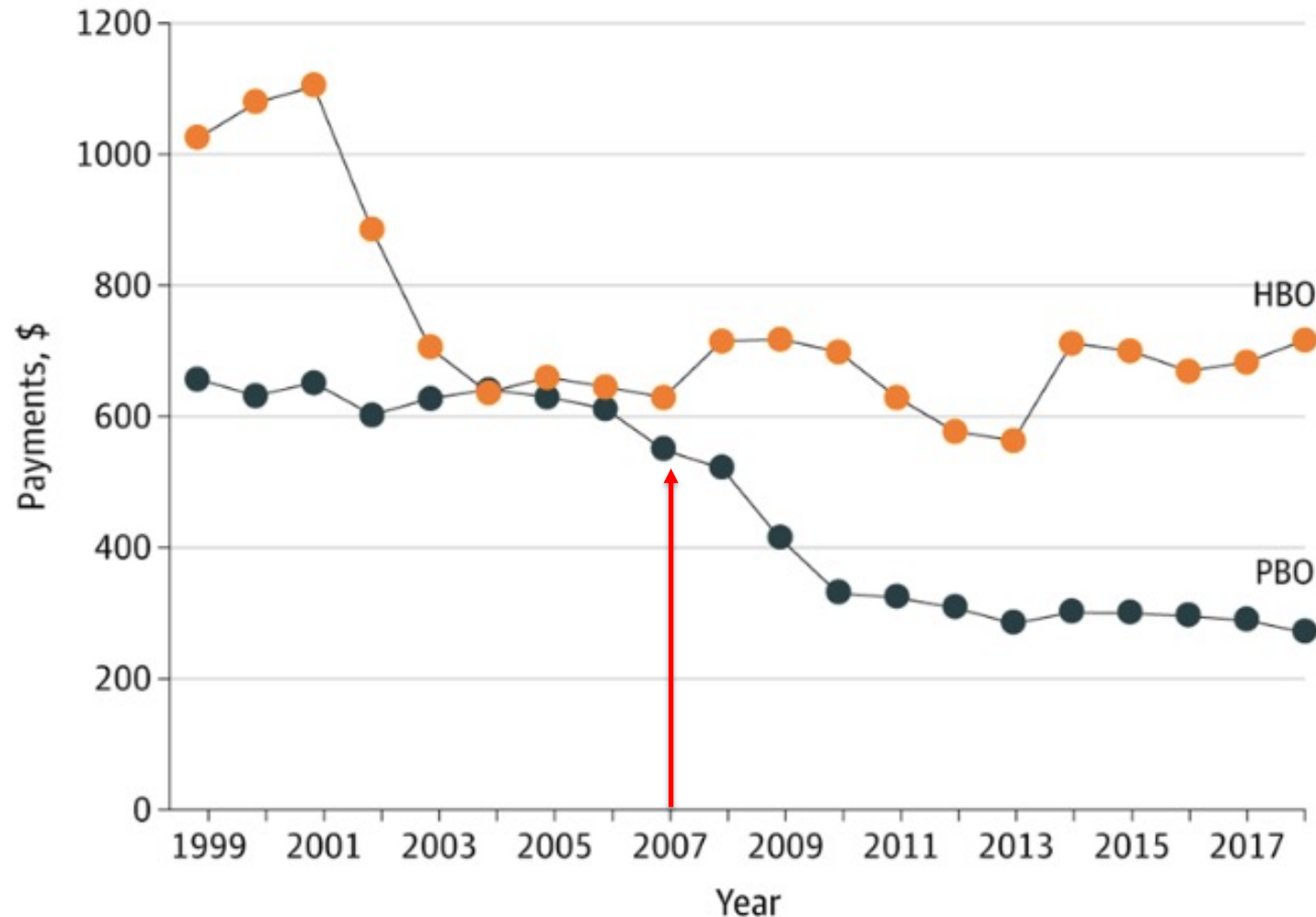
**When Physician over utilization
is recognized by the payers.....**

What happens?



