



HEALTH BOOT CAMPS

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Presented by the Health Section

Provider Risk Sharing Boot Camp for Health Actuaries

Presenters:

Colleen Norris, FSA, MAAA

Jay Hazelrigs, ASA, MAAA

Dr. Chris Stanley, MD

[SOA Antitrust Disclaimer](#)

[SOA Presentation Disclaimer](#)

SOA Provider Risk Sharing Boot Camp for Health Actuaries

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JAY HAZELRIGS, ASA, MAAA

DR. CHRIS STANLEY, MD



Introductions

- Colleen Norris
- Jay Hazelrigs
- Dr. Chris Stanley

- Attendees - who are you, where do you work, what do you do, what you seek most from this boot camp?

Housekeeping

- The boot camp concept
- Stop us to ask questions throughout. This is meant to be an interactive learning session.
- Consider anti-trust and anti-collusion laws in your conversations with one another
- Cell phones = vibrate or off
- There will be breaks, but feel free to step out

What will be covered in this boot camp?

Day 1

- Overview: big issues in provider risk sharing
- MACRA
- Evaluation of value-based payment approaches

Day 2

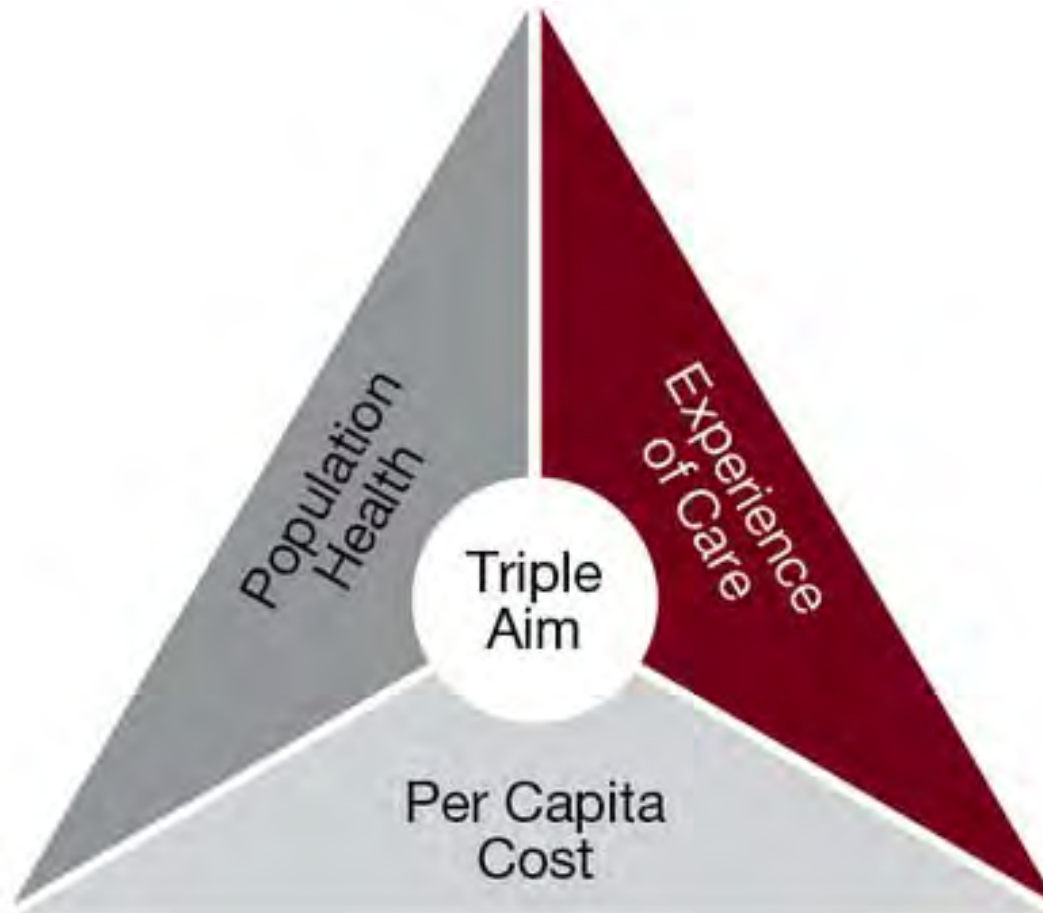
- Attribution techniques and issues
- Population health and quality
- Network considerations
- Tying it all together

Overview

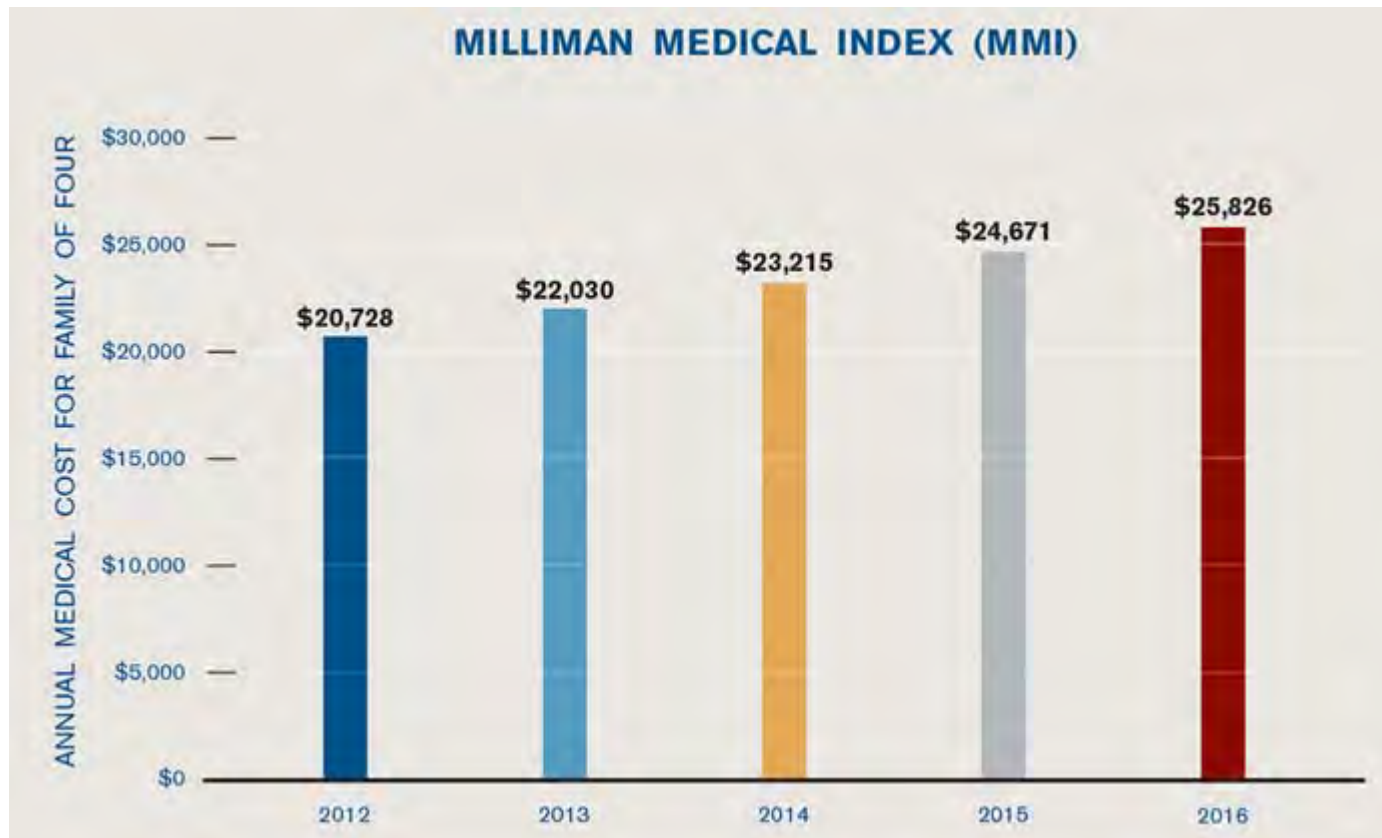
What are the big issues in provider risk sharing?



What is provider risk sharing and why is it happening?



What is provider risk sharing and why is it happening?



Approaches to reducing paid costs

Supply Side

Shared Savings

Narrow Networks

Negotiated discounts

Bundling services, etc.

Demand Side

Increased cost sharing

Preauthorization

Approaches to reducing paid costs

Supply Side

Shared Savings

Narrow Networks

Negotiated discounts

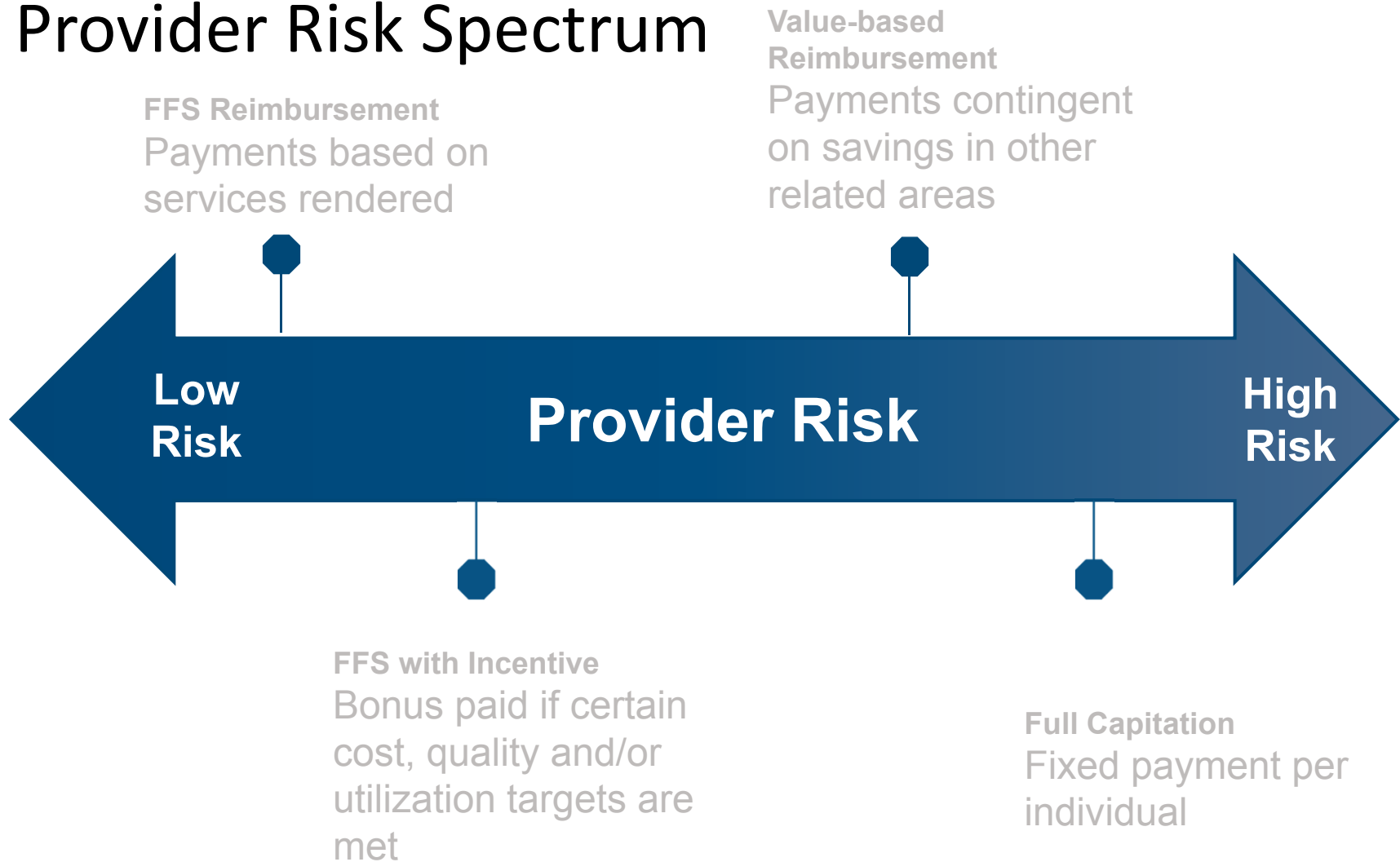
Bundling services, etc.

Demand Side

Increased cost sharing

Preauthorization

Provider Risk Spectrum



What are the big conceptual issues in the provider risk sharing space?

Transfer of risks providers can meaningfully influence

Attribution

Financial Incentives

Declining revenues

Predictive modeling

Quality

Risk Adjustment

Population Health

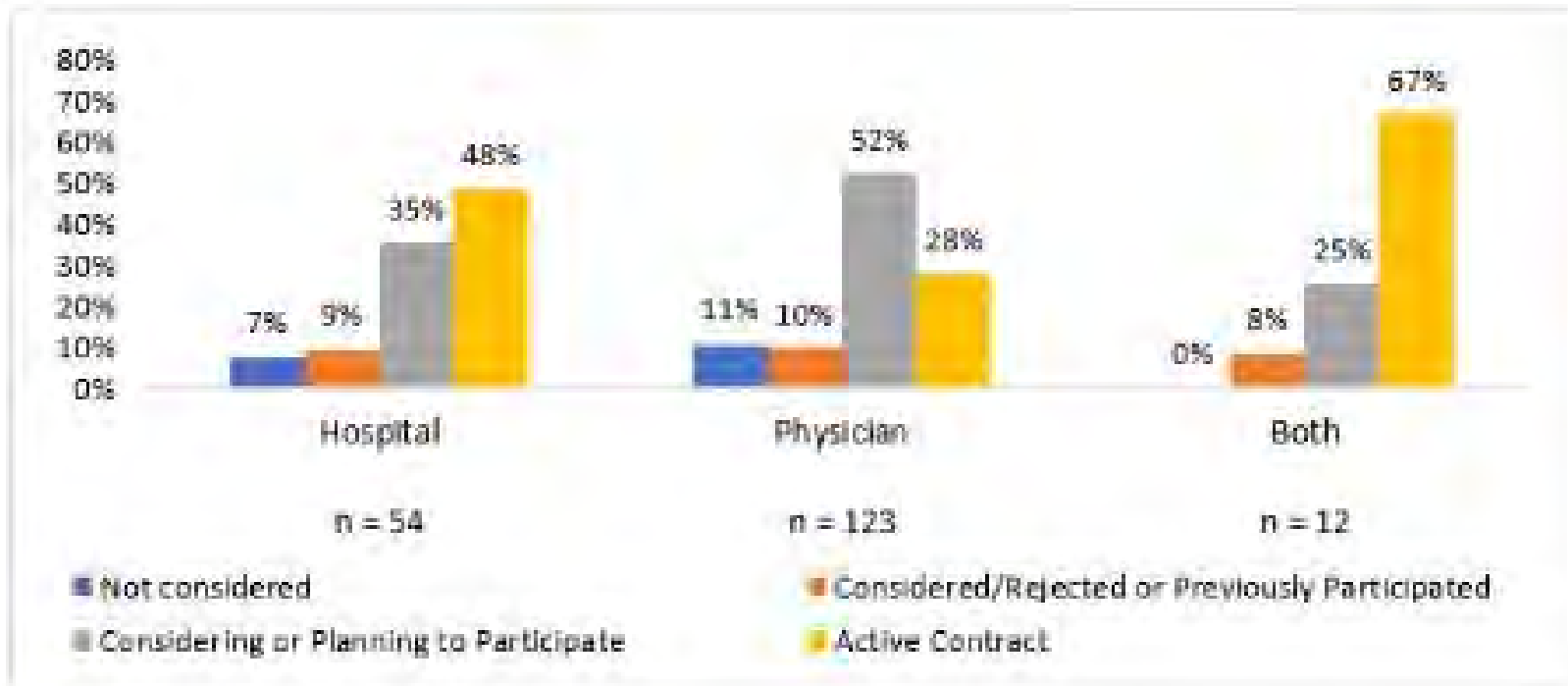
What is the state of provider risk sharing in 2017?



Field	Values	ACO Survey (n=215 ⁺)	ACO Database (n=936)
Contract Type [†]	Medicare ^{***}	78.1%	59.7%
	Commercial ^{***}	44.2%	49.0%
	Medicaid ^{***}	7.4%	8.3%
ACO Lives	<10,000 Lives	17.2%	23.3%
	10,000-50,000 Lives	57.2%	56.9%
	50,001-100,000 Lives	14.9%	11.9%
	>100,000 Lives	10.7%	7.9%
Provider Type	Physician Group-Led	65.1%	66.7%
	Hospital-Led	28.4%	26.4%
	Both	6.5%	6.9%
CMS ACO Programs	MSSP ^{***}	70.2%	51.1%
	NGACO [†]	8.4%	4.8%
	CEC ^{††}	0.0%	3.9%
Region [†]	North East	24.7%	23.2%
	South	36.3%	34.5%
	Midwest	23.3%	21.7%
	West	15.8%	20.2%

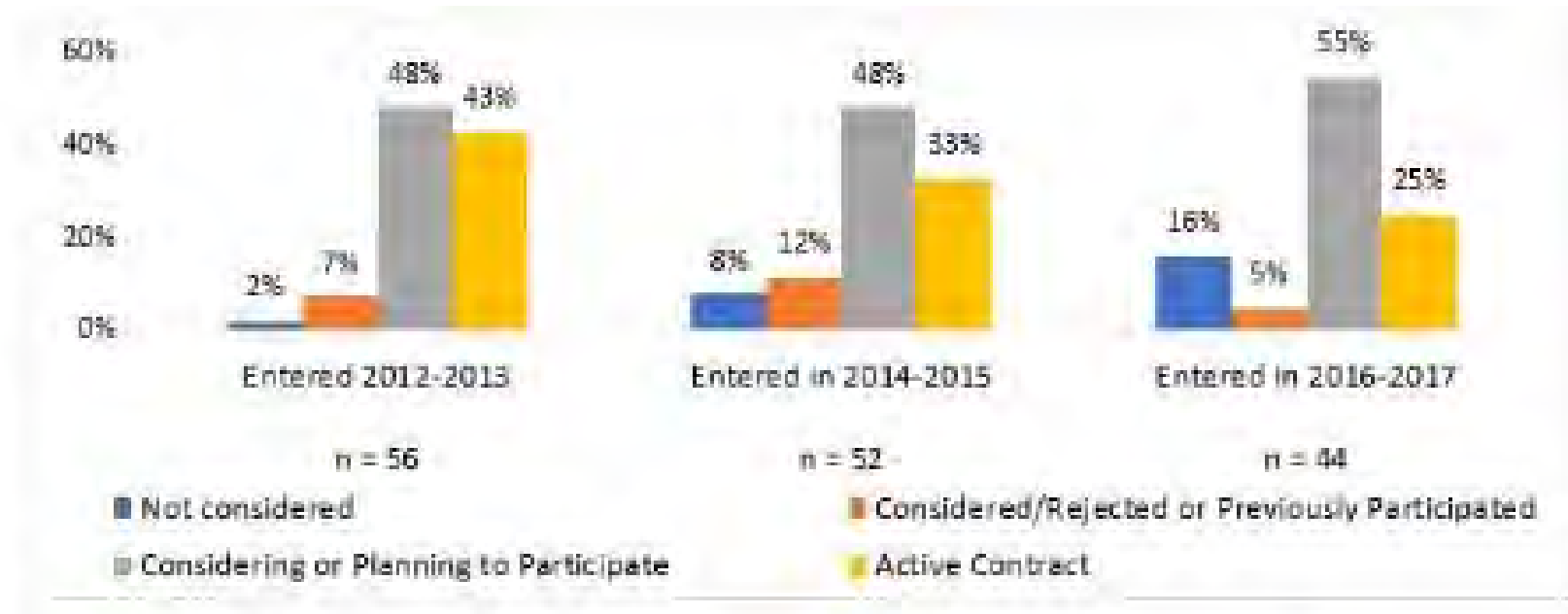
Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

Plans for Shared Savings with Risk by ACO Type



Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

Plans for Shared Savings with Risk by MSSP Start Date



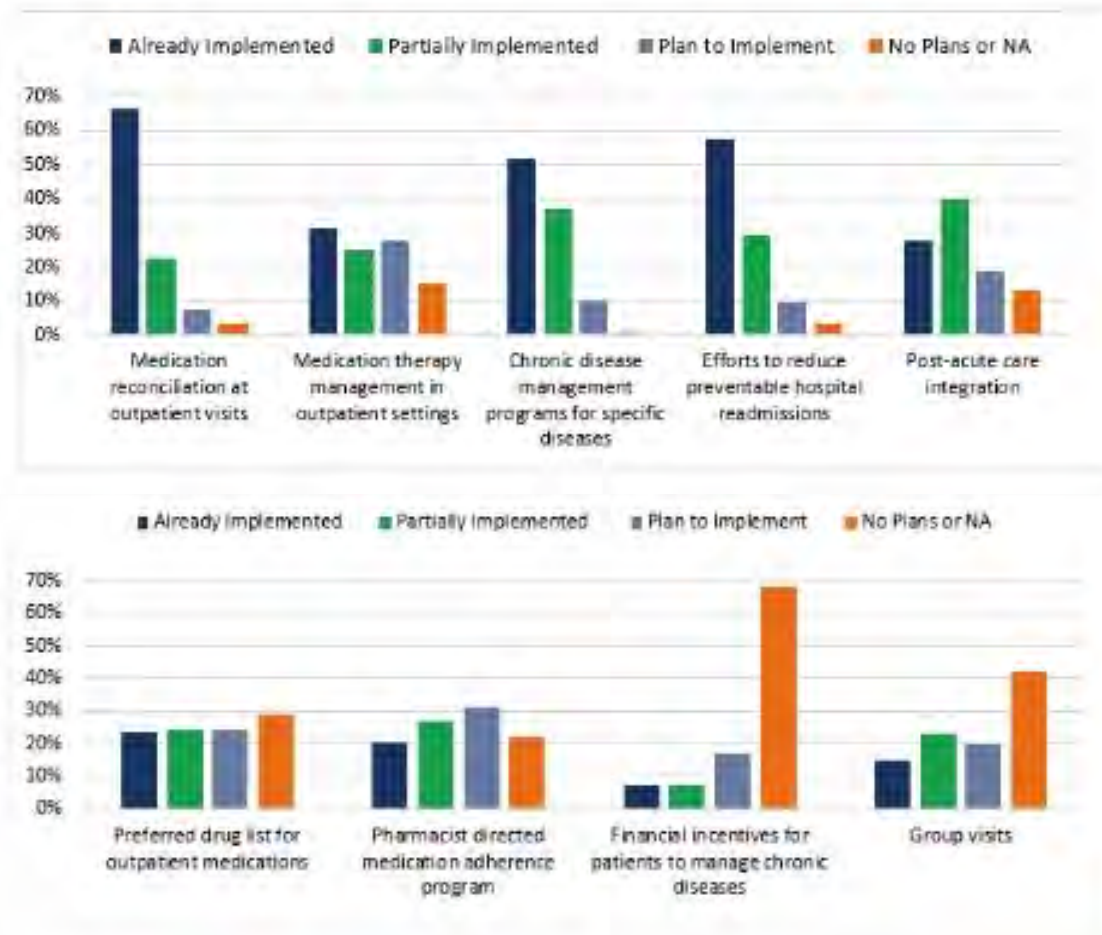
Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