CARDIAC AREST

Figure 1. Weighted Mean Fee-for-Service Medicare Payments for Noninvasive Cardiovascular Tests in the Hospital-Based Outpatient (HBO) and Provider-Based Office (PBO) Settings, 1999-2015



-1999-2005 CMS noted a 60% increase noninvasive cardiac tests in private practice

-2007 CMS Reduces payments to independent cardiologists for non-invasive in-office procedures from an average of \$700 per test to \$300 per test



Cardiology Employment Model shifts

2008-2018

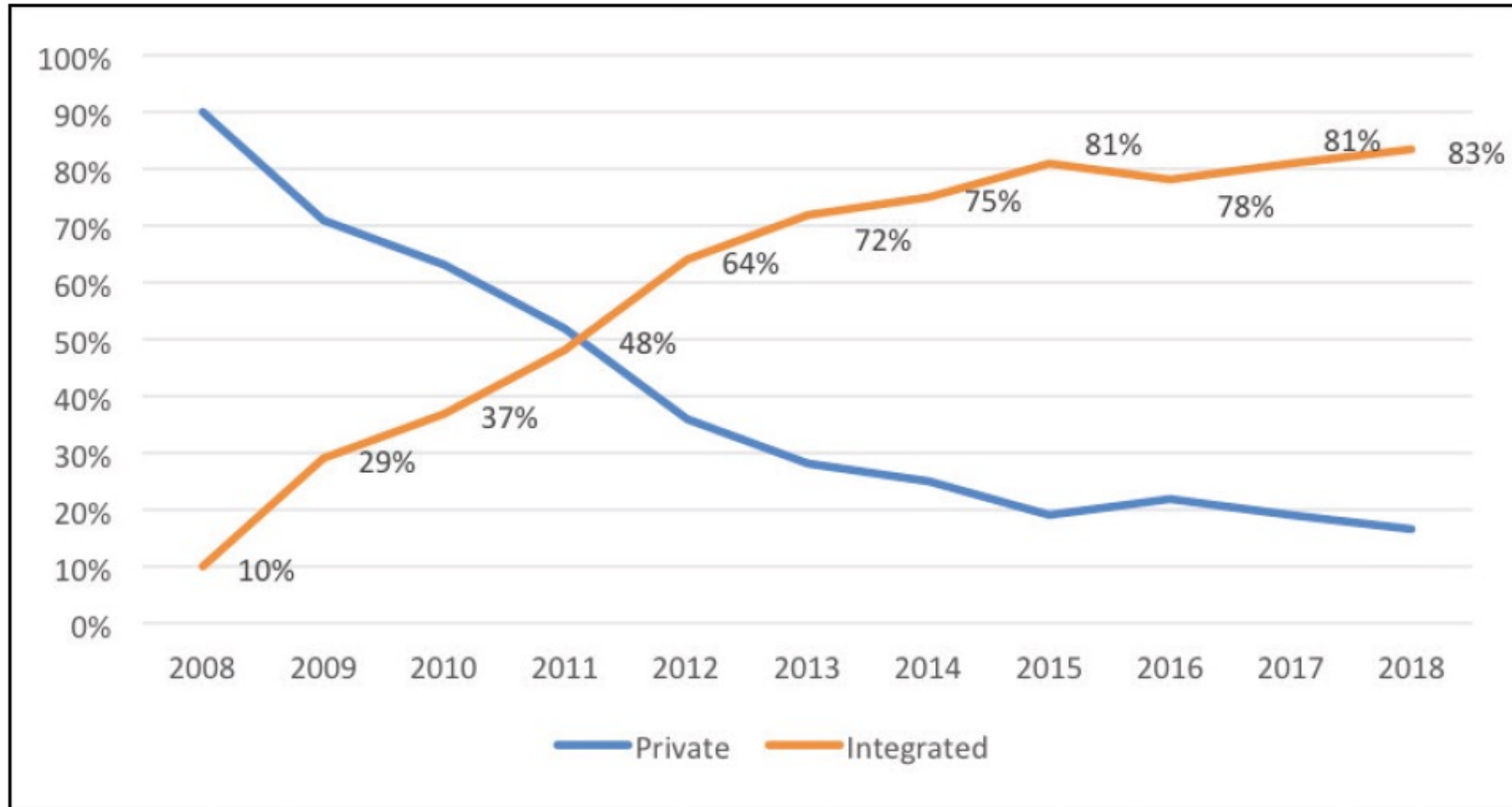


Figure 5. Ownership model trend.