Participation across multiple shared risk arrangements



Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

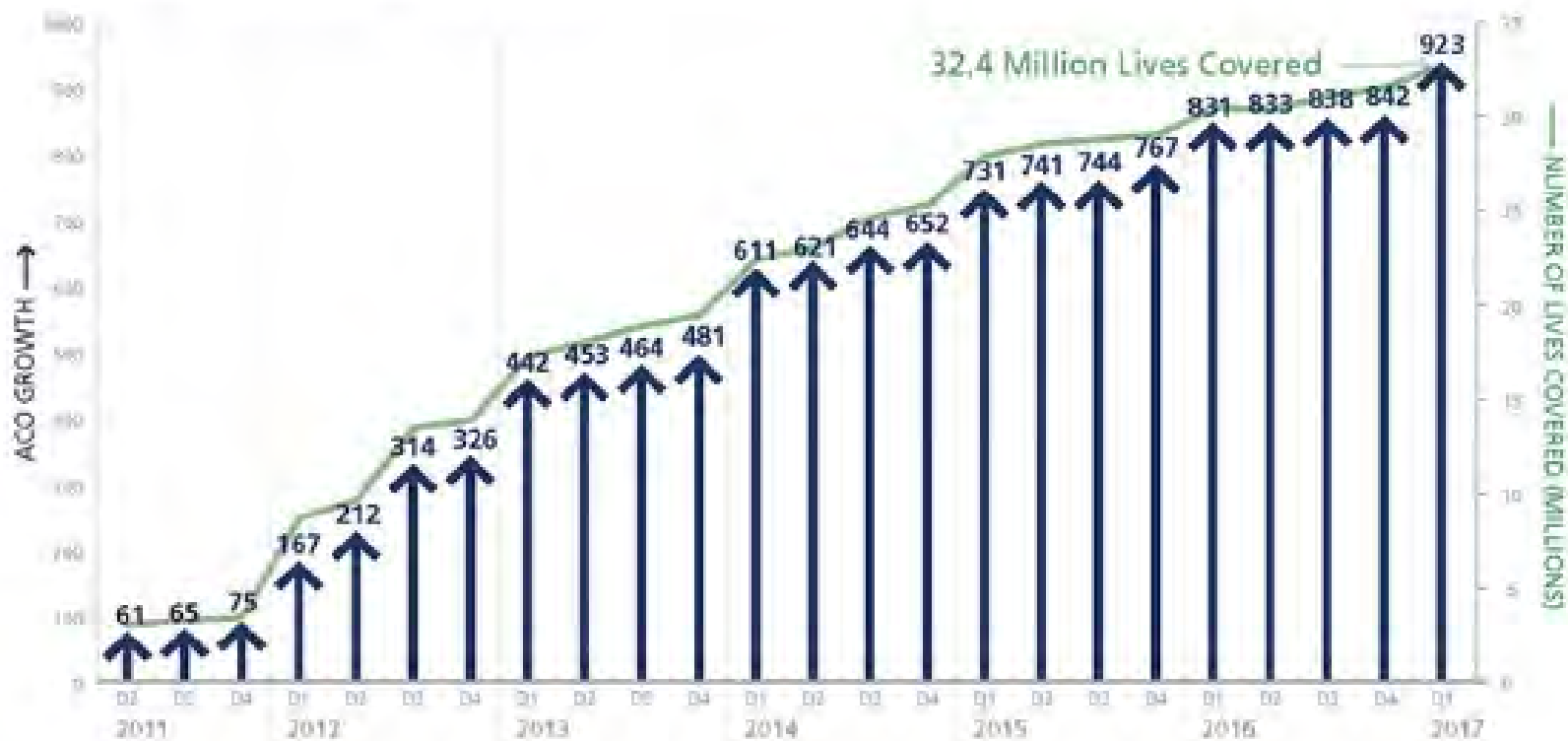
Most and least implemented population health measures



Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

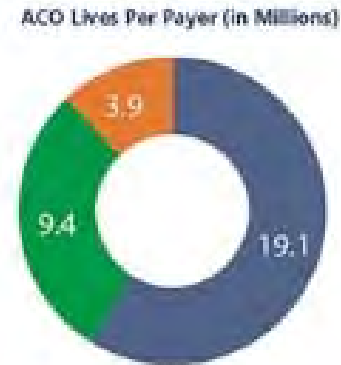
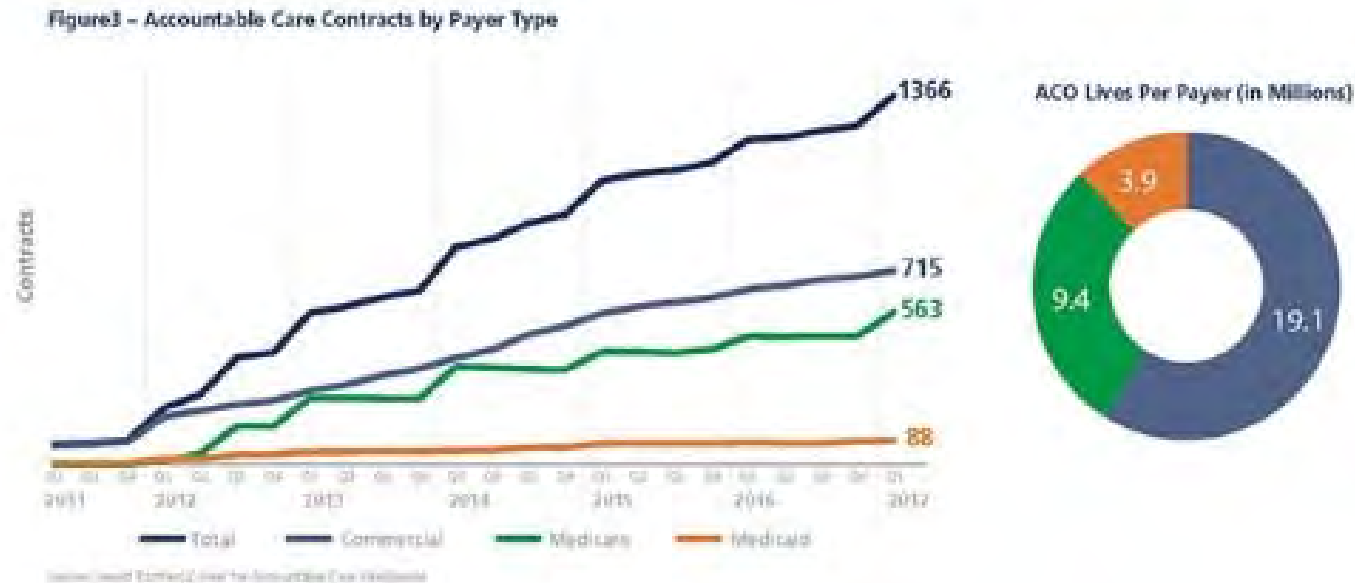
What are the most common ways in which risk is being shared with providers?

Figure 1 – ACOs and Covered Lives Over Time



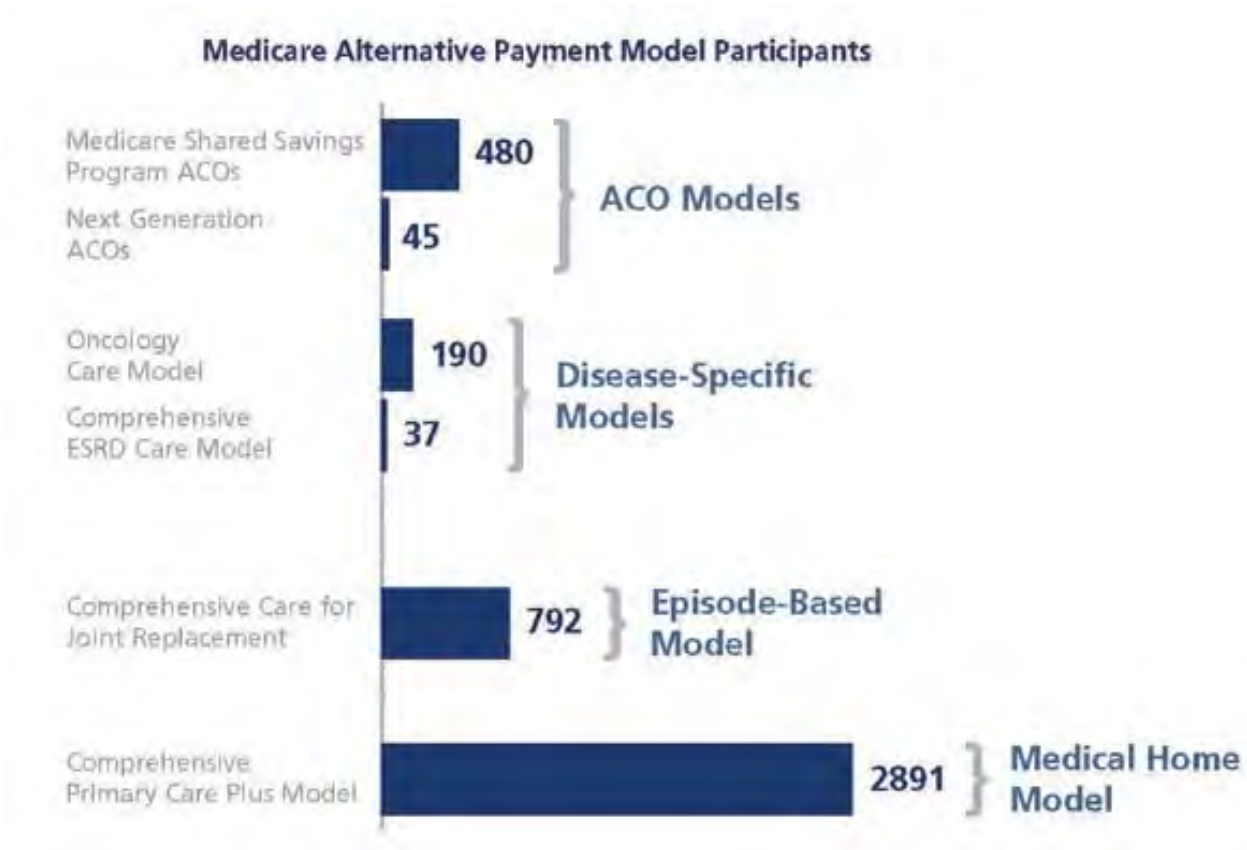
Source: 2017 Annual ACO Survey conducted by the National Association of ACOs

What are the most common ways in which risk is being shared with providers?



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What is the role of government programs?

MACRA

Medicare
ACOs

Other APMs

Medicaid
Innovations

What is the role of government programs?

MACRA

Medicare
ACOs

Other APMs

Medicaid
Innovations

*How will
Medicare FFS
reimbursement
change?*

Exempt

Certain providers are exempt from adjustments
New, rural, low-volume, and certain other providers are excluded.

MIPS

Merit-Based Incentive Payment System
Adjusts Medicare FFS base rate up or down based on several categories

QP

Qualifying Participant (and partial-QP)
5% lump-sum bonus based on meaningful participation in an Advanced APM.

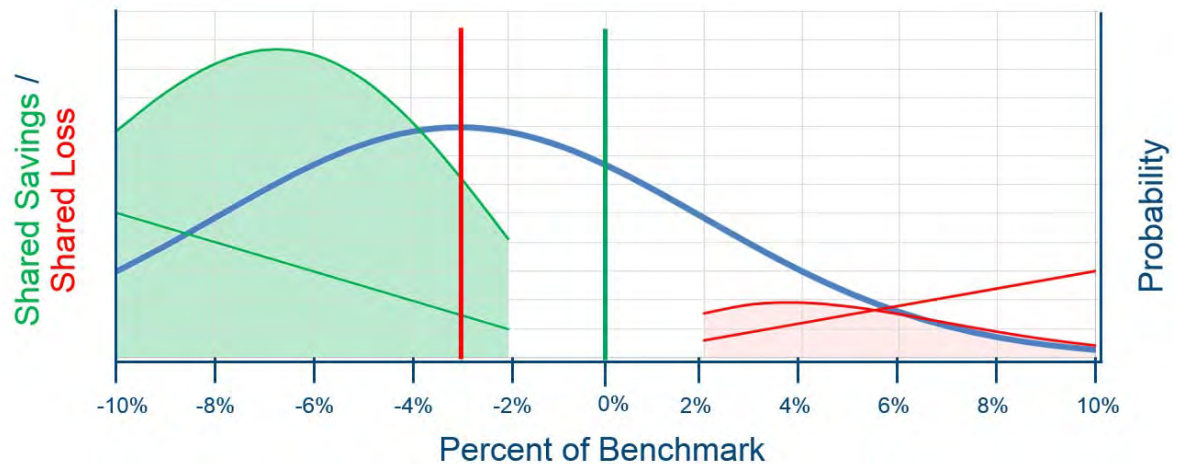
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MACRA

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Other APMs

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Innovations



What is the role of government programs?

MACRA

Medicare ACOs

Other APMs

Medicaid Innovations

Alternative Payment Models

- Comp. Care for Joint Replacement
- Comp. ESRD Care (LDO)
- Comp. ESRD Care (non-LDO)
- Comp. Primary Care Plus
- MSSP Track 1
- MSSP Track 2
- MSSP Track 3
- Next Generation ACO
- Oncology Care Model (1-sided)
- Oncology Care Model (2-sided)
- MSSP Track 1+

Advanced Alternative Payment Models

- Comp. ESRD Care (LDO)
- Comp. Primary Care Plus
- MSSP Track 2
- MSSP Track 3
- Next Generation ACO
- Oncology Care Model (2-sided)
- MSSP Track 1+

What is the role of government programs?

MACRA

Medicare
ACOs

Other APMs

Medicaid
Innovations

- Customized Medicaid expansions
- RCCO in Colorado
- Oregon Medicaid

Why is this such an important space for actuaries?



Insurance Risk carved out to providers

Why is this such an important space for actuaries?

Who is included?

Quality

Measuring Savings

Managing Risk

- Insurers
 - Members have policies with defined benefits for defined periods of time
- Providers
 - Members can potentially see many providers over the course time. Who is responsible for the patient?

Why is this such an important space for actuaries?

Who is included?

Quality

Measuring Savings

Managing Risk

- How is quality maintained when providers are incentivized to produce fewer services?
- How can quality be meaningfully measured?
- How should providers be compensated for high-quality care?

Why is this such an important space for actuaries?

Who is included?

Quality

Measuring Savings

Managing Risk

- What does it mean for a provider to “save money”?
 - How do you measure starting point costs (And for what population)?
 - How do you adjust for patient morbidity and expected disease progression?
 - Diminishing targets over time

Why is this such an important space for actuaries?

Who is included?

Quality

Measuring Savings

Managing Risk

- Volatility in patient costs
- Patient behavior that can't reasonably be controlled by providers
- How to accurately account for trend

MACRA

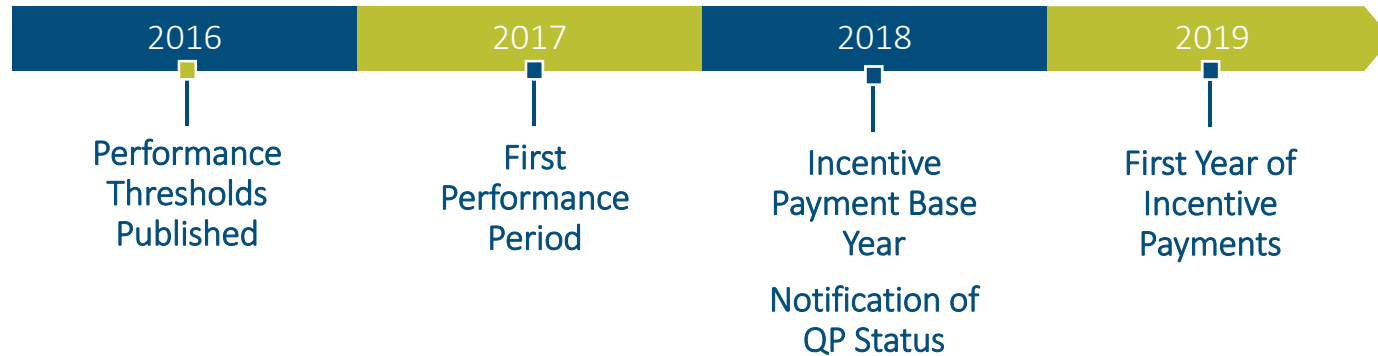


**SOCIETY OF
ACTUARIES**

What are we going to cover in this section?

- What is MACRA designed to do, and who does it impact?
- The mechanics of MACRA
- Strategic implications, and how actuaries can help both insurers and providers respond

MACRA implementation has already started



Medicare Access and CHIP Reauthorization Act of 2015



How will my Medicare FFS reimbursement change?

Exempt

Certain providers are exempt from adjustments

New, rural, low-volume, and certain other providers are excluded.

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Qualifying Participant (and partial-QP)

5% lump-sum bonus based on meaningful participation in an Advanced APM.

Medicare Access and CHIP Reauthorization Act of 2015



How will my Medicare FFS reimbursement change?

Repeal of Sustainable Growth Rate Adjustment

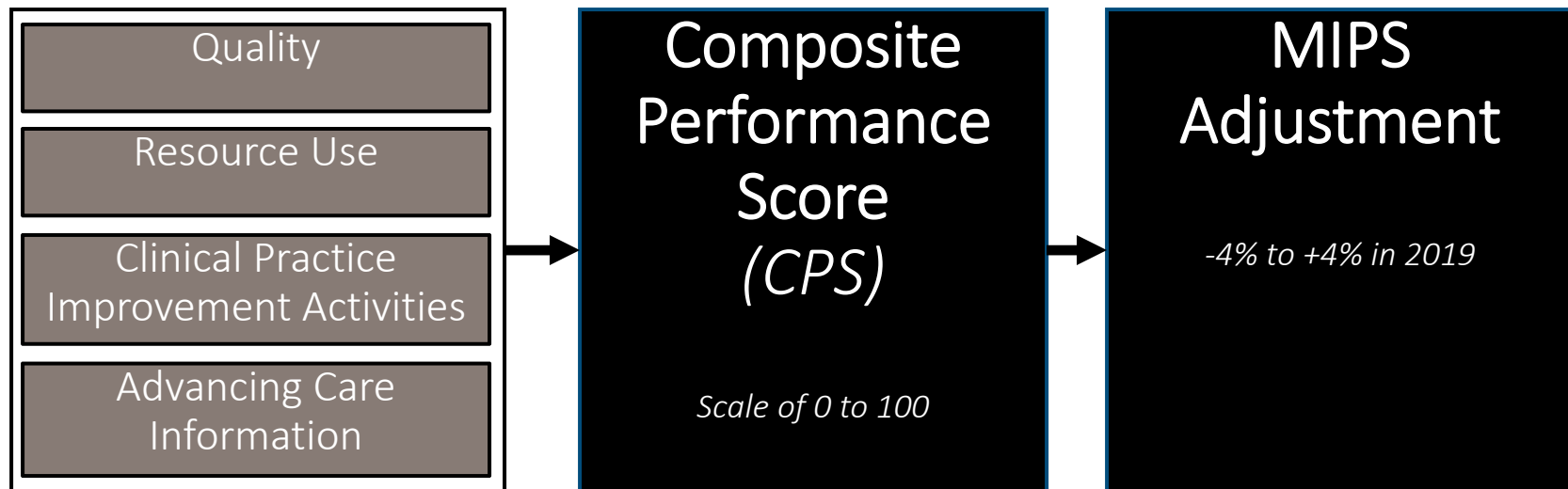
No overall fee-schedule increase between 2019 and 2025

When fee schedule updates resume, they are higher for QPs.

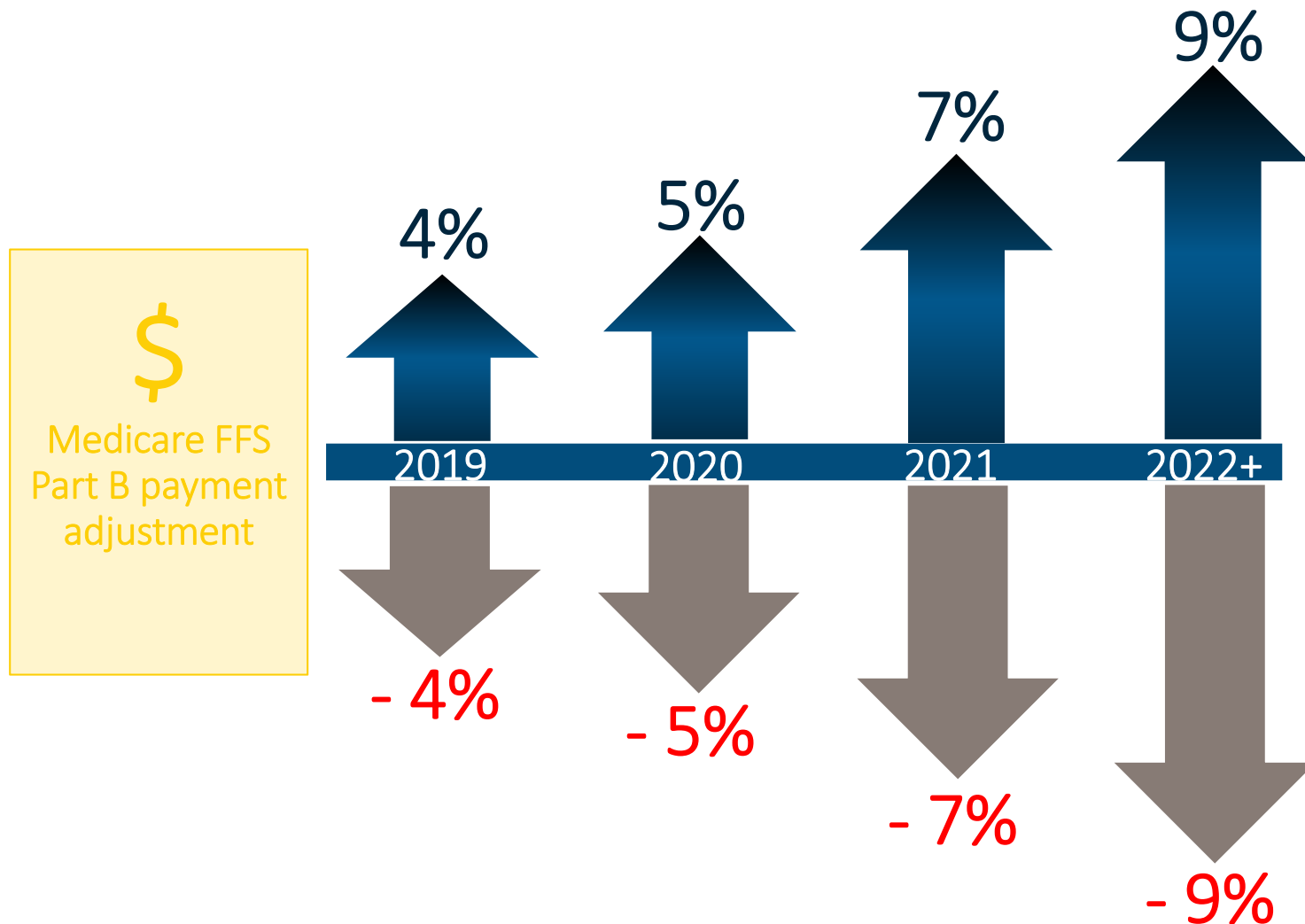
Merit- Based Incentive Payment System



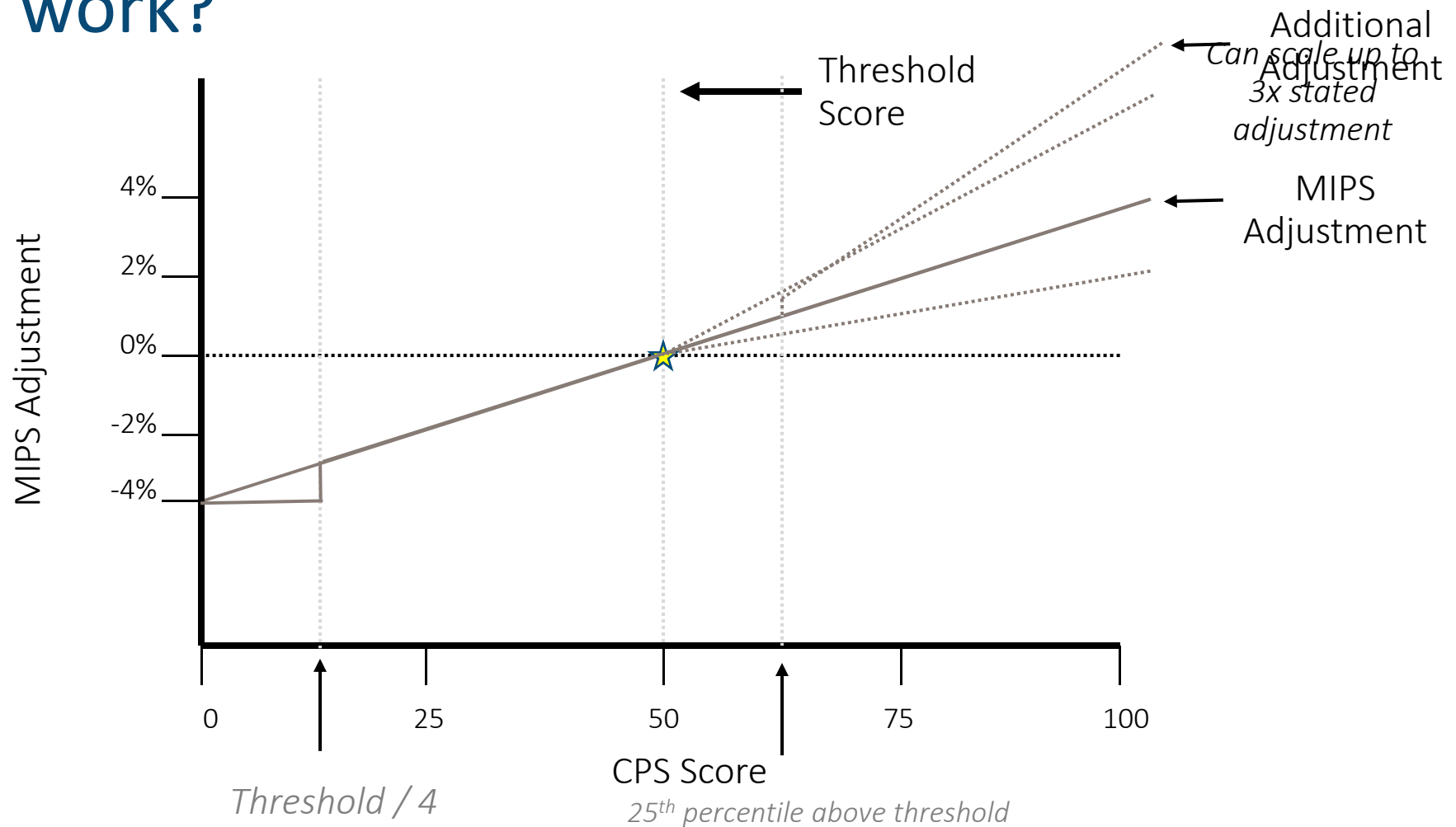
How does MIPS work?



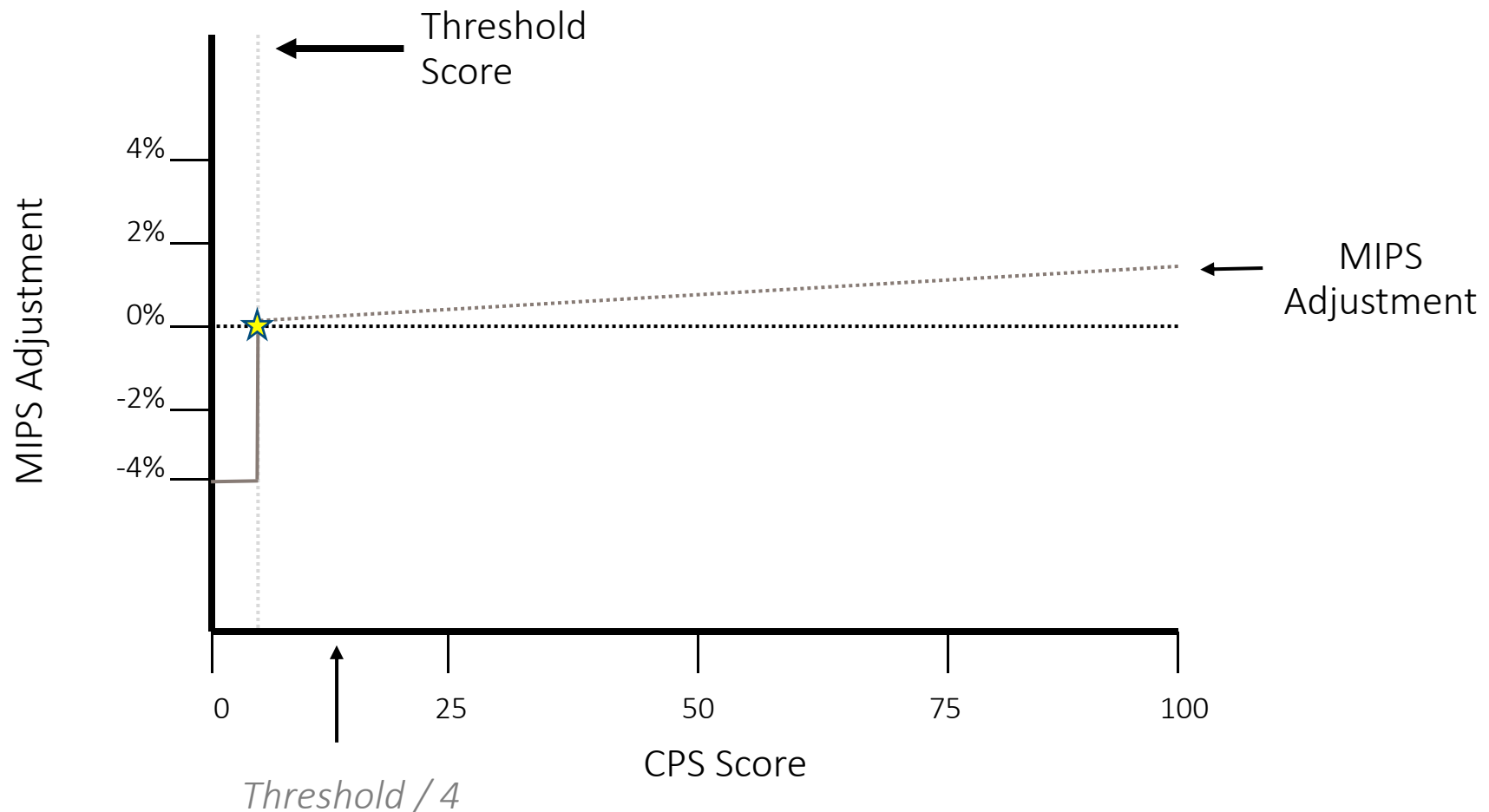
MIPS Adjustments to Medicare FFS payments



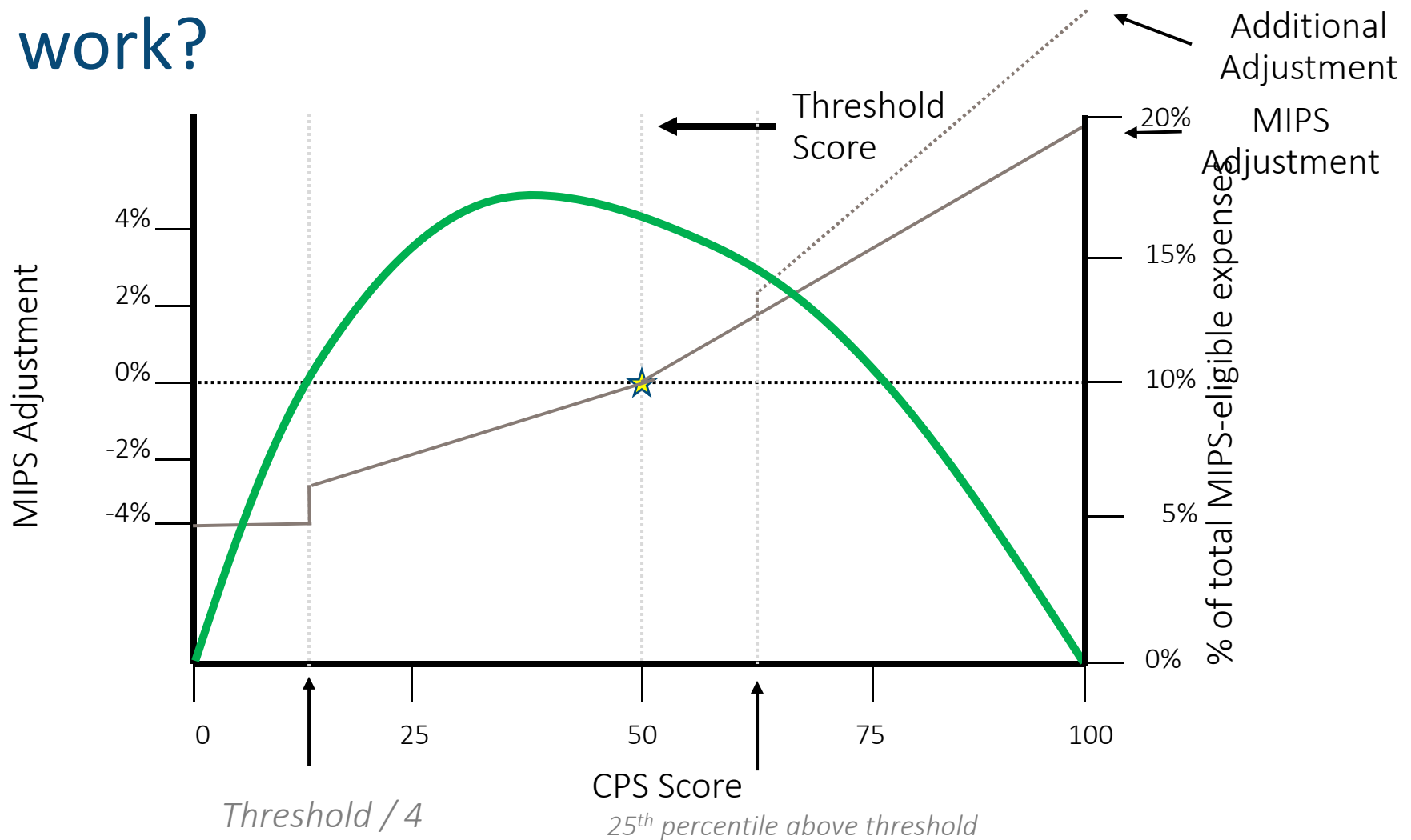
How does the MIPS Adjustment actually work?



How does the MIPS Adjustment actually work *in 2019*?



How does the MIPS Adjustment actually work?



How is the Composite Performance Score (CPS) calculated?



Why is this so important?

Example of Using Benchmarks for a Single Measure to Assign Points

Decile	Sample Quality Measure Benchmarks	Possible Points
Benchmark Decile 1	0 – 6.9%	1.0-1.9
Benchmark Decile 2	7.0% - 15.9%	2.0-2.9
Benchmark Decile 3	16.0% - 22.9%	3.0-3.9
Benchmark Decile 4	23.0% - 35.9%	4.0-4.9
Benchmark Decile 5	36.0% - 40.9%	5.0-5.9
Benchmark Decile 6	41.0% - 61.9%	6.0-6.9
Benchmark Decile 7	62.0% - 68.9%	7.0-7.9
Benchmark Decile 8	69.0% - 78.9%	8.0-8.9
Benchmark Decile 9	79.0% - 84.9%	9.0-9.9
Benchmark Decile 10	85.0% - 100%	10

Example of Topped Out Quality Measure

Decile	Sample Quality Measure Benchmarks	Possible Points
Benchmark Decile 1	0 – 74.9%	1.0-1.9
Benchmark Decile 2	75.0% - 79.9%	2.0-2.9
Benchmark Decile 3	80.0% - 84.9%	3.0-3.9
Benchmark Decile 4	85.0% - 94.9%	4.0-4.9
Benchmark Decile 5	95.0% - 99.9%	5.0-5.9
Benchmark Decile 6	100%	8.0
Benchmark Decile 7	100%	8.0
Benchmark Decile 8	100%	8.0
Benchmark Decile 9	100%	8.0
Benchmark Decile 10	100%	8.0

Strategy for Maximizing MIPS Score

Understand Categories and Weights



Weighting the CPS

	Providers reporting who are not in a MIPS APM			An APM% <i>(adjustments for 2019)</i>		
	2019	2020	2021+	MSSP	Next Gen	Other MIPS APMS
Quality	60%	60%	30%	50%	50%	0%
Cost	0%	0%	30%	0%	0%	0%
Improvement Activities	15%	15%	15%	20%	20%	25%
Advancing Care Information	25%	25%	25%	30%	30%	75%

Medicare Access and CHIP Reauthorization Act of 2015



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Qualifying Participant Status



There is a lot of payment uncertainty in MIPS. How can I obtain “Qualifying Participant” (QP) status?

Participation in an
Advanced
Alternative
Payment Model
(Advanced APM)



Meet claim
dollar or
patient count
threshold



Obtain QP
status
5% lump-sum bonus
Obtain partial-QP
status
*Choose if you want to be
subject to MIPS.*

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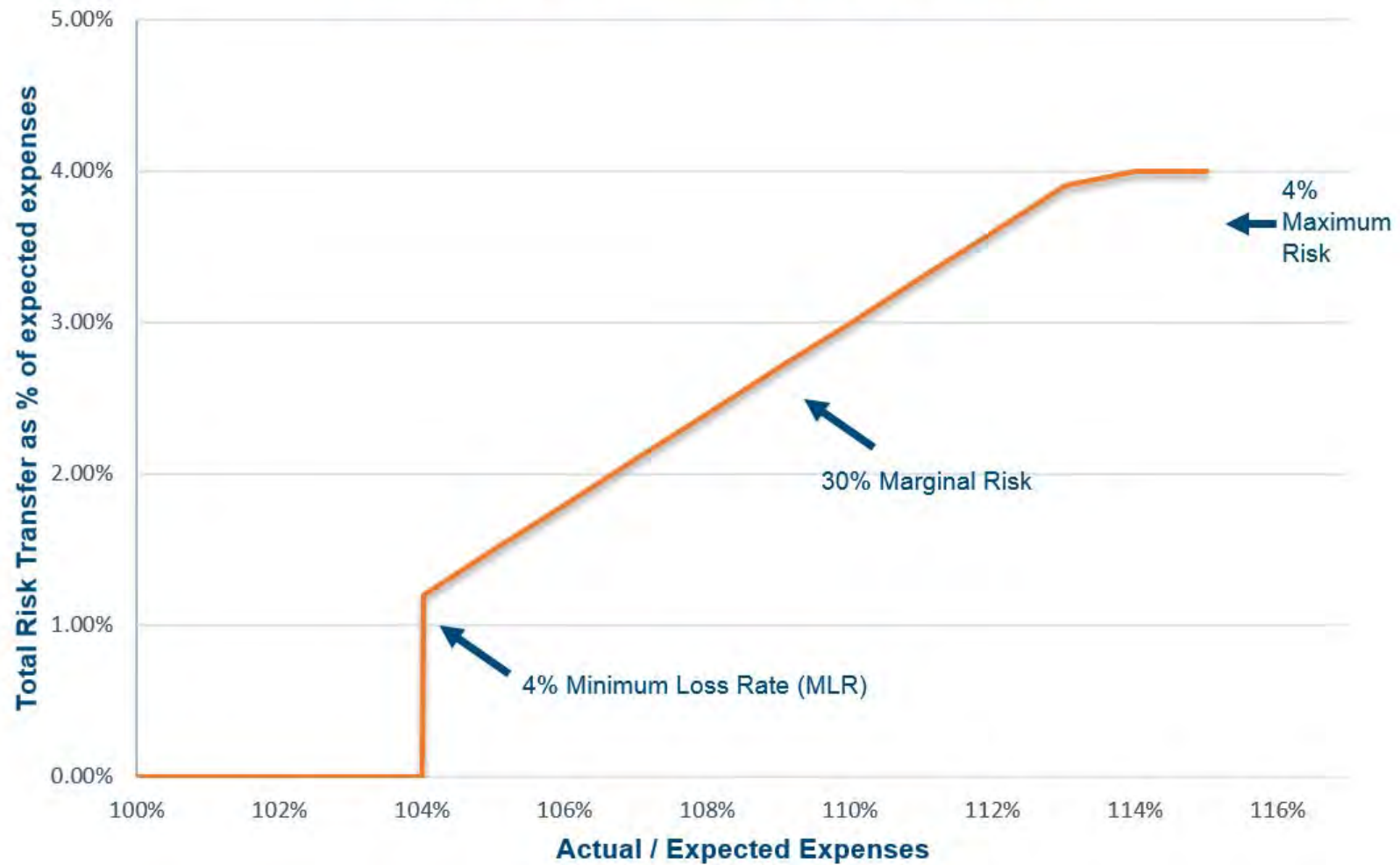
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So what are “Alternative Payment Models” (APMs)?

Medicare APMs			
CMS Innovation Center Model (under section 1115A, other than Health Care Innovation Award)	MSSP (Medicare Shared Savings Program)	Demonstration under Health Care Quality Demonstration Program	Demonstration required by Federal Law

Advanced APMS
<i>To be an advanced APM, the APM must meet all three of the following:</i>
1) EHR: The APM must require participants to use certified EHR technology.
2) Quality: The APM must provide for payment for covered professional service based on quality measures comparable to those in the quality performance category under MIPS.
3) Nominal Risk: Must take more than nominal risk

Nominal Risk - Minimum Standard



Nominal Risk - Standard APMs

Component	Description	Medicare Standard	Other Payer Standard
Marginal Risk	The percentage of the amount by which actual expenditures exceed expenditures for which an APM Entity would be liable under the APM.	Greater than or equal to 30%	Greater than or equal to 30%
Minimum Loss Rate (MLR)	A percentage by which actual expenditure may exceed expected expenditures without triggering financial risk.	No greater than 4%	No greater than 4%
Total Potential Risk	The maximum potential payment for which an APM Entity could be liable under the APM.	At least 4%	At least 4%

Nominal Risk - Medical Homes

Year	Medicare Standard	Other Payer Standard
2017	2.50%	N/A
2018	3.00%	N.A
2019	4.00%	4.00%
2020+	5.00%	5.00%

So what are “Alternative Payment Models” (APMs)?