Market Lockout

Description	Code	Private/Medicare												Medicaid		Medicaid	
		11 Dallas area		18 Houston area		20 Beaumont area		31 Austin area		99 Other		State		State		State	
		Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility	Non-Facility	Facility
Immunization administration for vaccines/toxoids	90465-90474	0.99	0.66	1.02	0.74	0.83	0.55	0.86	0.42	0.98	0.79	0.94	0.68	2.29		2.38	
Psychiatry	90801-90899	1.10	1.73	0.96	1.92	1.28		1.09	1.43	1.20	1.46	1.12	1.65	1.65	1.69	1.36	1.30
Biofeedback	90901-90911	1.13		1.23				3.05		1.24	1.13	1.74	1.13	2.01	1.33	1.18	1.20
Dialysis	90935-90999	1.45	1.41	0.98	1.02		1.01	0.97	1.01	1.73	2.82	1.52	1.79	1.62	2.43	1.19	1.19
Gastroenterology	91000-91299	1.48	2.30	1.02	1.11	1.11	1.54	2.74	4.00	2.90	1.98	2.00	2.00	3.46	2.28	1.18	1.19
Ophthalmology	92002-92499	1.32	1.93	1.13	2.02	1.49	0.80	1.34	2.19	1.38	1.85	1.31	1.94	1.45	1.71	1.18	1.18
Special otorhino-laryngologic services	92502-92700	1.41	2.50	1.15	2.07	1.48	2.48	1.21	2.21	1.30	2.25	1.28	2.25	1.56	2.61	1.29	1.15
Cardiovascular	92950-93799	1.78	2.54	2.00	1.85	1.75	2.72	2.29	2.15	1.84	2.09	1.93	2.16	1.89	2.13	1.18	1.19
Noninvasive vascular diagnostic studies	93875-93990	1.36	1.51	1.35	1.53	1.26	2.00	1.23	0.99	1.46	1.32	1.36	1.42	1.79	2.40	1.18	1.19
Pulmonary	94002-94799	1.29	2.13	1.23	2.59	1.24	1.66	1.26	3.71	1.39	2.94	1.29	2.66	1.61	7.89	1.19	1.20
Allergy and clinical immunology	95004-95199	18.82	1.97	18.33	3.87	19.63		22.86		16.68	29.52	19.02	17.69	18.26		1.11	
Endocrinology	95250-95251	1.18		0.85		1.04		1.19		1.17	1.35	1.09	1.35	1.24	1.81	1.18	1.20
Neurology and neuromuscular	95803-96020	1.60	2.23	1.63	2.46	1.11	1.96	1.11	1.36	1.87	3.17	1.60	2.53	2.27	3.18	1.18	1.19



Eustachian Tube Dysfunction

HCPCS Code	Short Description	Non-Facility Price Office	Facility Price HOPD/ASC
69433	M&T	\$209.02	\$134.62
69705	Unilateral ET Dilation	\$2,941.87	\$176.84
69706	Bilateral ET Dilation	\$3,036.69	\$247.09