Alternative Payment Models

Comp. Care for Joint Replacement
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Meet claim
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Obtain partial-QP
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*Choose if you want to be
subject to MIPS.*

Claim Dollar Threshold

	Medicare Option		All-payer Option			
	QP	Partial-QP	QP		Partial-QP	
	<i>Medicare</i>	<i>Medicare</i>	<i>Medicare</i>	<i>Total</i>	<i>Medicare</i>	<i>Total</i>
2019	25%	20%	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
2020	25%	20%	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
2021	50%	40%	25%	50%	20%	40%
2022	50%	40%	25%	50%	20%	40%
2023	75%	50%	25%	75%	20%	50%
2024 and later	75%	50%	25%	75%	20%	50%

Patient Count Threshold

	Medicare Option		All-payer Option			
	QP	Partial-QP	QP		Partial-QP	
	<i>Medicare</i>	<i>Medicare</i>	<i>Medicare</i>	<i>Total</i>	<i>Medicare</i>	<i>Total</i>
2019	20%	10%	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
2020	20%	10%	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
2021	35%	25%	20%	35%	10%	25%
2022	35%	25%	20%	35%	10%	25%
2023	50%	35%	25%	50%	10%	35%
2024 and later	50%	35%	25%	50%	10%	35%

How are these ratios calculated?

Example: Claim-dollar threshold for non episode-based Medicare APMs

All Medicare Part B payment for services furnished by eligible clinicians in the Advanced APM entity to **attributed beneficiaries**.

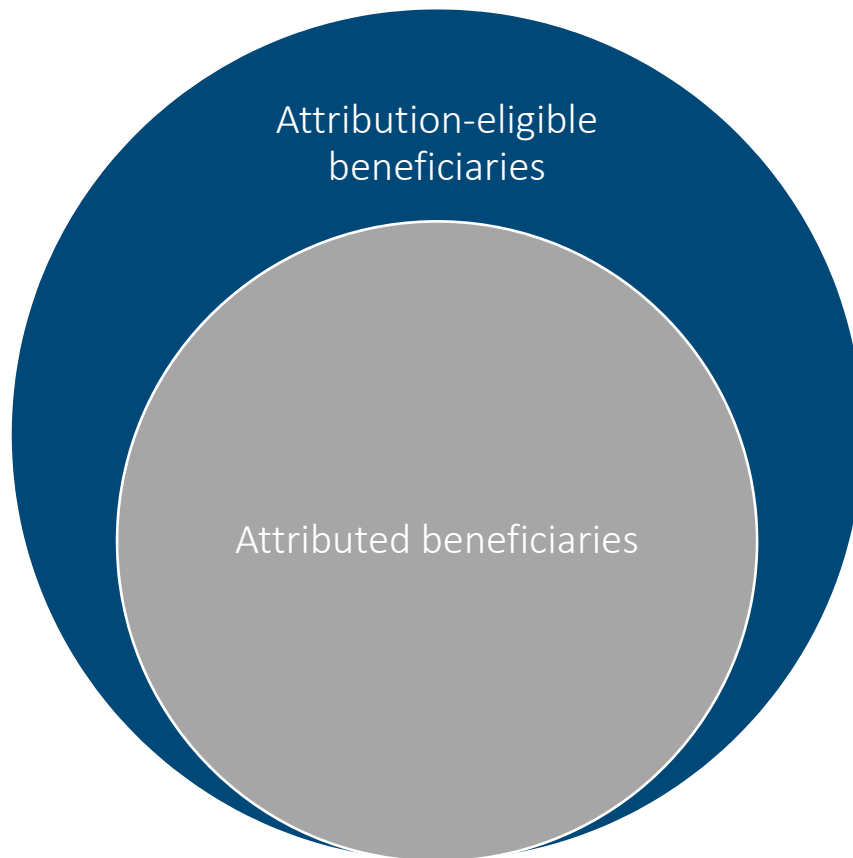
Aggregate of all payments for Medicare Part B covered professional services furnished by the eligible clinicians to **attribution-eligible beneficiaries**.

= Ratio

If > 25% in 2017 (for the 2019 bonus), Qualifying Participant status is obtained.

If > 20% but < 25% in 2017 (for the 2019 bonus), partial-QP status is obtained.

Attribution vs. Attribution-eligible beneficiaries



Attributed Beneficiaries

- Based on each APM's respective attribution rules.
- Generally, an individual can only be attributed to one APM.

Attribution-eligible Beneficiaries

- Medicare Eligible
- At least one claim for E&M services with the APM.

Medicare Only

Patient Payment Method (i.e., Claim Dollar Threshold)

	Standard APMs	Episode-based payments
Numerator	All Medicare Part B payments for services furnished by eligible clinicians in the Advanced APM entity to attributed beneficiaries.	For episode-based payments, all Medicare Part B payments for services furnished by eligible clinicians to an attributed beneficiary during the episode.
Denominator	Aggregate of all payments for Medicare Part B covered professional services furnished by the eligible clinicians to attribution-eligible beneficiaries.	For episode-based payments, all Medicare part B furnished by the eligible clinicians to any attribution-eligible beneficiary. This includes all such services to all attribution-eligible beneficiaries whether or not such services occur during the course of an episode under the Advanced APM.

Patient Count Method

	Standard APMs	Episode-based payments
Numerator	Unique attributed beneficiaries for whom eligible clinicians in the Advanced APM Entity furnish Medicare Part B covered professional services during the QP Performance period.	Unique attributed beneficiaries for whom eligible clinicians in the Advanced APM Entity furnish Medicare Part B covered professional services during the course of an episode.
Denominator	Attribution-eligible beneficiaries for whom eligible clinicians in the Advanced APM Entity furnish Medicare Part B covered professional services during the QP Performance period.	Attribution-eligible beneficiaries for whom eligible clinicians in the Advanced APM Entity furnished Medicare Part B services, irrespective of if such services occur during an episode.

All-Payer

Patient Payment Method

	Medicare	Other Payer
Numerator	All Medicare Part B payments for services furnished by eligible clinicians in the Advanced APM entity to attributed beneficiaries. Episode-based payments as previously described.	Sum of total payments through ACO.
Denominator	Aggregate of all payments for Medicare Part B covered professional services furnished by the eligible clinicians to attribution-eligible beneficiaries. Episode-based payments as previously described.	Total payments through applicable payer.

Patient Count Method

	Medicare	Other Payer
Numerator	Unique attributed beneficiaries for whom eligible clinicians in the Advanced APM Entity furnish Medicare Part B covered professional services during the QP Performance period. Episode-based payments as previously described.	The number of unique patients included in measures of aggregate expenditures for the APM.
Denominator	Attribution-eligible beneficiaries for whom eligible clinicians in the Advanced APM Entity furnish Medicare Part B covered professional services during the QP Performance period. Episode-based payments as previously described.	The number of unique patients to whom clinicians furnish services under all non-excluded categories.

Qualifying Participant Status



There is a lot of payment uncertainty in MIPS. How can I obtain “Qualifying Participant” (QP) status?

Participation in an
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Meet claim
dollar or
patient count
threshold



Obtain QP
status
5% lump-sum bonus
Obtain partial-QP
status
*Choose if you want to be
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Who counts as an Advanced APM in the All-Payer approach?

	Patient Count Method			Patient Payment Method		
	Patients Through ACO	Total Patients from Payer	Calc. Threshold	Payments through ACO	Total Payments from Payer	Calc. Threshold
Medicare - Part B	19,005	100,231	19.0%	\$3,801,000	\$15,034,650	25.28%
Commercial - EPO Product	32,367	32,367	100.0%	\$17,801,850	\$17,801,850	100.00%
Commercial - Other	1,593	60,354	2.6%	\$382,320	\$9,053,100	4.22%
Medicaid	165	249	66.3%	\$82,500	\$99,600	82.83%
MA - EPO Product	11,698	11,698	100.0%	\$11,698,000	\$11,698,000	100.0%
MA - Other	4,217	9,672	43.6%	\$1,972,604	\$2,108,500	93.55%
Total - All Payer	69,045	214,571	32.2%	\$35,738,274	\$55,795,700	64.05%

Medicare Only			
	Minimum Threshold (QP)	35.0%	50.0%
	Calculated Threshold	19.0%	25.28%
	Criteria Met?	No	No
All-Payer			
	Minimum Threshold – Medicare	20.0%	25.0%
	Calculated Threshold – Medicare	19.0%	25.28%
	Minimum Threshold – All Payer	35.0%	50.0%
	Calculated Threshold – All Payer	32.2%	64.05%
	Criteria Met?	No	Yes

Who counts as an Advanced APM in the All-Payer approach?

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Criteria Met?		No	No
All-Payer			
Minimum Threshold – Medicare		20.0%	25.0%
Calculated Threshold – Medicare		19.0%	25.28%
Minimum Threshold – All Payer		35.0%	50.0%
Calculated Threshold – All Payer		32.2%	64.05%
Criteria Met?		No	Yes

Who counts as an Advanced APM in the All-Payer approach?

	Patient Count Method			Patient Payment Method		
	Patients Through ACO	Total Patients from Payer	Calc. Threshold	Payments through ACO	Total Payments from Payer	Calc. Threshold
Medicare - Part B	19,005	100,231	19.0%	\$3,801,000	\$15,034,650	25.28%
Commercial - EPO Product	32,367	32,367	100.0%	\$17,801,850	\$17,801,850	100.00%
Commercial - Other	1,593	60,354	2.6%	\$382,320	\$9,053,100	4.22%
Medicaid	165	249	66.3%	\$82,500	\$99,600	82.83%
MA - EPO Product	11,698	11,698	100.0%	\$11,698,000	\$11,698,000	100.0%
MA - Other	4,217	9,672	43.6%	\$1,972,604	\$2,108,500	93.55%
Total - All Payer	69,045	214,571	32.2%	\$35,738,274	\$55,795,700	64.05%

Medicare Only			
Minimum Threshold (QP)		35.0%	50.0%
Calculated Threshold		19.0%	25.28%
Criteria Met?		No	No
All-Payer			
Minimum Threshold – Medicare		20.0%	25.0%
Calculated Threshold – Medicare		19.0%	25.28%
Minimum Threshold – All Payer		35.0%	50.0%
Calculated Threshold – All Payer		32.2%	64.05%
Criteria Met?		No	Yes

Who counts as an Advanced APM in the All-Payer approach?

	Patient Count Method			Patient Payment Method		
	Patients Through ACO	Total Patients from Payer	Calc. Threshold	Payments through ACO	Total Payments from Payer	Calc. Threshold
Medicare - Part B	19,005	100,231	19.0%	\$3,801,000	\$15,034,650	25.28%
Commercial - EPO Product	32,367	32,367	100.0%	\$17,801,850	\$17,801,850	100.00%
Commercial - Other	1,593	60,354	2.6%	\$382,320	\$9,053,100	4.22%
Medicaid	165	249	66.3%	\$82,500	\$99,600	82.83%
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MA - Other	4,217	9,672	43.6%	\$1,972,604	\$2,108,500	93.55%
Total - All Payer	69,045	214,571	32.2%	\$35,738,274	\$55,795,700	64.05%

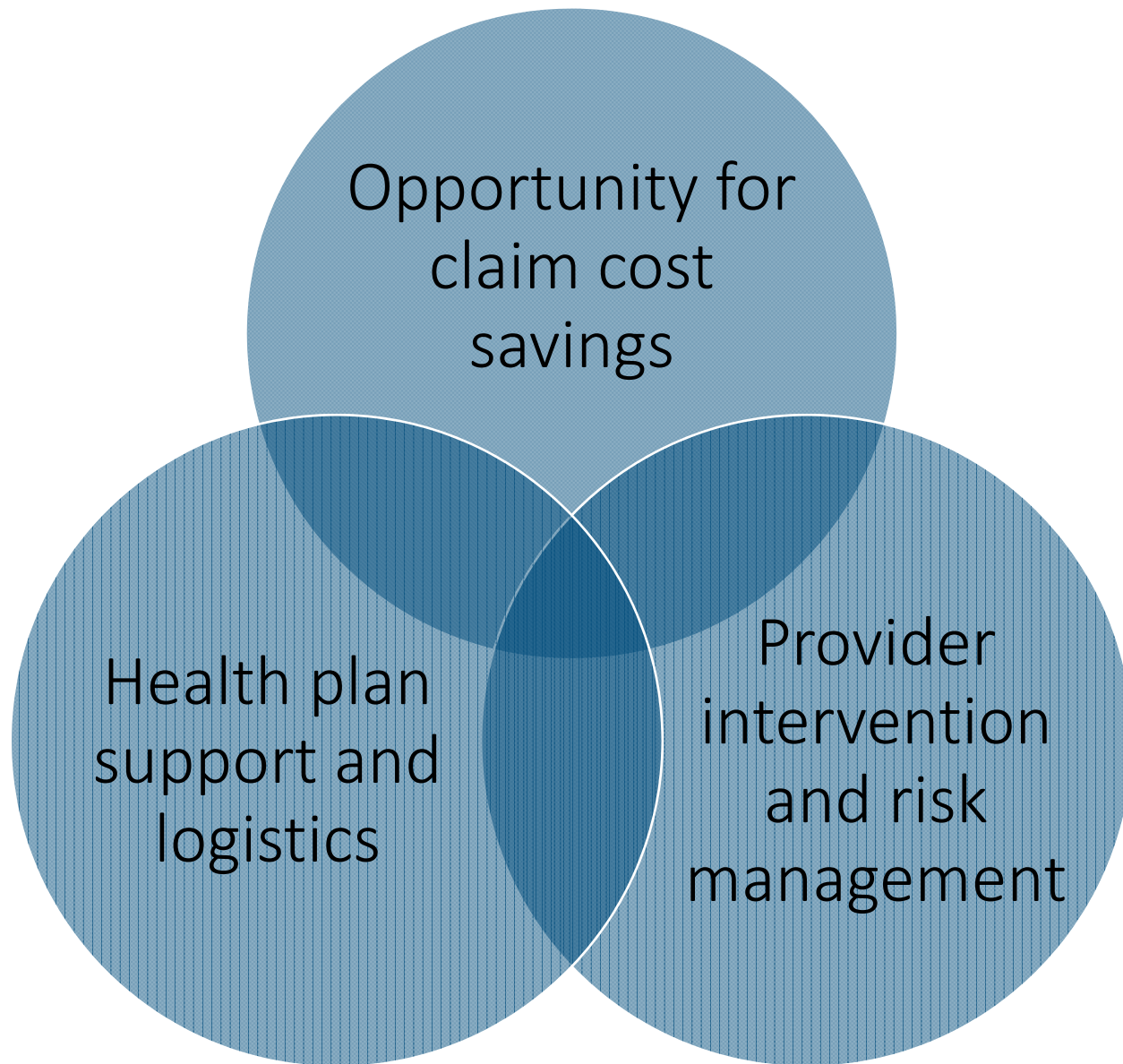
Medicare Only			
Minimum Threshold (QP)		35.0%	50.0%
Calculated Threshold		19.0%	25.28%
Criteria Met?		No	No
All-Payer			
Minimum Threshold – Medicare		20.0%	25.0%
Calculated Threshold – Medicare		19.0%	25.28%
Minimum Threshold – All Payer		35.0%	50.0%
Calculated Threshold – All Payer		32.2%	64.05%
Criteria Met?		No	Yes

Evaluation of value-based payment approaches



What are we going to cover in this section?

- Detailed dive into the main value-based payment approaches in use today
- Shared savings arrangements
- Case Study
- Other shared risk arrangements



Alternative Payment Models (APM) Framework



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

Fee-for-Service	Category 2				Category 3		Category 4	
	A	B	C	D	A	B	A	B
	Foundational Payments for Infrastructure & Operations	Pay for Reporting	Rewards for Performance	Rewards and Penalties for Performance	APMs with Upside Gainsharing	APMs with Upside Gainsharing/Downside Risk	Condition-Specific Population-Based Payment	Comprehensive Population-Based Payment
Traditional FFS	Foundational payments to improve care delivery, such as care coordination fees, and payments for investments in HIT	Bonus payments for quality reporting	Bonus payments for quality performance	Bonus payments and penalties for quality performance	Bundled payment with upside risk only	Bundled payment with up- and downside risk	Population-based payments for condition-specific care (e.g., via an ACO, PCMH, or COE)	Full or percent of premium population-based payment (e.g., via an ACO, PCMH, or COE)
DRGs Not linked To Quality		DRGs with rewards for quality reporting	DRGs with rewards for quality performance	DRGs with rewards and penalties for quality performance	Episode-based payments for procedure-based clinical episodes with shared savings only	Episode-based payments for procedure-based clinical episodes with shared savings and losses		
		FFS with rewards for quality reporting	FFS with rewards for quality performance	FFS with rewards and penalties for quality performance	Primary care PCMHs with shared savings only	Primary care PCMHs with shared savings and losses	Partial population-based payments for primary care	Integrated, comprehensive payment and delivery system
					Oncology COEs with shared savings only	Oncology COEs with shared savings and losses	Episode-based, population payments for clinical conditions, such as diabetes	Population-based payment for comprehensive pediatric or geriatric care
					3M Risk-based payments NOT linked to quality		4M Capitated payments NOT linked to quality	

* example payment models will not count toward APM goal.

* payment models in Categories 3 and 4 that do not have a link to quality and will not count toward the APM goal.

For Public Release



CMS value-based payment models

Alternative Payment Models

- Comprehensive Care for Joint Replacement (CJR)
- Comprehensive ESRD Care CEC (2-sided)
- Comprehensive ESRD Care (1-sided)
- Comprehensive Primary Care Plus
- MSSP Track 1
- MSSP Track 2
- MSSP Track 3
- Next Generation ACO
- Oncology Care Model (1-sided)
- Oncology Care Model (2-sided)

All programs run through CMS for Traditional Medicare beneficiaries (non-Medicare Advantage). Intent is to move beyond simple Fee for Service (FFS).

Only Certain APMs are Advanced

Alternative Payment Models

Comprehensive Care for Joint Replacement (CJR)

Comprehensive ESRD Care CEC (2-sided)

Comprehensive ESRD Care (1-sided)

Comprehensive Primary Care Plus

MSSP Track 1

MSSP Track 2

MSSP Track 3

Next Generation ACO

Oncology Care Model (1-sided)

Oncology Care Model (2-sided)

Advanced Alternative Payment Models

Comprehensive ESRD Care CEC (2-sided)

Comprehensive Primary Care Plus

MSSP Track 2

MSSP Track 3

Next Generation ACO

Oncology Care Model (2-sided)

Only Certain APMs are Advanced

Advanced APMs require 'less than nominal' downside risk and specific quality metrics.

Advanced Alternative Payment Models

Comprehensive ESRD Care CEC (2-sided)

Comprehensive Primary Care Plus

MSSP Track 2

MSSP Track 3

Next Generation ACO

Oncology Care Model (2-sided)

Comprehensive ESRD Care (CEC)

- Participants: ESRD providers
- Program Elements:
 - Total cost of care for 12 months for ESRD patients
 - Large Dialysis Organization (LDO) and non-LDO tracks
- Anticipated Participation: Low
- More information:
 - <https://innovation.cms.gov/initiatives/comprehensive-esrd-care/>

Comprehensive Primary Care Plus (CPC+)

- Participants: Primary Care Physicians in selected geographies
- Program Elements:
 - Total cost of care for 12 months for attributed patients
- Anticipated Participation: Moderate
- More information:
 - <https://innovation.cms.gov/initiatives/comprehensive-primary-care-plus>



Source: Centers for Medicare & Medicaid Services

MSSP Tracks 2 & 3

- Participants: Accountable Care Organizations (ACOs)
- Program Elements:
 - Total cost of care for 12 months for attributed patients
 - Patients may enter and leave throughout the year
- Anticipated Participation: Significant
- More information:
 - <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/index.html>

Next Generation ACO (Next Gen)

- Participants: Accountable Care Organizations (ACOs)
 - Advanced
- Program Elements:
 - Total cost of care for 12 months for attributed patients
 - Patient assignment 'locked in' throughout the year
- Anticipated Participation: Moderate
- More information:
 - <https://innovation.cms.gov/initiatives/Next-Generation-ACO-Model/>



Source: Centers for Medicare & Medicaid Services

Oncology Care Model – 2 Sided Risk (OCM-2)

- Participants: Oncologists
- Program Elements:
 - Total cost of care for 12 months for attributed patients
- Anticipated Participation: Moderate
- More information:
 - <https://innovation.cms.gov/initiatives/oncology-care/>



Source: Centers for Medicare & Medicaid Services

Starting in 2019 QP Performance Period, All-Payer Advanced APMs Option Under MACRA

- Commercial, Medicaid and other programs can be counted under APM track of MACRA
 - Program must require ‘less than nominal’ downside financial risk
 - Quality measurements that are substantially the same as MIPS
 - Use of Certified HER Technology
- Commercial payers

Different Participants in AAPMS

Organization (System)-Centric

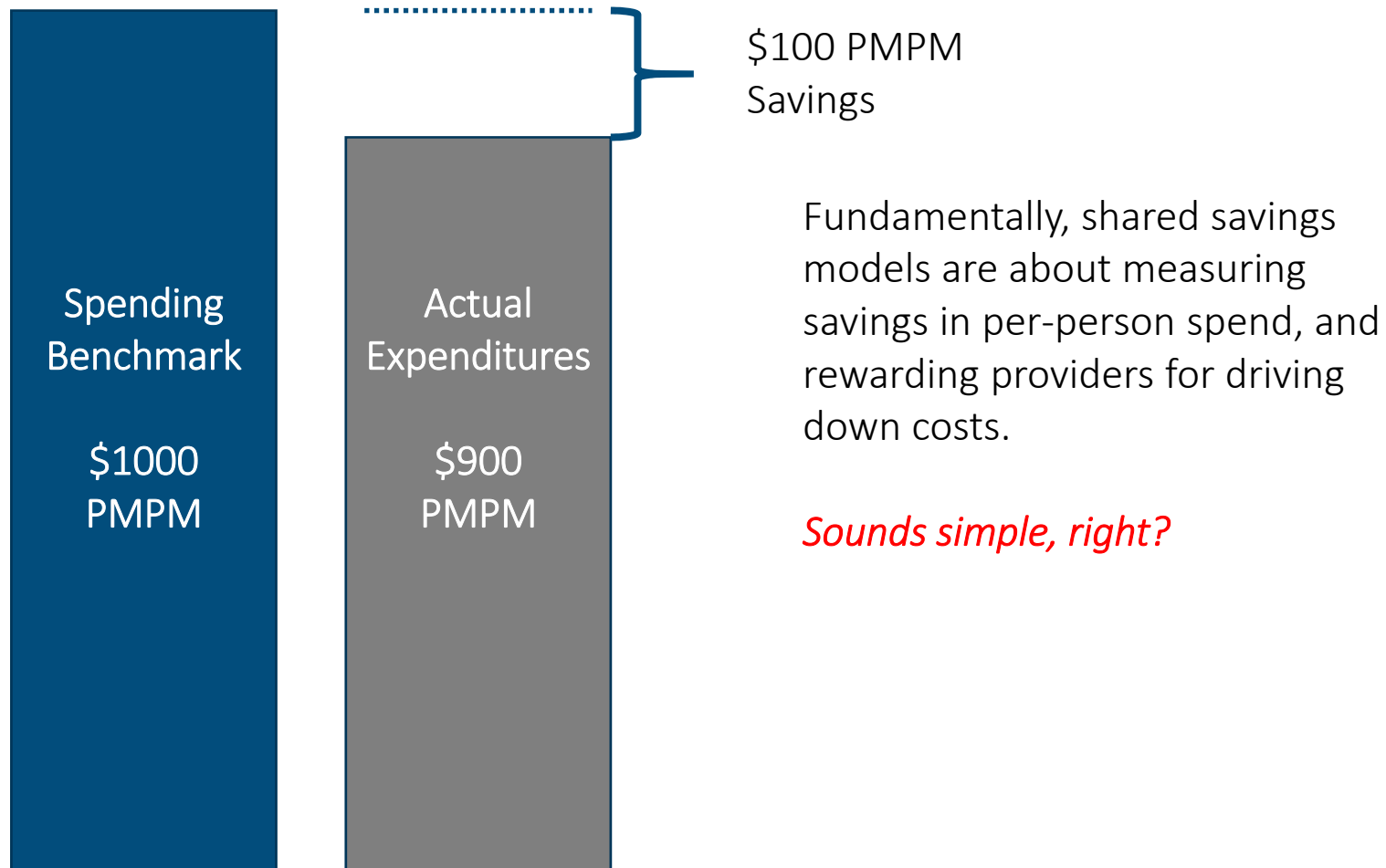
- MSSP Track 2
- MSSP Track 3
- Next Gen ACO

Physician (Practice)-Centric

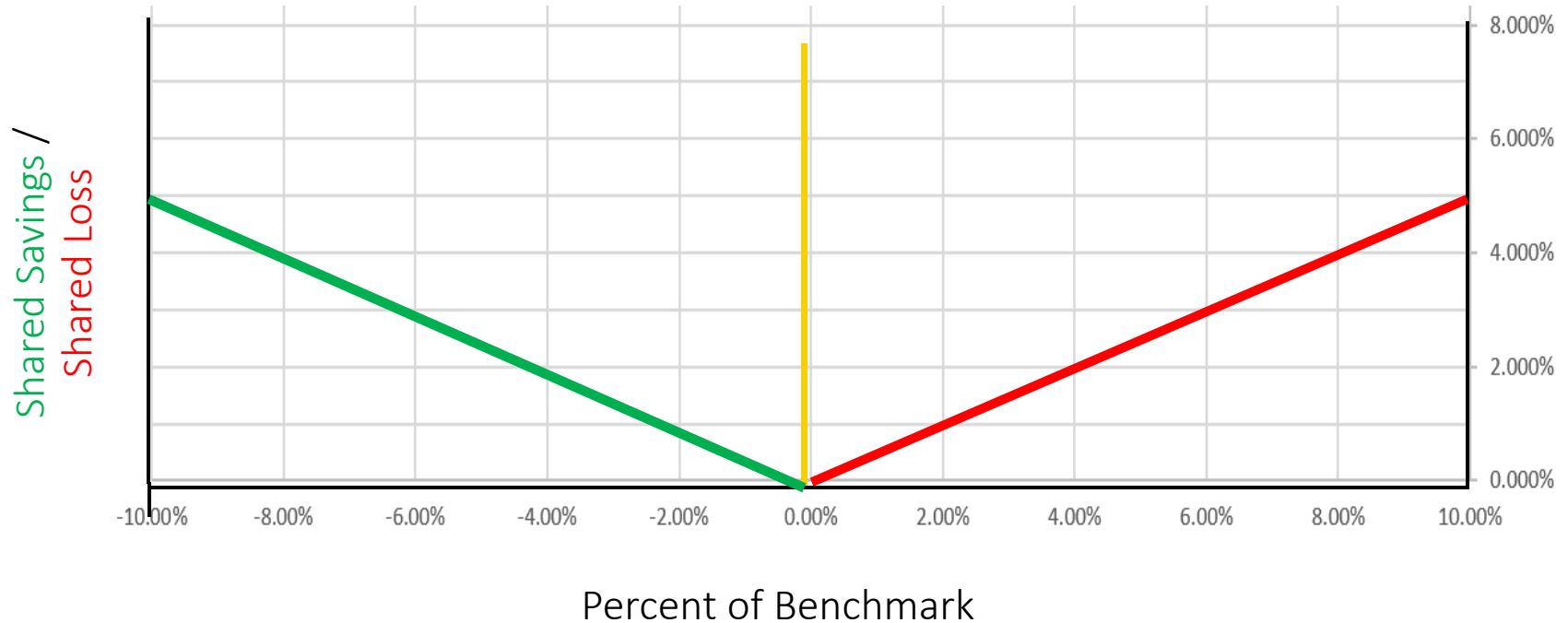
- ESRD
- CPC+
- OCM

Both organized systems and individual practices will be participating in AAPMs under MACRA (CMS intent)

Shared Savings Models

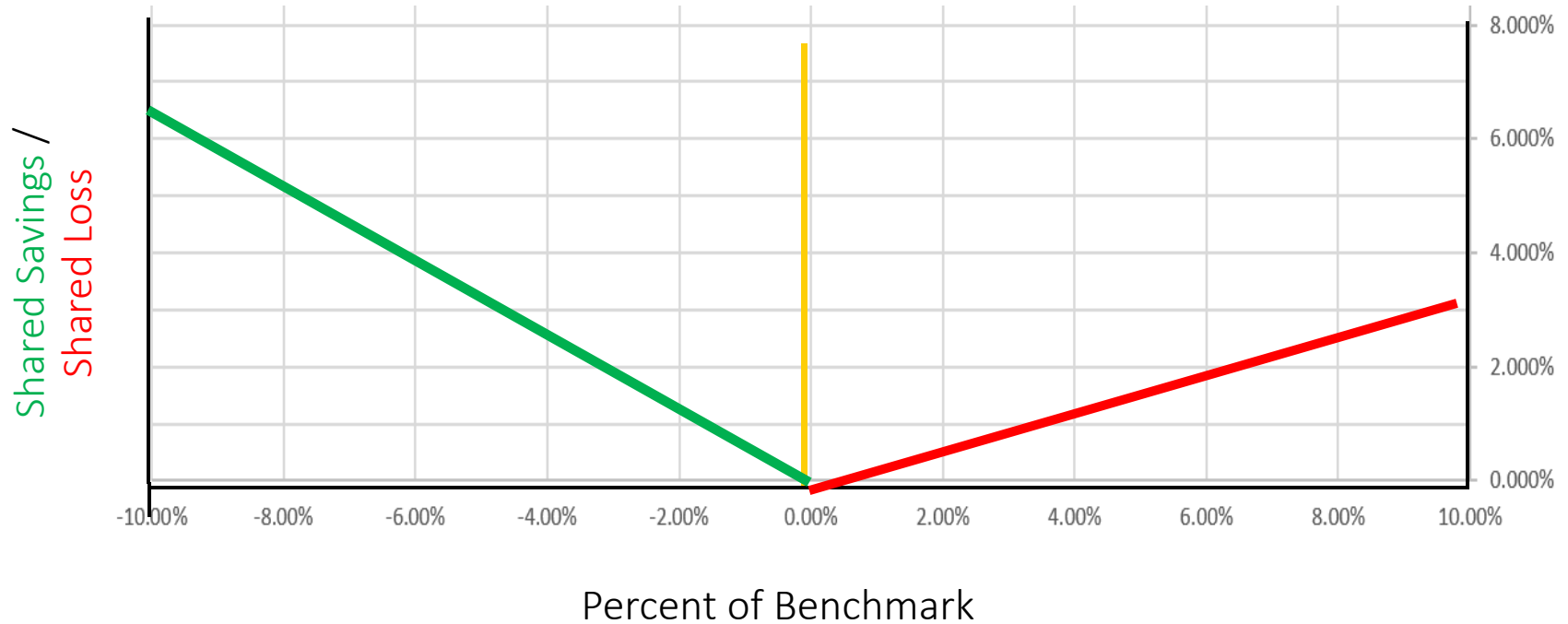


Focusing on Shared Savings Models



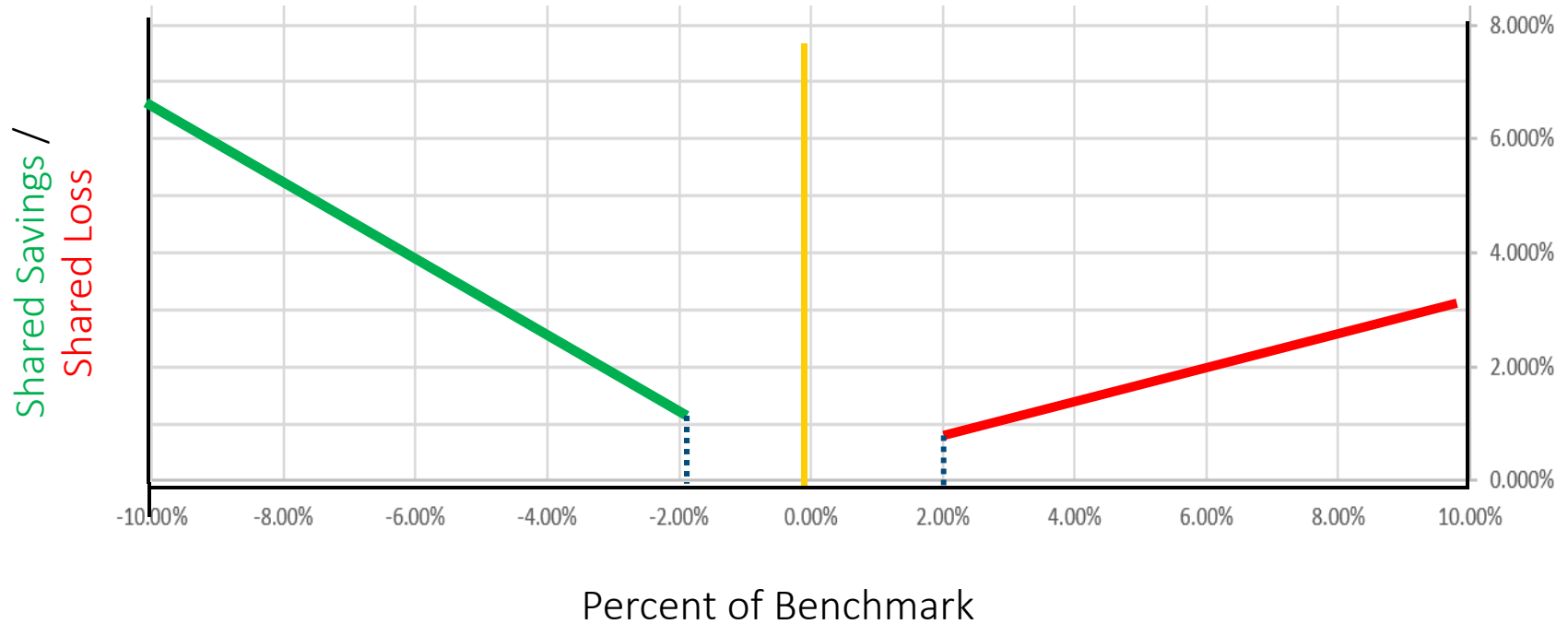
Establish a shared savings / shared loss rate

Focusing on Shared Savings Models



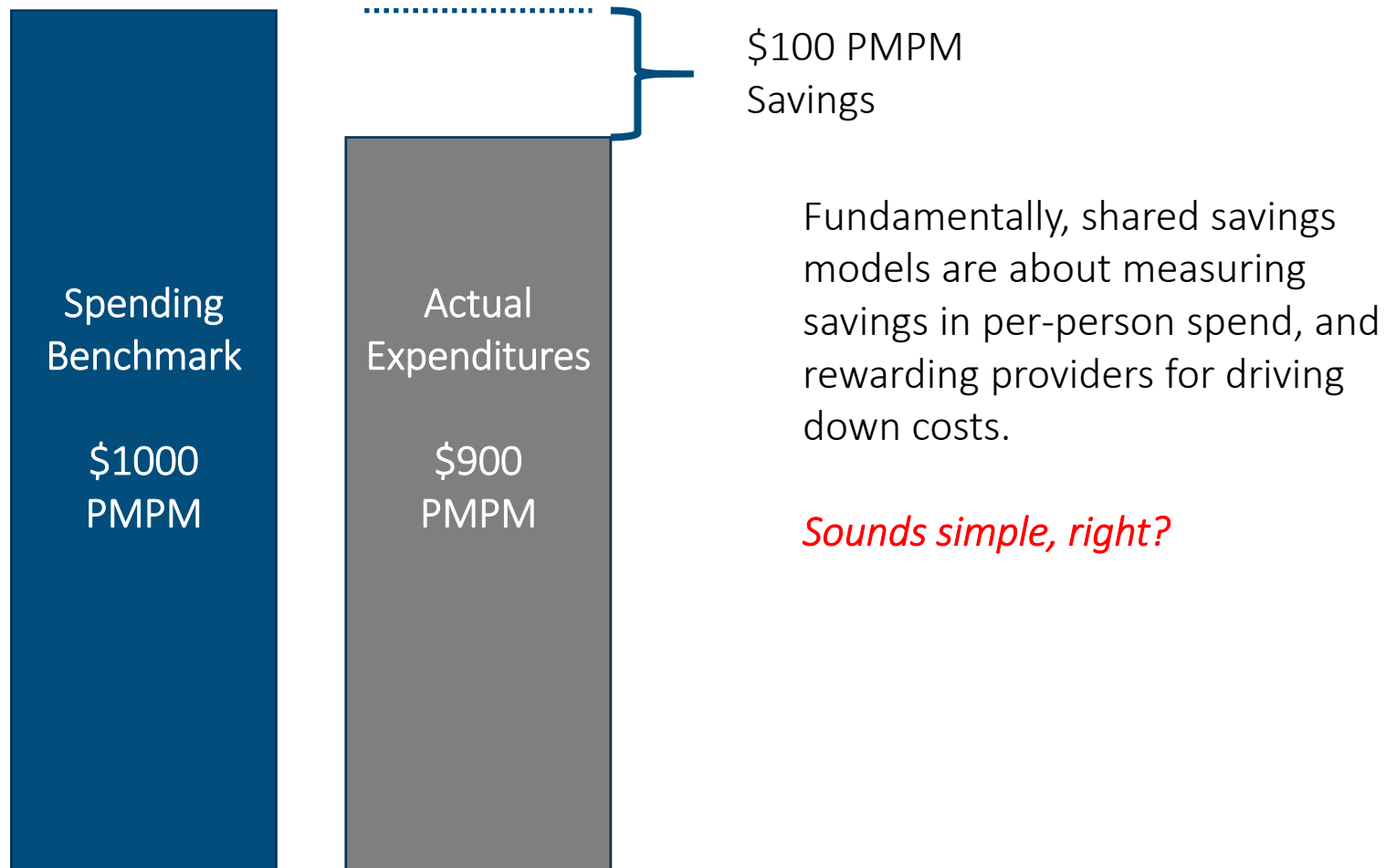
Incorporating Quality (*varies by Track*)

Focusing on Shared Savings Models

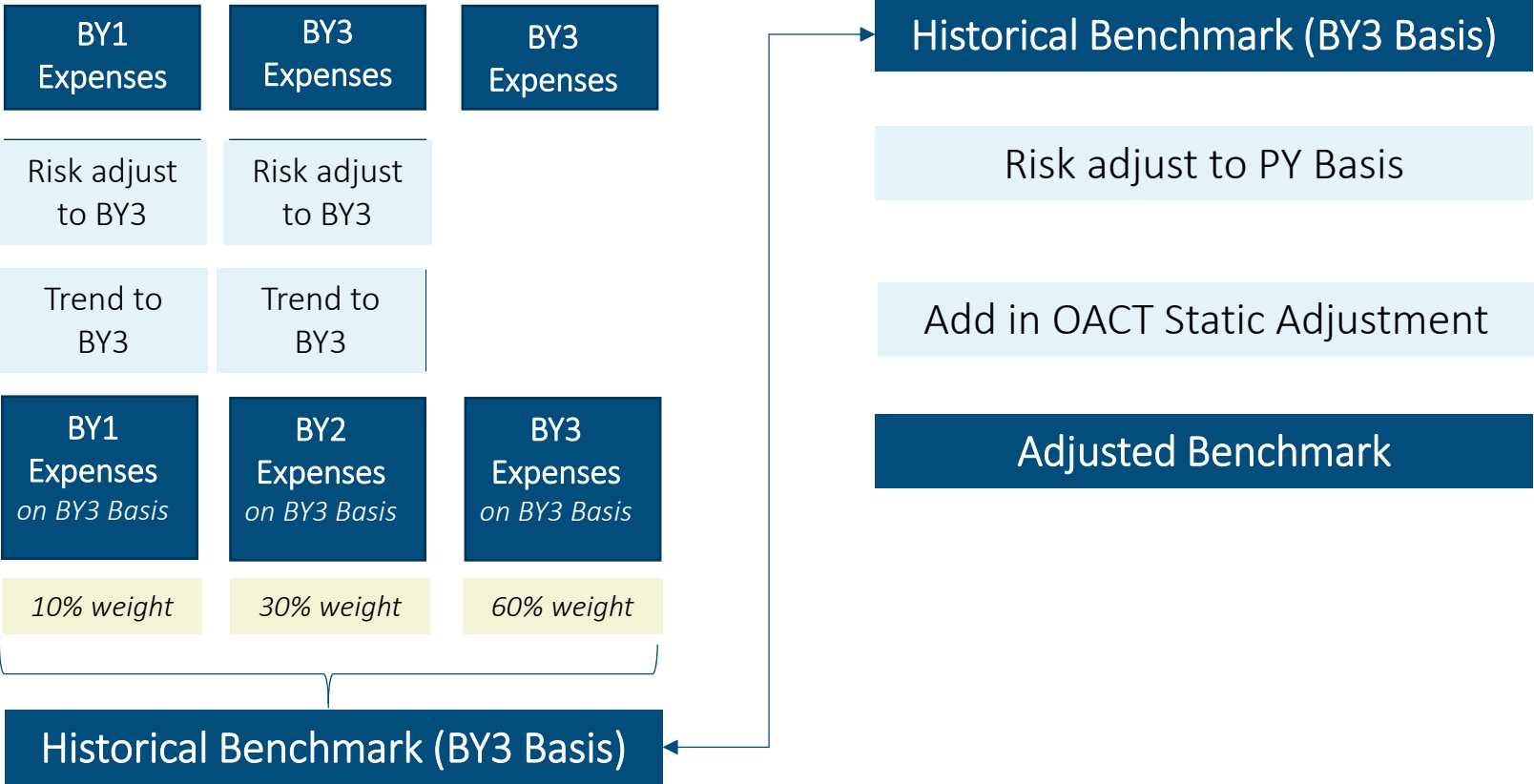


Corridors *(varies by Track)*

Shared Savings Models



Benchmark mechanics



Focusing on Shared Savings Models: MSSP Tracks

Benchmark Features

	Tracks 1 and 2	Tracks 1+ and 3
Minimum Beneficiaries	5,000	5,000
Assignment Algorithm	Retrospective	Prospective
Assignment Period	12 month performance year	12 months ending 3 months prior to performance year
Voluntary Alignment	Begins performance year 2018	Begins performance year 2018
SNF 3 Day Rule Waiver	No	Yes

Focusing on Shared Savings Models: MSSP Tracks

Shared Savings Features

	Track 1	Track 1+	Track 2	Track 3
Sharing rates				
<i>Final Sharing Rate</i>	50% multiplied by quality score	50% multiplied by quality score	60% multiplied by quality score	75% multiplied by quality score
<i>Shared Loss Rate</i>	0%	Fixed 30%	One minus final sharing rate, capped at 60%	One minus final sharing rate, capped at 75%
Corridors				
	2.0% to 3.9% depending on number of assigned beneficiaries	Choice of 0% to 2% in 0.5% increments	Choice of 0% to 2% in 0.5% increments	Choice of 0% to 2% in 0.5% increments
Gain / Loss sharing limits				
<i>Gain sharing limit</i>	10%	10%	15%	20%
<i>Loss sharing limit</i>	N/A	4%*	5% in year 1, 7.5% in year 2, 10% in year 3 and in subsequent years.	15%