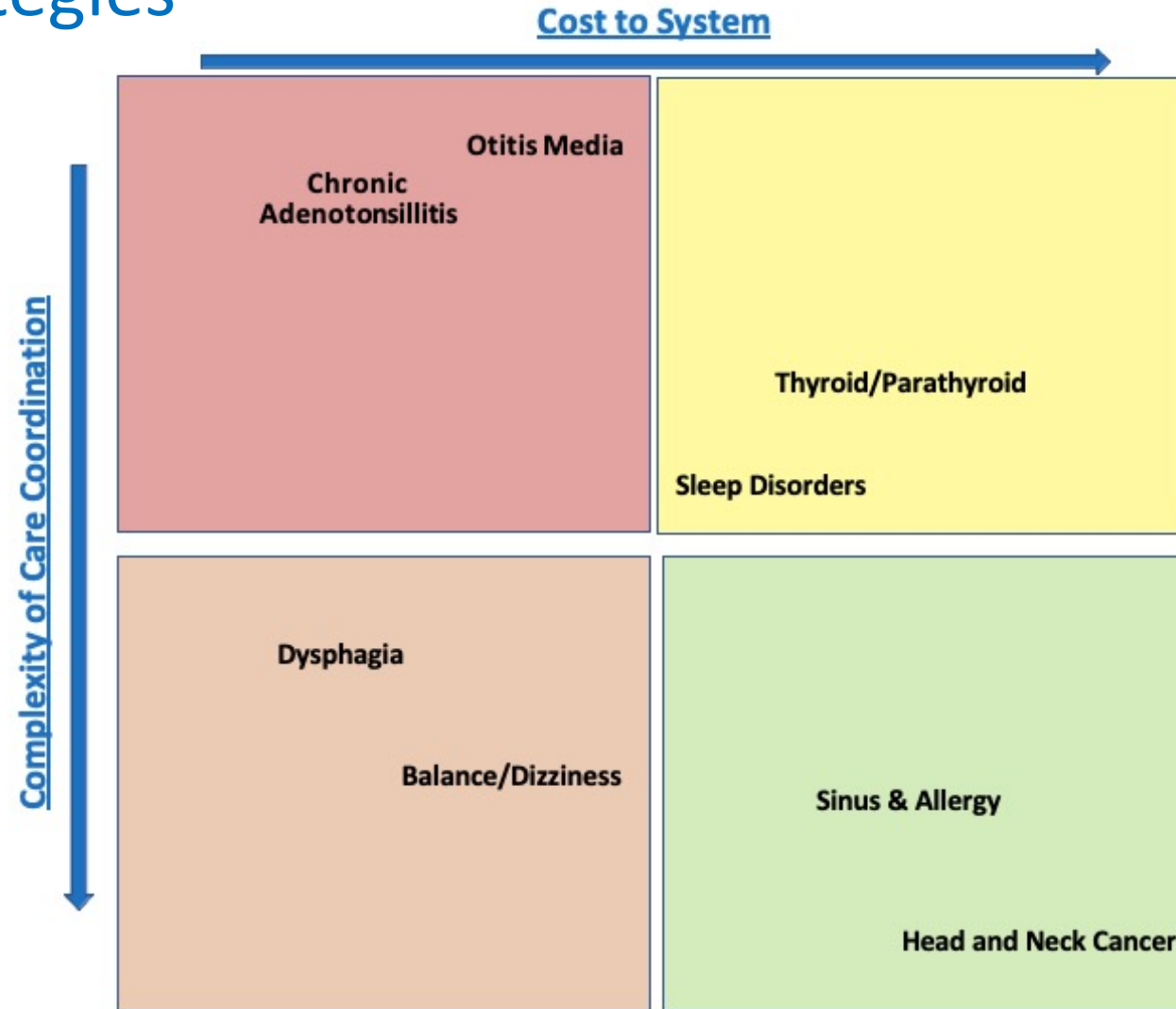
V = EM³: What pathway will create VALUE?



Value-Based Healthcare

Otolaryngology Strategies

Future concepts



Melon, DE 2019



Value-Based Healthcare: *Coordination of Care*

$$\text{Value} = \text{EM}^3$$

Patient *Experience Management*: EM³

- Management of the ***Patients'*** Experience
 - *PATIENT JOURNEY MAPPING*
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- Management of the ***Clinical Outcomes*** of that Experience
 - *PATIENT REPORTED OUTCOME MEASURES*
 - *DIAGNOSTIC REPORTED MEASURES*
 - *Integration of BIG DATA*