Source: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/New-Accountable-Care-Organization-Model-Opportunity-Fact-Sheet.pdf>

Focusing on Shared Savings Models: MSSP Tracks

Minimum savings rate for Track 1

Number of assigned beneficiaries	MSR (low end of assigned beneficiaries)	MSR (high end of assigned beneficiaries)
5,000–5,999	3.9%	3.6%
6,000–6,999	3.6%	3.4%
7,000–7,999	3.4%	3.2%
8,000–8,999	3.2%	3.1%
9,000–9,999	3.1%	3.0%
10,000–14,999	3.0%	2.7%
15,000–19,999	2.7%	2.5%
20,000–49,999	2.5%	2.2%
50,000–59,999	2.2%	2.0%
60,000 +	2.0%	2.0%

Source: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/Shared-Savings-Losses-Assignment-Spec-V4.pdf>

CMS's approach to incorporating regional costs

Agreement Period	Weight on Rebased Benchmark	Weight on Regional Benchmark	Spend compared to region?	Trend
1st	100%	0%	Higher	National
1st	100%	0%	Lower	National
2nd	75%	25%	Higher	Regional
2nd	65%	35%	Lower	Regional
3rd	50%	50%	Higher	Regional
3rd	30%	70%	Lower	Regional
4th	30%	70%	Higher	Regional
4th	30%	70%	Lower	Regional

<https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2016-Fact-sheets-items/2016-06-06.html>

Focusing on Shared Savings Models: Next Gen ACO

- Fill in content specific to these programs:
 - Benchmark
 - Performance Year costs
 - Shared savings rate
 - Corridors (minimum savings / loss rates)
 - Caps
 - Quality adjustments

Shared Savings Models: Quality

- Metrics are specifically defined within the MSSP and Next Gen programs
 - Clinical Quality & Patient Experience
 - Administrative data, Chart data and Patient Surveys

2017 Reporting Year: Total Points for Each Domain within the Quality Performance Standard

Domain	Number of Individual Measures	Total Measures for Scoring Purposes	Total Possible Points	Domain Weight
Patient/Caregiver Experience	8	8 individual survey module measures	16	25%
Care Coordination/ Patient Safety	10	10 measures, including the EHR measure, which is double-weighted (4 points)	22	25%
Preventive Health	8	8 measures	16	25%
At-Risk Population	5	4 measures: 3 individual measures and a 2-component diabetes composite measure that is scored as one measure	8	25%
Total in all Domains	31	30	62	100%

- Quality composite results will impact any shared savings payouts – and audits must show 90% accuracy

Case Study



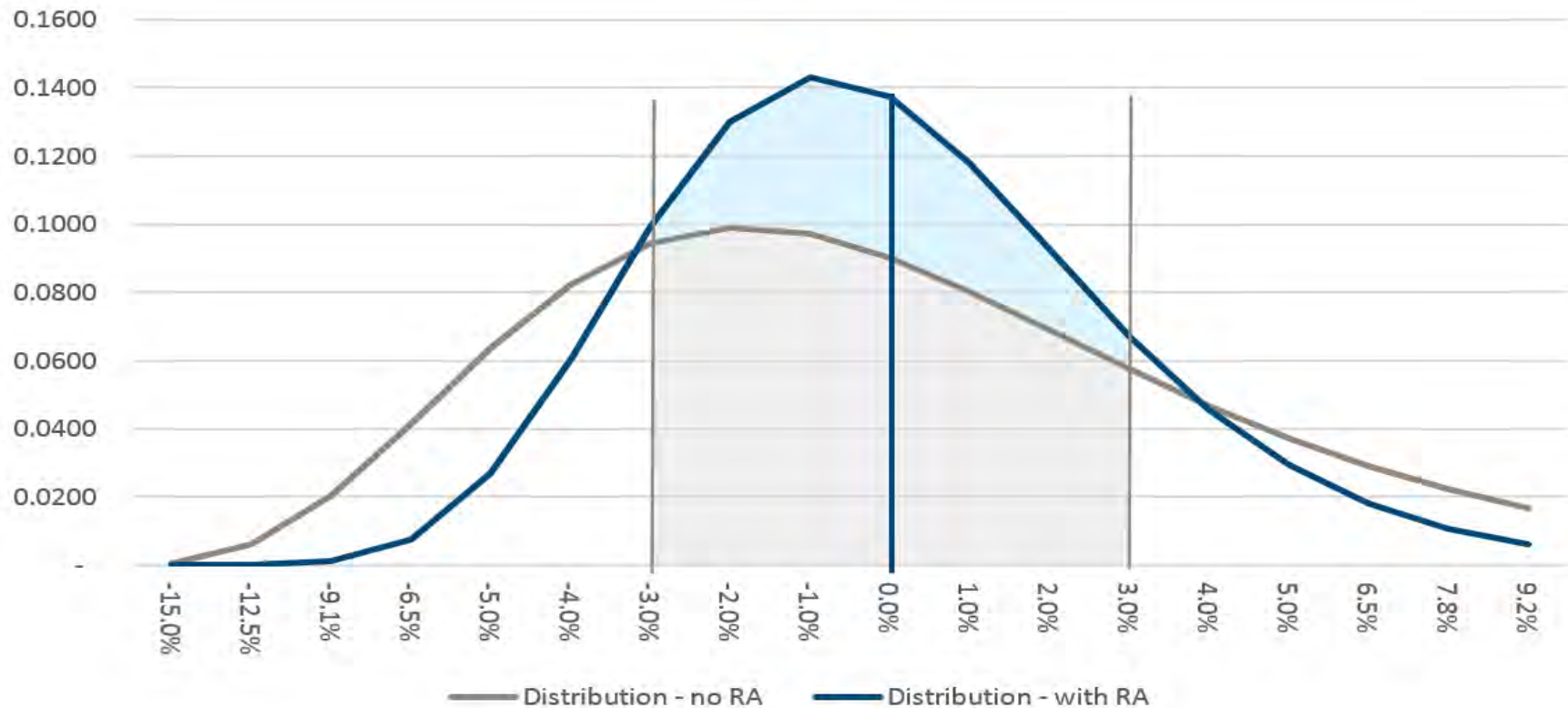
**SOCIETY OF
ACTUARIES**

Shared Savings Models: Benchmark Issues

- Time period of benchmark
- Risk adjustment
- Trend
- Competing against past performance
- Special populations and outliers

Stochastic variation in costs

with and without risk adjustment



Attribution techniques and associated issues



Objectives / Outcomes

- Understand the importance of attribution to patients, payers, and providers as the fundamental mechanism for aligning accountable care delivery with payment.
- Understand how the details of attribution methodologies influence product churn, accountability, and payer dependency.
- Understand the influence of attribution on financial benchmarking and performance measurement, which payers and providers must establish in order to implement actionable reporting to meet contract expectations.
- Identify the value of financial risk associated with various attribution methodologies, as well as how that risk is transferred between payers and providers.

Attribution: Definition

- The method used to determine which *provider group* is responsible for a patient's care and costs.
- Basis for Benchmarking, Bundling, VBP, Reporting & Accountability at the Payer level
 - Pairing payment to delivery of care based on various benchmarking & assignment of cost responsibility
- As value and risk shift from plans to providers, attribution will drive actionable performance
 - Financial
 - Performance (Quality)
 - Other

Attribution: Definition



Provider Payment Arrangements, Provider Risk, and Their Relationship with the Cost of Health Care

- The attribution method is extremely important to both the payer and the provider although the details can be quite complex.
- We would categorize attribution into five general categories: member choice, geographic, clinical prequalification, retrospective visit-based and prospective visit-based.

Whose Patient is It? And Why Do We Care?

- Goal is to have credible, measurable results
 - Beneficial to both finance and providers
- Trade-offs between methods
- Adaptable to industry trends such as e-mail visits, telehealth
- Patient, provider, and finance/actuarial should converge to same answer

Three Basic Methods

- Patient Choice
 - Oldest, Simplest Method
 - May be validated with data
 - Hard to enforce => low cost members skewed to not choosing
 - High attribution
- Geographic
 - Narrow-network
 - Use zip or county of residence
- Visit Based
 - Algorithm-based

Visit Based

- *Typically has a hierarchy of criteria for assigning members, with algorithms and tie breakers.*

Example:

- 1. PCP used during a recent time period, maybe for a defined subset of E&M codes*
- 2. If no PCP, go next to medical specialists used (e.g., cardiologist, GI, oncologist, ...)*
- 3. If still no assignment, go to surgical specialist used - may only account for 2-3% of population*

Balances are not attributed – may be 25% in many populations.

If you only use the PCP criteria, you may end up with 35% or so unattributed.

Visit Based

- Challenges

- Administratively complex
- Data Quality
 - *Health systems use the Tax ID # to identify providers, but those #s might change if the provider is acquired by or merged into another entity.*

- Advantages

- No member selection
- Algorithm-based
- Conceptually simple

Visit Based: Retrospective vs. Prospective

- *Prospective approach: Run the attribution at the beginning of the measuring period, then typically add no new members. The list of attributed members can be given to the Health System at the BOY. Some members will drop off during the year, but providers know who they are managing.*
- *Retrospective approach: May start with the same attribution run at the BOY as does the Prospective approach. And there may be subsequent attributions done each quarter. But the only attribution that really counts for the contract measurement period is the one done 4-5 months after the end of the period. That may create challenges for the providers.*

Tie-Breakers and Exclusions

- Tie-Breakers
 - Greatest Number of Visits
 - RVUs
 - Most Recent Visit
 - Highest Allowed Dollars
- Exclusions
 - ESRD
 - Transplant
 - Members with annual claims over \$500K

Churn Rates and Trends

- Churn rates
 - 40% - 60% annual re-attribute (members assigned to same provider)
- Trends
 - Attributed population have higher costs
 - No significant variation in risk-adjusted cost trends between attributed and non-attributed members

Provider Issues

- For providers paid on PMPM basis, may prefer consistency in payment over accuracy of assignment
- Should providers be allowed to “de-select” members for non-adherence, etc.

Next Generation

- Connect patient to the right organization / people
- Ultimate goals
 - Connect member to the individual most likely to create improvement (physician, nurse, behavioral change, or “someone like me”)
 - Give a single strong individual the responsibility and authority for management (including delegating to others for complex cases)
- These are often two different people
- Next generation may also evolve to include high risk and/or emergency patients (now “out-of-network”)

Best Practices:

Methods still evolving but some lessons learned

- More is not necessarily better
- Plurality – Better at capturing high cost members
- Visits/services preferred (commercial) as dollars can skew results
- IP, ER, urgent care settings do not reflect patient choice

Attribution: Financial Risk

1. Alignment with funding
2. Shared savings/loss distribution
3. Methodology
4. Network design
5. Actuarially sound budget for risk contract/attributed members
6. Aligned incentives
7. Solvency requirements for providers
8. Attribution of complex specialist patients
9. High cost cohorts
10. Intermittent members

Attribution: Financial Risk

Alignment with Funding

1. Ensure attribution methodology aligns with target/budget (premium, MLR, etc.)
 - The method utilized for alignment or attribution of a health plan member, Medicare beneficiary, etc. will **determine the financial risk of the population**, i.e. the **expected expenditures** for the population
 - Examples
 - Claims-based attribution
 - Hard attribution

Attribution: Financial Risk

Shared Savings/Loss Distribution

2. Shared savings/loss distribution

- The attribution methodology should support the **distribution of the gain/losses to the providers**, and by providers this could mean to the ACO, provider group, POD, chapter, practice, or individual provider.
 - Example: Medicare ACO
 - Beneficiary is aligned to the ACO and not an individual provider. This methodology supports assigning responsibility for the care and financial outcomes of a population to the ACO, but **does not support assigning responsibility to individual providers or practices.**
 - Selecting the level for which shared gains/losses will be distributed/levied has many considerations, many which have foundations in **actuarial science including credibility, statistical significance, reserving, risk adjustment and predictive modeling.**
- The method in which shared savings/losses are assigned to providers will also serve as an incentive for **engaging providers to actively participate and perform** under the terms of the risk contract.

Attribution: Financial Risk Methodology

3. Attribution methodology
 - a. Patient versus Episode
 - b. Single vs. Multiple
 - c. Prospective vs. Retrospective
 - a. Prospective – providers know population being managed prior to performance period
 - b. Retrospective – **providers do not know entirety of population being managed until performance period has ended**, with sufficient claims run-out to calculate attribution
 - d. Multiple Methods → Concurrent → Plurality???

Attribution: Financial Risk

Network Design

4. Network design (open/closed, HMO/PPO/Indemnity) – impacts ease of moving providers
 - The network design impacts an organizations ability to manage cost and utilization through development of high performing networks and/or network access.
 - Leakage/Care Retention

Attribution: Financial Risk

Actuarially Soundness

5. Actuarially sound budget for risk contract/attributed members
 - Current practice is to take a group/pool /class of business/rate cell, for which the rate is actuarially sound, and then split the group/pool/class of business/rate cell across various provider risk contracts, leading to rates/budgets that may potentially not meet the definition of actuarial soundness.

Attribution: Financial Risk

Aligned Incentives

6. Aligned incentives
 - Payer and provider
 - Attribution – The method used to determine which provider group is responsible for a patient’s care and costs. (HCP LAN).
 - Payer perspective
 - Provider perspective
 - Provider managed care division and attributable/managing physicians
 - Who is at-risk in the value-based contract?
 - What incentives exist for the at-risk parties?

Attribution: Financial Risk

Solvency Requirements

7. Solvency requirements for providers signing risk contracts; minimum vs sufficient
 - Minimum capital and surplus requirements
 - Minimum infrastructure and reach to take on risk profile

Attribution: Financial Risk

Complex Members

8. Attribution of complex patients can introduce risk if the contract does not include the controlling specialty, such as renal or cardiac patients.
 - Ability for attributable providers to impact care
 - Consider what services, patient cohorts, etc. for which a provider **should be at risk**.
 - The financial reconciliation methodology may not support inclusion of certain specialties for alignment.

Attribution: Financial Risk

High Cost Cohorts

9. Understanding the dynamic of x% of the patients are XX% of the costs. Achieving results is a much more focused activity than may be understood.
 - High Risk and/or High Need
 - Chronic Care Management (CCM)
 - End-of-life care (EoLC)
 - High-risk case management
 - Other cohorts
 - Episodic management within a total cost of care risk contract
 - Preventive care
 - Hidden risk outreach, etc.

Attribution: Financial Risk

Intermittent Members

10. Intermittent patients methodology; eligibility and attribution; duration.

- Should consideration be given to a methodology that rewards provider-member relationships that extend for multiple performance periods.
- Greater investment in preventive medicine with stability in population and longer program duration
- Lower acceptance of risk from providers for members for which they do not believe they manage the care
- Provider churn: providers being added and terminated and the effect this has on the RBE and the members they are responsible for managing.

Attribution: Quality

1. Impact of attribution methodology on quality performance

- Risk adjusted quality metrics
 - Account for social determinants of health, other predictors of quality performance
- Perceived attribution may change focus of quality efforts.
 - Who, what, where, when performance is attributed and actioned at provider level

Attribution: Other Considerations

- Provider types
- Episode (BPCI, CJR, OCM, etc.) versus Total Cost of Care (ACO) - How the attribution method interacts with the payment method
- Time period for attribution

Attribution: Case Study Discussion

1. Medicare ACO (MSSP, Pioneer, NGACO)
2. MACRA
3. BPCI/OCM/CJR
4. Medicaid ACOs

Prospective vs. Retrospective Attribution

- Prospective: Members are assigned prior to the performance period.
- Retrospective: Members are assigned based on patterns of care that occur during the performance period.

Other issues with attribution methods

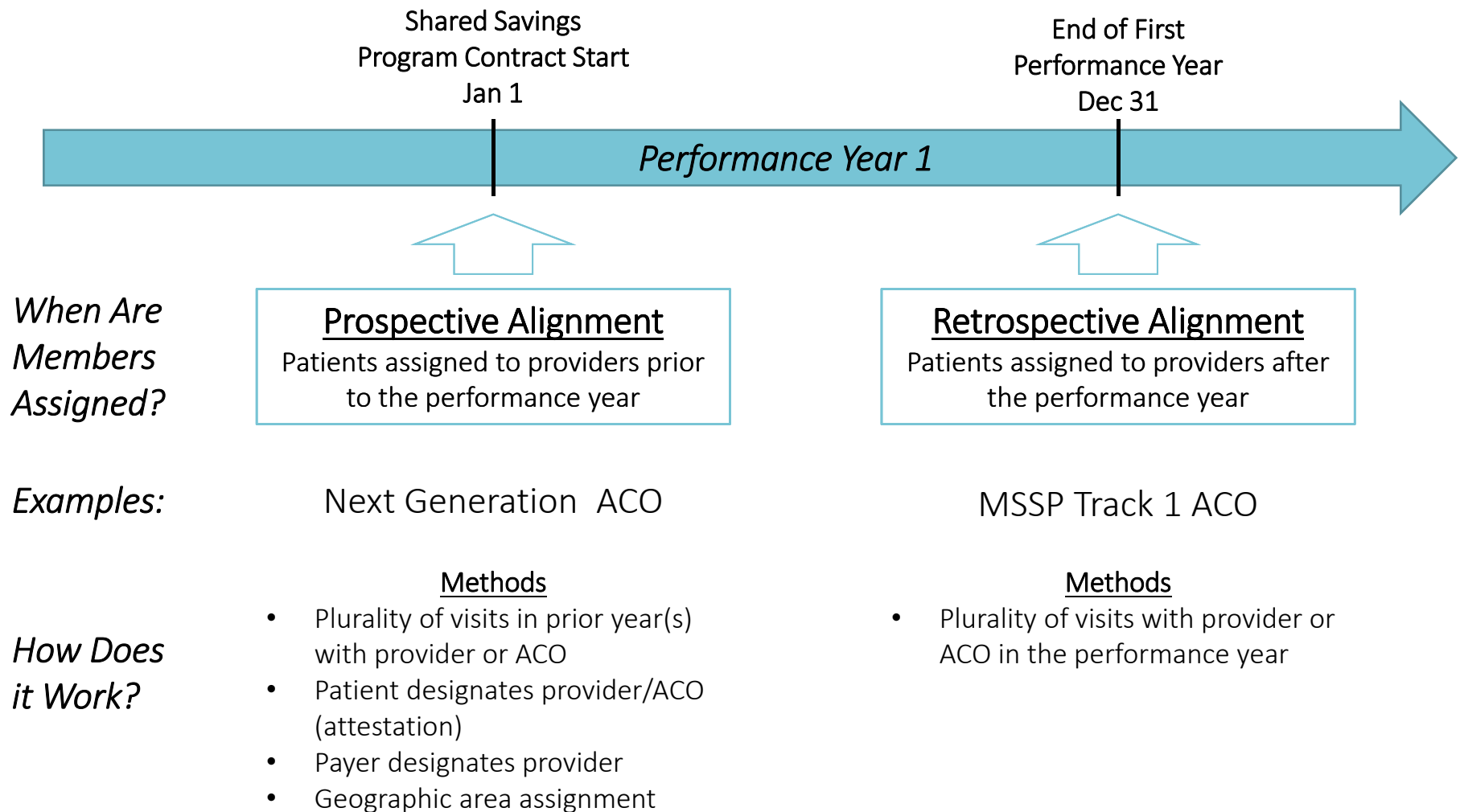
- Propensity vs most recent
- Service type vs service count
- Excluded services
- Most attribution methods pick up the utilizers, not those who don't utilize services. Therefore MLR based methods are inappropriate.
- Regression to the mean for prospective attribution
- Hard attribution: Member selection of PCP

Case Study



Case Study

MSSP Track 1 Attribution



Case Study

MSSP Track 1 Attribution/Assignment Methodology

1. Beneficiary must have a record of enrollment with CMS
2. Beneficiary must have at least one month of Part A and Part B enrollment, and cannot have any months of Part A only or Part B only enrollment
3. Beneficiary cannot have any months of Medicare group (private) health plan enrollment
4. Beneficiaries will be assigned to only one Medicare shared savings initiative (MA Part C, PACE, etc.)
5. Beneficiary must live in the United States or U.S. territories and possessions
 - a) Only in the last month of the performance period
6. Beneficiary must have a primary care service with a physician at the ACO
 - a) Special cases for FQHCs/RHCs
7. Beneficiary must have received the largest share of his/her primary care services from the participating ACO

If a beneficiary meets the screening criteria in 1 through 7, he or she is eligible to be assigned to an ACO. There are up to two steps in this process:

1. Assignment to ACO for plurality of primary care services (allowed dollars) performed by a PCP versus other MSSP ACOs or non-ACO TINs
2. For beneficiaries with no primary care services performed by a PCP, assignment to ACO for plurality of primary care services (allowed dollars) performed by an alignment-eligible specialist versus other MSSP ACOs or non-ACO TINs