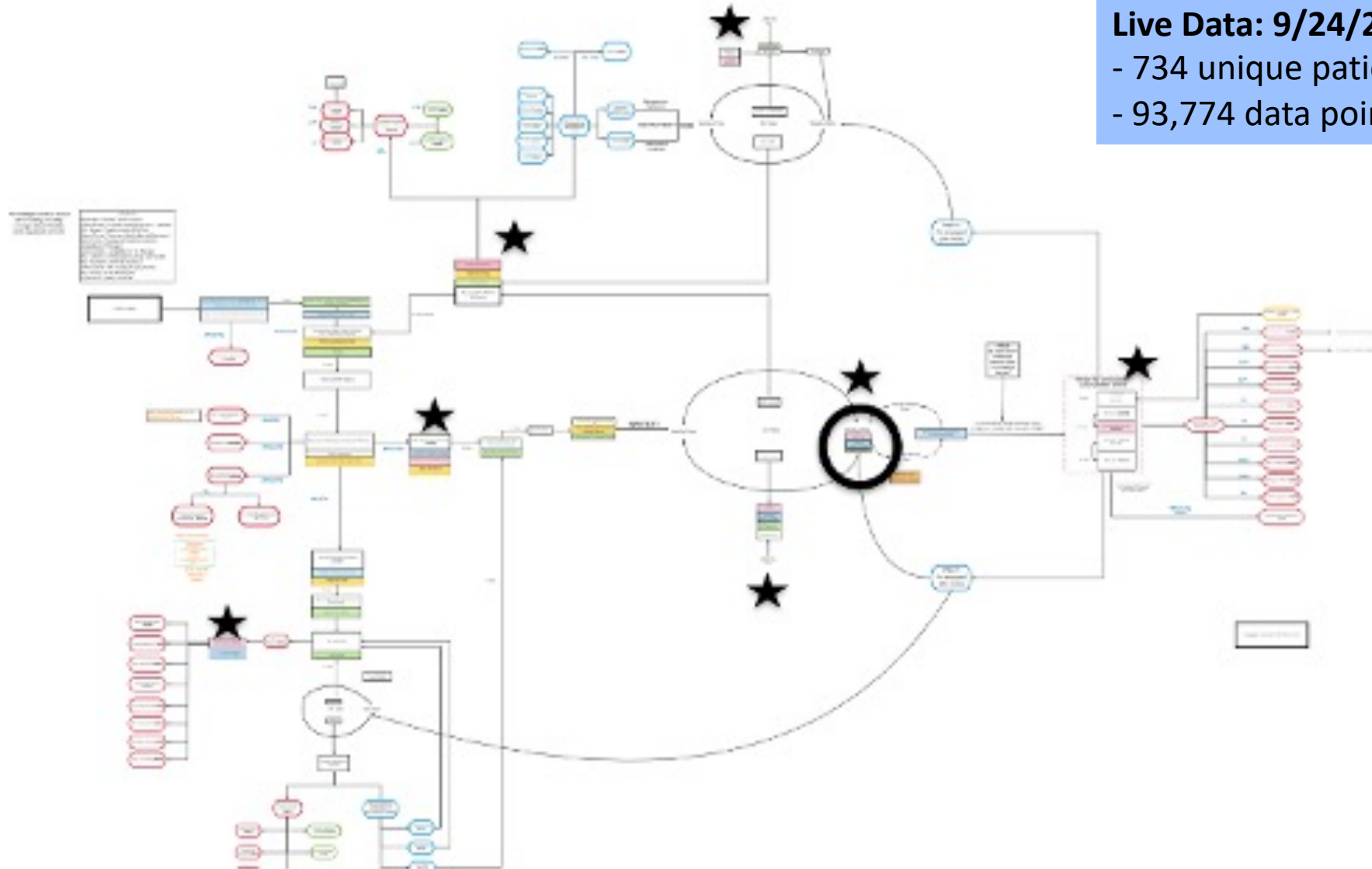
Tools

Sino-Allergy Home
Allergy Patient Journey Mapping



Otolaryngology VBH 2025

Managing the Patient's Experience through Data



Live Data: 9/24/2020-7/6/2021

- 734 unique patients engaged

- 93,774 data points





CAROLINA

EAR NOSE & THROAT

SINUS AND ALLERGY CENTER, P.A.