Case Study

MSSP Track 1 Attribution Visit Codes and Services

Primary Care Codes and Services

Office or Other Outpatient Services	Initial Nursing Facility Care	Nursing Facility Discharge Services
99201 New Patient, brief	99304 New or Established Patient, brief (use except when POS = 31)	99315 New or Established Patient, brief (use except when POS = 31)
99202 New Patient, limited	99305 New or Established Patient, moderate (use except when POS = 31)	99316 New or Established Patient, comprehensive (use except when POS = 31)
99203 New Patient, moderate	99306 New or Established Patient, comprehensive (use except when POS = 31)	Domiciliary, Rest Home, or Custodial Care Services
99204 New Patient, comprehensive	Subsequent Nursing Facility Care	99324 New Patient, brief
99205 New Patient, extensive	99307 New or Established Patient, brief (use except when POS = 31)	99325 New Patient, limited
99211 Established Patient, brief	99308 New or Established Patient, limited (use except when POS = 31)	99326 New Patient, moderate
99212 Established Patient, limited	99309 New or Established Patient, comprehensive (use except when POS = 31)	99327 New Patient, comprehensive
99213 Established Patient, moderate	99310 New or Established Patient, extensive (use except when POS = 31)	99328 New Patient, extensive
99214 Established Patient, comprehensive	Other Nursing Facility Services	99334 Established Patient, brief
99215 Established Patient, extensive	99318 New or Established Patient (use except when POS = 31)	99335 Established Patient, moderate
		99336 Established Patient, comprehensive
		99337 Established Patient, extensive

Case Study

MSSP Track 1 Attribution Visit Codes and Services Continued

Primary Care Codes and Services

Domiciliary, Rest Home, or Home Care Plan Oversight Services	Home Services	For FQHC services furnished prior to 1/1/2011, primary care services include services identified by HCPCS code G0402 (effective 1/1/2009) or the following revenue center codes:
99339, brief	99341 New Patient, brief	0521 Clinic Visit by Member to FQHC/RHC Medicare
99340, comprehensive	99342 New Patient, limited	0522 Home Visit by FQHC/RHC Practitioner
Wellness Visits	99343 New Patient, moderate	0524 Visit by FQHC/RHC Practitioner to a Member, in a Covered Part A Stay at the SNF
G0402 Welcome to Medicare visit	99344 New Patient, comprehensive	0525 Visit by FQHC/RHC Practitioner to a Member in an SNF (not in a Covered Part A Stay) or Nursing Facility or ICF MR or other Residential Facility
G0438 Annual Wellness Visit	99345 New Patient, extensive	For RHC services, primary care services include services identified by HCPCS code G0402 (effective 1/1/2009) or G0438 (effective 1/1/2011), G0439 (effective 1/1/2011) or the following revenue center codes:
G0439 Annual Wellness Visit	99347 Established Patient, brief	
New G Code for Outpatient Hospital Claims	99348 Established Patient, moderate	
G0463 Hospital Outpatient Clinic Visit	99349 Established Patient, comprehensive	0521 Clinic Visit by Member to FQHC/RHC
	99350 Established Patient, extensive	0522 Home Visit by FQHC/RHC Practitioner
	99490 Chronic Care Management Service, 20 minutes	0524 Visit by FQHC/RHC Practitioner to a Member, in a Covered Part A Stay at the SNF
	99495 Transitional Care Management Services within 14 days of discharge	0525 Visit by FQHC/RHC Practitioner to a Member in an SNF (not in a Covered Part A Stay) or Nursing Facility or ICF MR or other Residential Facility
	99496 Transitional Care Management Services within 7 days of discharge	

Case Study

MSSP Track 1 Attribution-Eligible Specialties

Specialty Code	Description	Primary Care Physician	Specialist
01	General practice	Yes	No
06	Cardiology	No	Yes
08	Family practice	Yes	No
11	Internal medicine	Yes	No
12	Osteopathic manipulative medicine	No	Yes
13	Neurology	No	Yes
16	Obstetrics/gynecology	No	Yes
23	Sports medicine	No	Yes
25	Physical medicine and rehabilitation	No	Yes
26	Psychiatry	No	Yes
27	Geriatric psychiatry	No	Yes
29	Pulmonary disease	No	Yes
37	Pediatric medicine	Yes	No
38	Geriatric medicine	Yes	No
39	Nephrology	No	Yes
46	Endocrinology (eff. 5/1992)	No	Yes

Case Study

MSSP Track 1 Attribution-Eligible Specialties Continued

Specialty Code	Description	Primary Care Physician	Specialist
70	Multispecialty clinic or group practice	No	Yes
79	Addiction medicine (eff. 5/1992)	No	Yes
82	Hematology (eff. 5/1992)	No	Yes
83	Hematology/oncology (eff. 5/1992)	No	Yes
84	Preventive medicine (eff. 5/1992)	No	Yes
86	Neuropsychiatry (eff. 5/1992)	No	Yes
90	Medical oncology (eff. 5/1992)	No	Yes
98	Gynecologist/oncologist (eff. 10/1994) No	No	Yes
50	Nurse practitioner		
89	Clinical nurse specialist		
97	Physician assistant		
Method II CAH Claims	Type of bill 85X with the presence of one or more of the following revenue center codes: 096x, 097x, and/or 098x		
RHC Claims	71x bill types		
FQHC Claims	73x (for dates of service prior to 4/1/2010) and 77x (for dates of service on or after 4/1/2010)		
ETA Claims	13x bill types (from ETA hospitals)		

Population Health



**SOCIETY OF
ACTUARIES**

What are we going to cover in this section?

- Defining Population Health
- Actuarial Framework

Defining Population Health

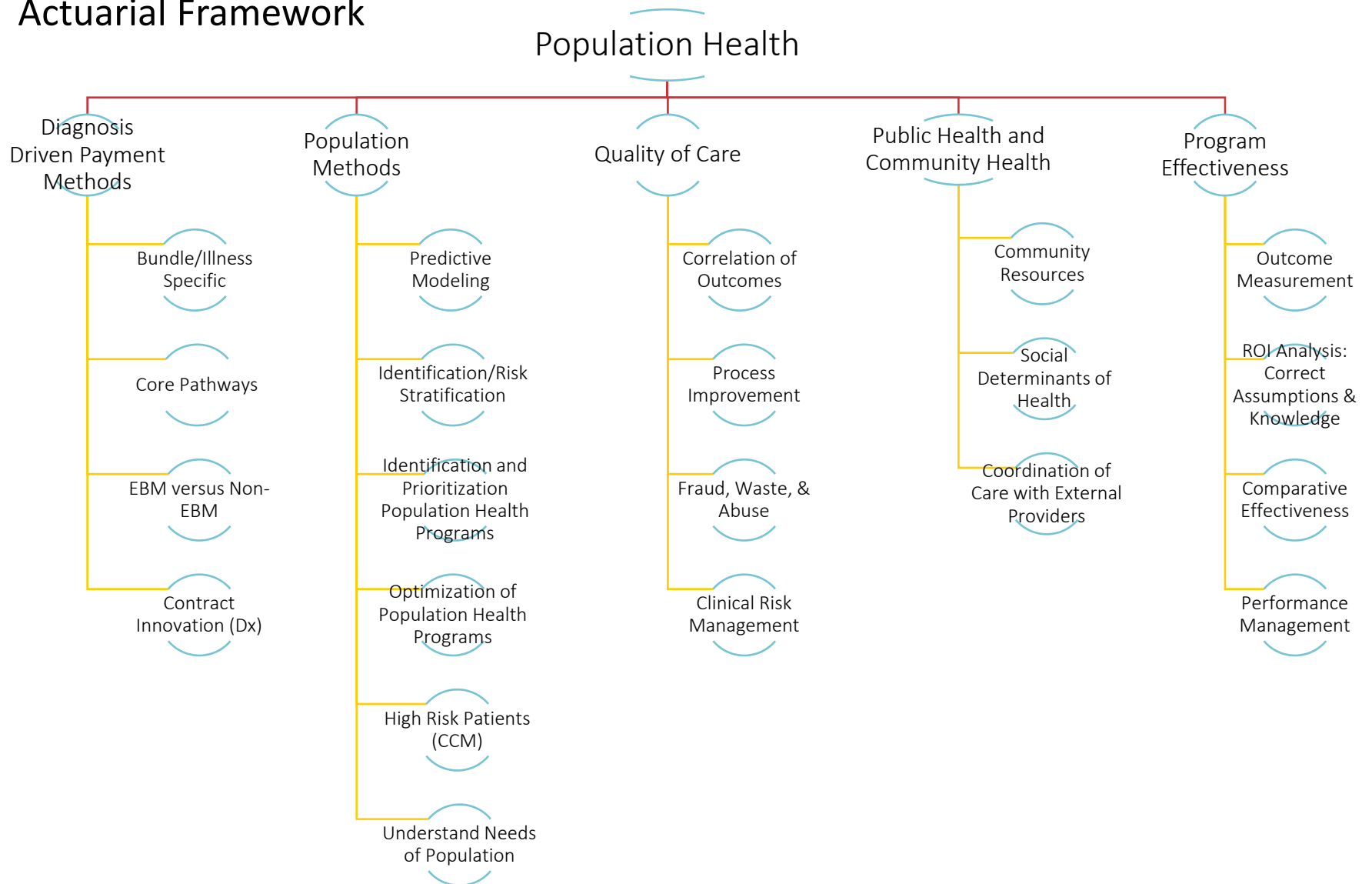
"Everyone's talking about it, no one really knows how to do it — everyone thinks everyone else is doing it, so we all say we're doing it,"

-Deb Gage, President and CEO of Medecision, during a panel at the Becker's Hospital Review 5th Annual CEO + CFO Roundtable in November 2016



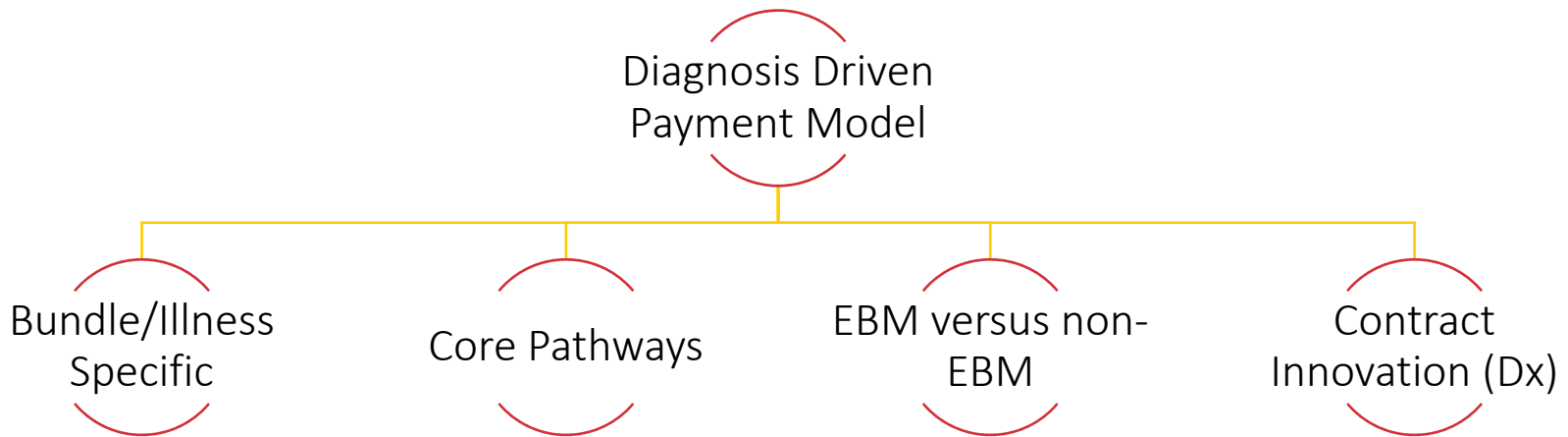
Population Health

Actuarial Framework



Population Health

Diagnosis Driven Payment Model



Diagnosis Driven Payment Model

- Reliance on data accuracy
 - e.g. coding of diagnosis by provider to identify population
- Defining episodes:
 - Statistical significance
 - Risk adjustment
 - Winsorization
 - Inclusions/exclusions
- Valuation of clinical interventions
 - Financial, quality
- Modeling of EBM pathways and episode-based payment models
- Impact of quality on outcomes and financials
- Trend analytics (core versus extraneous)

Diagnosis Driven Payment Model

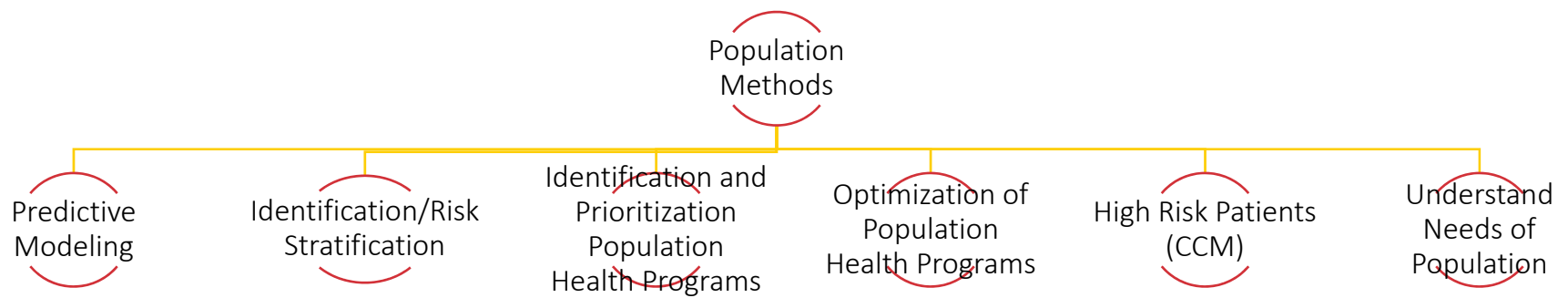
- Defining risk arrangements:
 - Align incentives across stakeholders
 - Stakeholders include: providers, employers, payers (commercial and government, life sciences, patient/member/insured/employee)
 - Contract terms
 - Attribution
 - Risk adjustment/case mix/severity
 - Outliers
 - Performance period (index event, trend)
 - Quality
 - Financial model (control group, historical expenditures)
 - Delegation (UM, claims, credentialing)
 - Payment methodology (base, incentive)
 - Payment models
 - FFS with shared savings/loss
 - Episode capitation
 - Sub-element of total cost of care contract
 - Payment distribution model

Diagnosis Driven Payment Model

- Reinsurance
- Methodologies to address coding improvement, unbundling
- Market-specific factors impacting efficient management of episodes, application of EBM guidelines (e.g. social determinants of health)
- Provider performance analyses

Population Health

Population Methods



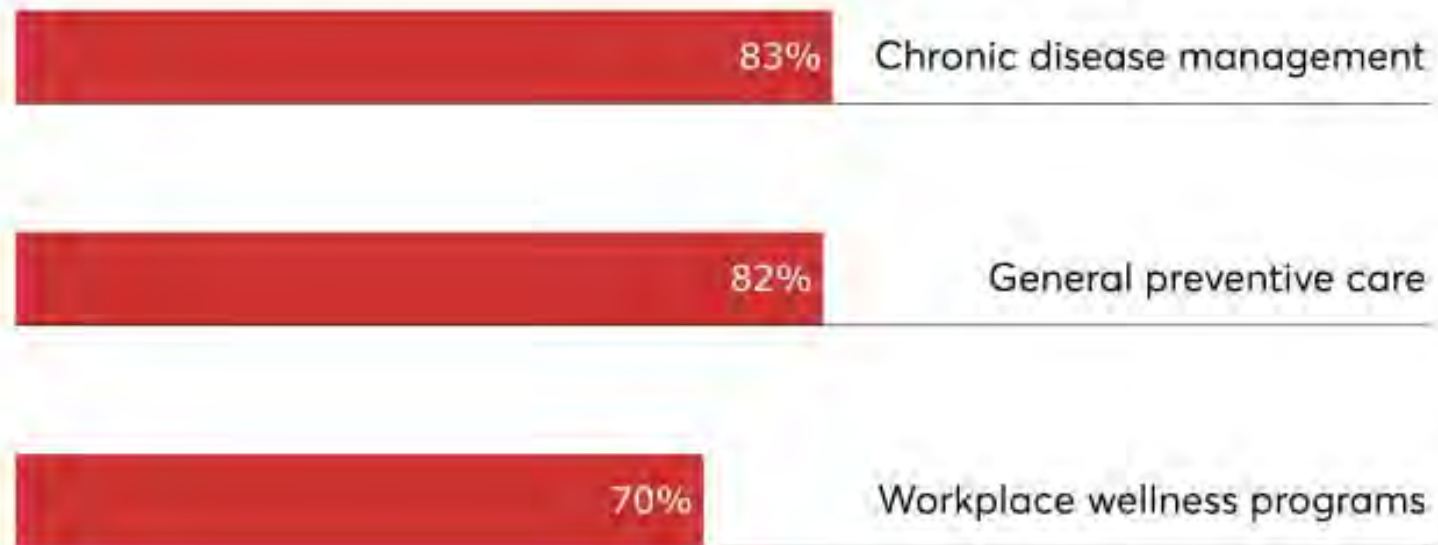
Population Health Management



SOURCE: CTG Health Solutions and Clinovations. "Population Health Management: Leveraging Data and Analytics to Achieve Value." 2012.

Top pop health strategies

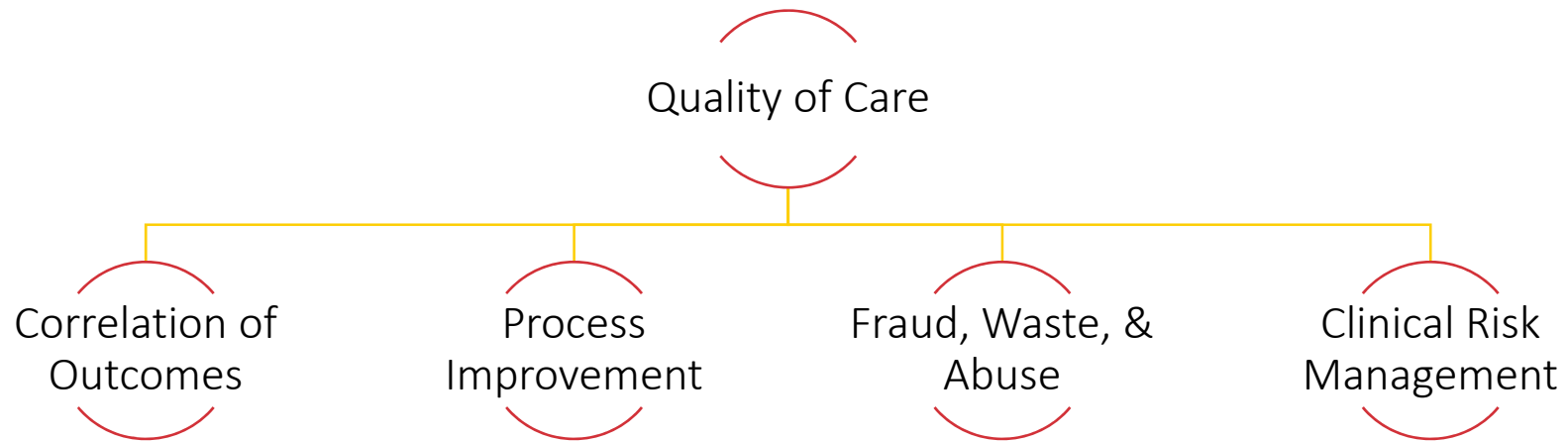
Percentage of respondents using these approaches



Source: HIMSS Analytics, 2015 survey of healthcare executives

Population Health

Quality of Care



“When possible, quality is founded on evidence-based medicine that not only includes clinical data, but also economic and patient-centered outcomes.”

-David B. Nash, Founding Dean of the Jefferson College of Population Health (JCPH)

Defining Quality

"the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."¹

IOM Health Care Quality Domains

- Effective
- Efficient
- Equitable
- Patient Centered
- Safe
- Timely



1: Institute of Medicine (IOM). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C: National Academy Press; 2001.

Increasing Prevalence of Quality Measures



The National Committee for Quality Assurance (NCQA) and URAC accredit health plans; NCQA accreditation is more often required by large employers



Health plans that participate in the Exchanges are required to be Accredited (URAC or NCQA – most use NCQA)

NCQA

- All Medicare Advantage (MA) plans are required to report HEDIS
- 39 states offer State Medicaid quality programs based on HEDIS
- NCQA relies extensively on performance measures in accreditation decisions and publishes a health plan report card on its website
- NCQA-accredited health plans are reviewed against more than 60 standards and must report on their performance in more than 40 areas in order to earn accreditation.
- NCQA uses a unified set of standards for various types of managed care organizations (HMOs, PPOs and POS plans)

Types of Quality Measures

Structural

- Gives consumers a sense of a health care provider's capacity, systems, and processes to provide high-quality care
- Examples: 1) Whether the health care organization uses electronic medical records or medication order entry systems; 2) The number or proportion of board-certified physicians; 3) The ratio of providers to patients

Process


- Indicate what a provider does to maintain or improve health, either for healthy people or for those diagnosed with a health care condition
- Examples: 1) % of people receiving preventive services (mammograms, immunizations, etc.); 2) % of people with diabetes who had their blood sugar tested and controlled

Outcome

- Reflect the impact of the health care service or intervention on the health status of patients
- Examples: 1) % of patients who died as a result of surgery (surgical mortality rates); 2) The rate of surgical complications or hospital-acquired infections

Source: Types of Quality Measures. Content last reviewed July 2011. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/types.html>

Accelerated Movement Toward Pay for Quality



Pay For Quality

- Has resulted in greater awareness and funding of quality programs
- Need to focus member and provider interactions in an integrated non-disruptive fashion for quality, risk and utilization

Emerging Impact of Accountable Care Organizations (ACOs) on Quality

- When private health insurers enter into ACO-type agreements with providers, the **providers** are held accountable for
 - Providing high-quality care to their usual patient population
 - Reducing the unnecessary use of resources
- Provider Organizations that meet agreed-upon performance levels on a range of specific quality measures are rewarded financially
- The idea is to encourage further steps to improve care management, leading to a steady evolution toward fully coordinated care systems

Increased Focus on Outcomes Measures

Outlook on quality is becoming more and more outcomes-based

High degree of correlation between multiple measures that all point to the same, single point of quality

As plans achieve administrative quality measures, they can be retired, and other measures become the focus

Investment in quality measures is encouraged through exclusion from minimum medical loss ratio requirements

Avoiding unnecessary care/admissions/readmissions is not only clinically important but also increasingly financially important

Data Sources (Quality)

Administrative Data	Patient Medical Records	Patient Surveys	Comments From Individual Patients	Standardized Clinical Data
<ul style="list-style-type: none">• Advantages<ul style="list-style-type: none">• Electronic• Cost < EMR data• Available across full population/payers• Fairly uniform systems/practices• Disadvantages<ul style="list-style-type: none">• Limited clinical data• Completeness• Timeliness• Accuracy for public reporting; billing primary purpose	<ul style="list-style-type: none">• Advantages<ul style="list-style-type: none">• Rich clinical data• Viewed by providers as credible• Disadvantages<ul style="list-style-type: none">• Cost, complexity, & time to compile data across sites of service, systems• Paper formats	<ul style="list-style-type: none">• Advantages<ul style="list-style-type: none">• Captures info where patient is best source• Well-established methods for survey design• Easy for consumers to understand• Disadvantages<ul style="list-style-type: none">• Cost of survey administration• Possibility of misleading results and bias (sampling or response)	<ul style="list-style-type: none">• Advantages<ul style="list-style-type: none">• Compelling to consumers to read about other's experiences• Efficient to convey information and influence individuals decisions and behavior• Disadvantages<ul style="list-style-type: none">• Not an impartial assessment of health care quality• Not representative of the patient population• May have undue influence on people's health care decision-making	<ul style="list-style-type: none">• Advantages<ul style="list-style-type: none">• Uses existing data sets• Characterizes facility performance in multiple domains of care• Disadvantages<ul style="list-style-type: none">• May not address all topics of interest

Source: Understanding Data Sources. Content last reviewed July 2011. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/understand.html>

Quality in Value-Based Contracts

MSSP ACO (2017)

- 30 measures for scoring grouped in four domains
 - Patient/Caregiver Experience (8)
 - Care Coordination/Patient Safety (10)
 - Preventive Health (8)
 - At-Risk Population (4)
 - Three individual measures, one 2-component diabetes composite measure that is scored as one measure

Quality in Value-Based Contracts

MSSP ACO (2017): Scoring Methodology

2017 Reporting Year: Total Points for Each Domain within the Quality Performance Standard

Domain	Number of Individual Measures	Total Measures for Scoring Purposes	Total Possible Points	Domain Weight
Patient/Caregiver Experience	8	8 individual survey module measures	16	25%
Care Coordination/ Patient Safety	10	10 measures, including the EHR measure, which is double-weighted (4 points)	22	25%
Preventive Health	8	8 measures	16	25%
At-Risk Population	5	4 measures: 3 individual measures and a 2-component diabetes composite measure that is scored as one measure	8	25%
Total in all Domains	31	30	62	100%

Quality in Value-Based Contracts

MSSP ACO (2017): Scoring Methodology

Sliding Scale Measure Scoring Approach

ACO Performance Level	Quality Points
90+ percentile benchmark or 90+ percent	2.00 points
80+ percentile benchmark or 80+ percent	1.85 points
70+ percentile benchmark or 70+ percent	1.70 points
60+ percentile benchmark or 60+ percent	1.55 points
50+ percentile benchmark or 50+ percent	1.40 points
40+ percentile benchmark or 40+ percent	1.25 points
30+ percentile benchmark or 30+ percent	1.10 points
<30+ percentile benchmark or <30+ percent	No points

Quality in Value-Based Contracts

MSSP ACO (2017)

- Quality Measures Validation Audit
 - If an ACO fails an audit the quality score may be adjusted proportional to its audit performance
 - Failure is an overall audit match rate of less than 90%

Quality in Value-Based Contracts

Medicare Star Ratings

- Centers for Medicaid and Medicare Services (CMS) has instituted a 5-Star Rating System to evaluate Quality. The purpose is three-fold:
 - Provide beneficiaries information on organization performance that they may consider (in addition to cost and benefit information) when choosing a plan
 - Determine Quality Bonus Payments (QBP) and Rebate Allocation
 - Assist CMS in identifying poor performing organizations for compliance actions
- Plans receive a star rating for every individual measure which are weighted (2014) and averaged into domains or a summary rating. A contract can receive ratings between one to five stars:

★	Poor performance
★ ★	Below average performance
★ ★ ★	Average performance
★ ★ ★ ★	Above average performance
★ ★ ★ ★ ★	Excellent performance

Quality in Value-Based Contracts

Medicare Star Ratings: Low Star Rating Implications

- For MA-PD only:
 - Reduction in Star bonus and Rebates (applies to MA-PD only)
- For PDP and MA-PD:
 - Any plans with low Star Ratings for 3 years in the row (either Part C or Part D) have a low quality icon on Plan Finder



- CMS also issues a Corrective Active Plan (CAP) letter
- CMS sends members to alert them re their enrolled plan with < 3 Stars
- Incentive for 5-Star plans: plans can enroll members year round

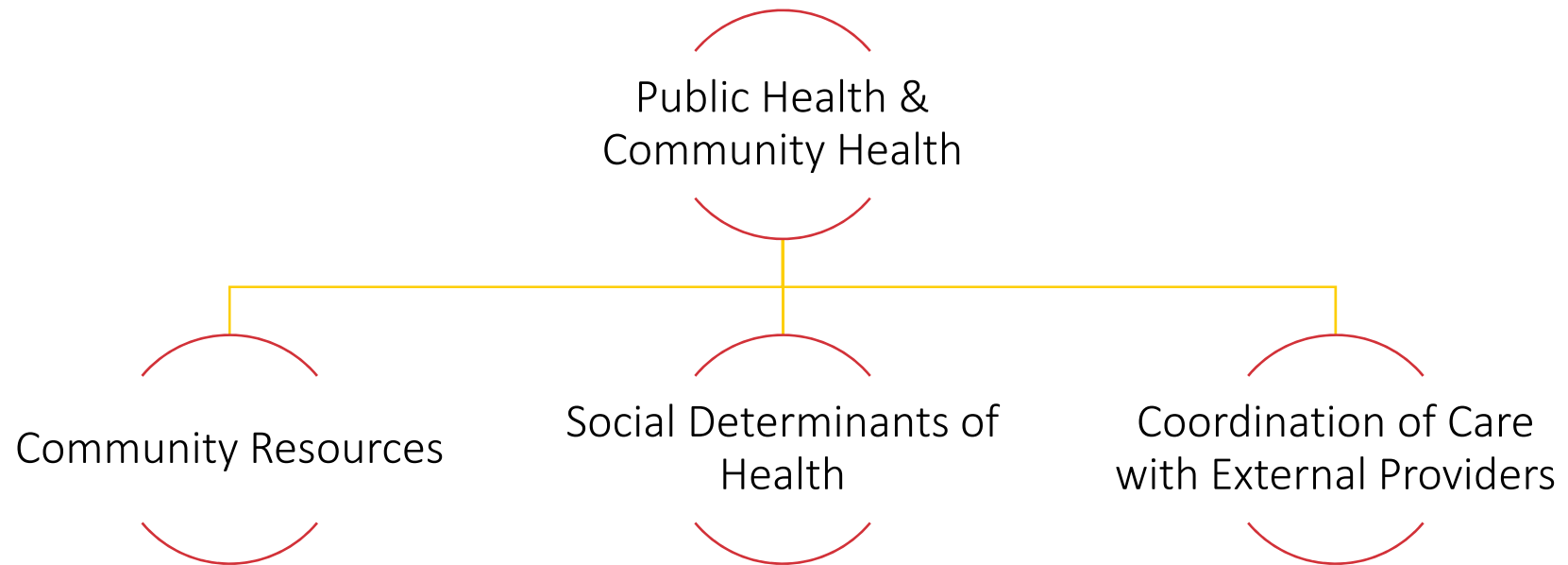
Quality in Value-Based Contracts

Other Examples

- MACRA (MIPS)
 - Quality equal to 60% of total MIPS performance in 2017
 - Choose six measures from total of 271 measures
 - <https://qpp.cms.gov/mips/quality-measures>
- BPCI
 - No explicit adjustment in financial model
 - Indicators of quality include mortality rates, readmissions, and via the beneficiary survey (experience of care and functional status)

Population Health

Public Health & Community Health



Public Health & Community Health

Community Resources



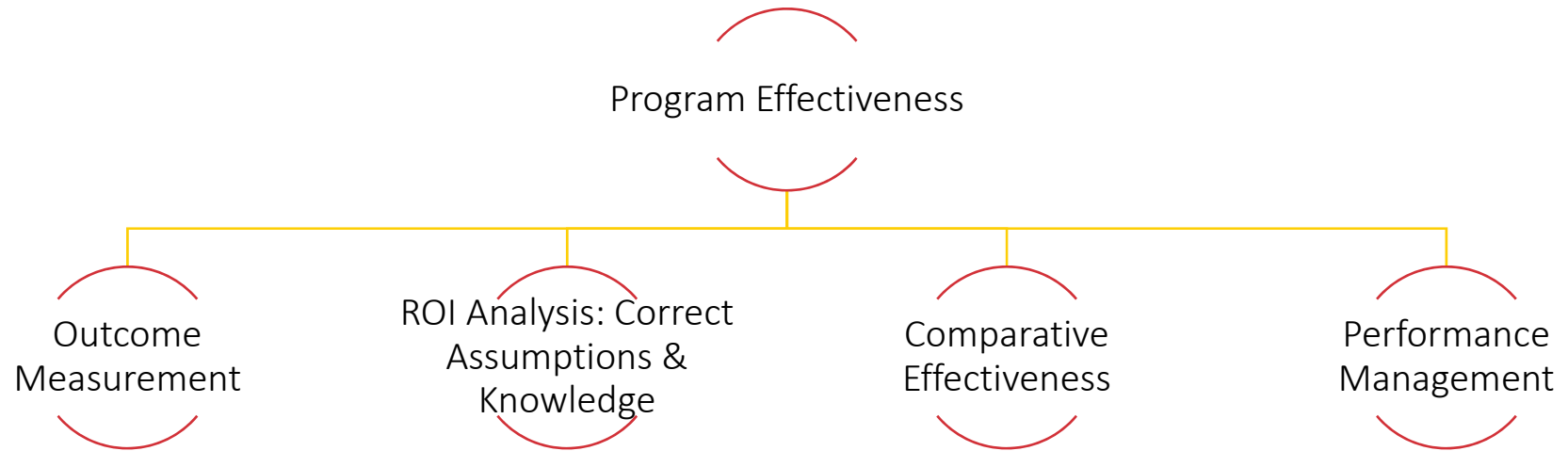
- Community Health Centers
- Informal Care
- Information & Referral
- Care Management Services
- Legal and Financial Counseling
- Transportation Services
- Nutrition Programs
- Respite Care
- Adult Day Care
- Home Care
- Hospice Care
- Caregiver Support Groups
- Employee Assistance Programs

Social Determinants of Health



- Predictive Modeling
- Care Management
- Health Impact Assessments
- Health in all Policies
 - <https://www.apha.org/topics-and-issues/health-in-all-policies>
- Examples:
 - Social Environment
 - Physical Environment
 - Access to Economic and Job Opportunities
 - Discrimination
 - Quality of Education
 - Public Safety
 - Language/Literacy
 - Transportation Options
 - Access to Media and Technology

Population Health Program Effectiveness



Network Considerations

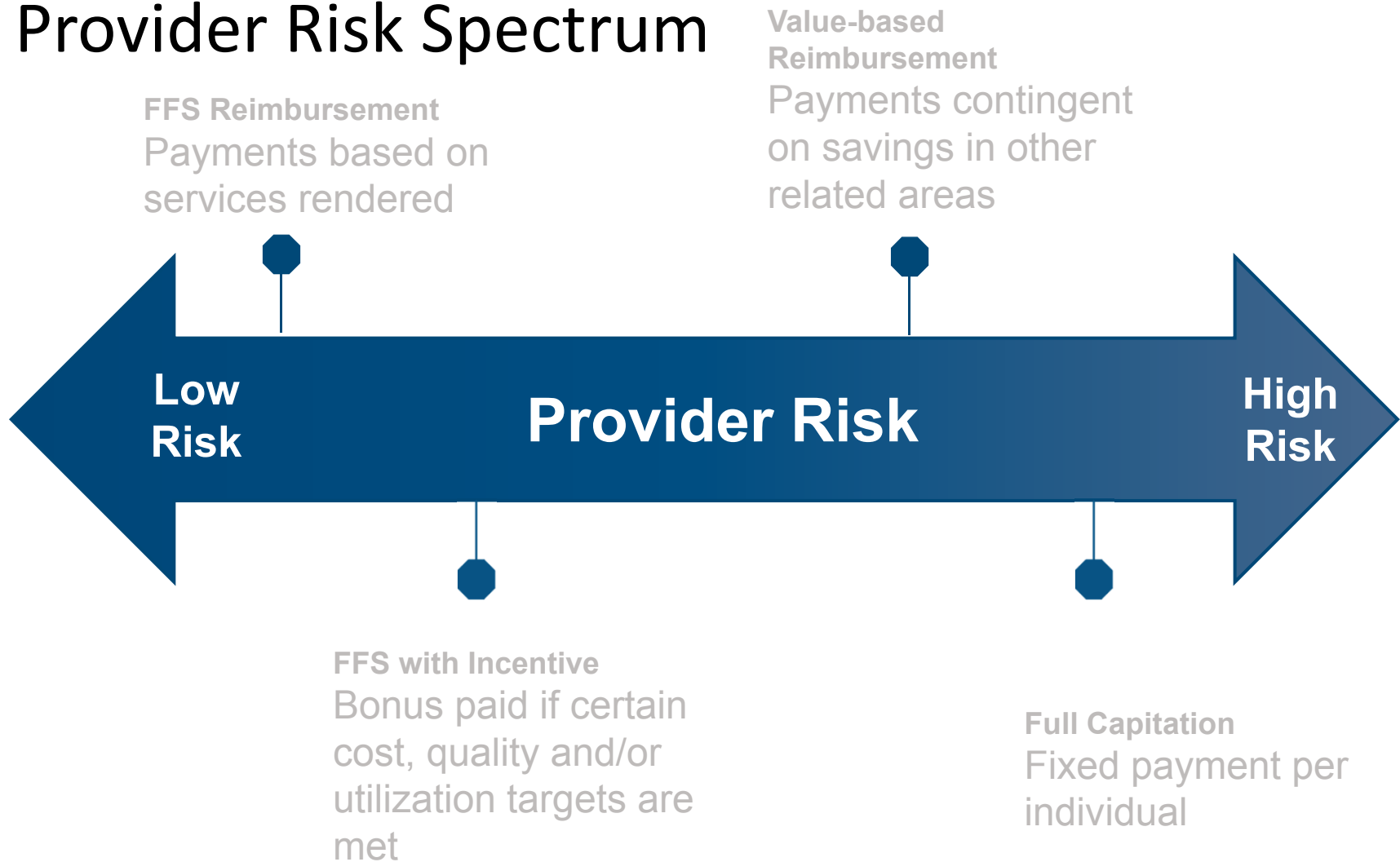


**SOCIETY OF
ACTUARIES**

What are we going to cover in this section?

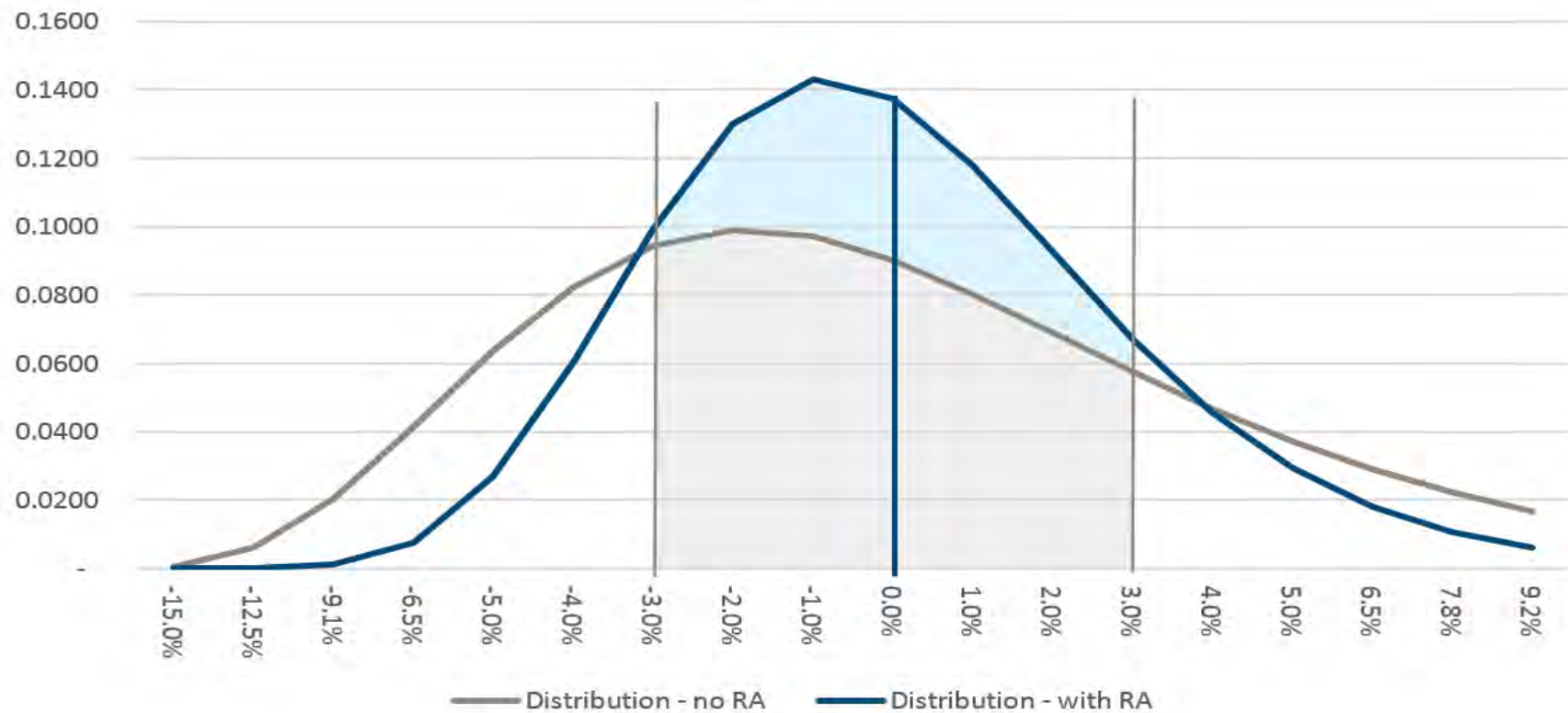
- Overview of how network and provider composition is inherently linked with risk sharing structure and success.
- Financial risk considerations associated with provider group size and panel composition.
- Network adequacy and provider engagement.
- Price-to-cost ratio
- Case study

Provider Risk Spectrum



Provider group size

Stochastic variation in average monthly costs for a group of 5,000, with and without risk adjustment



Why does network composition matter?

Transfer of risks providers can
meaningfully influence

Attribution

Financial Incentives

Declining revenues

Financial Risk
Transfer

Quality

Risk Adjustment

Population Health

Accountable Payment Models



Cost of Care

Bundled Pricing

- Bundled Payments for Care Improvement (BPCI) program
- Commercial Bundled Contracts

Quality of Care

Pay-for-Performance

- Value-Based purchasing
- Readmissions Penalties
- Quality-Based Commercial Contracts

Volume of Care

Shared Savings

- Medicare Shared Savings Program (MSSP) or Next Gen
- Commercial ACO Contracts

Financial risk considerations associated with provider group size and panel composition

- Is a provider group expected to manage the global cost of care?
- Is the provider group expected to manage the cost of care for certain conditions?
- Is the provider group expected to manage the cost of care for certain services?

Network Adequacy and Provider Engagement



Physician profiling

- Risk adjusted cost and efficiency profiles
- Linking attribution of members to particular providers
- What providers are driving leakage?
- What providers are driving higher-than-expected utilization?

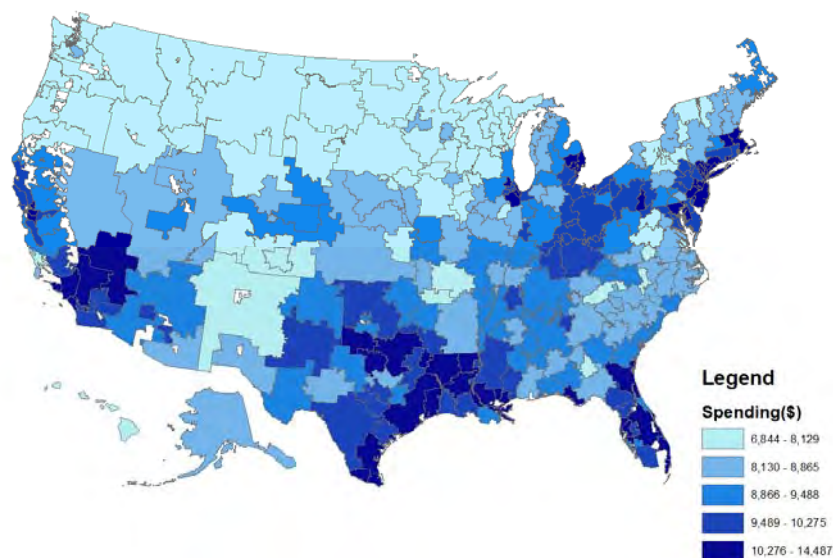
Price-to-cost ratio

- Provider reimbursement levels are the root of healthcare spending.
- Provider reimbursement levels vary widely both regionally, but also within a region often with little correlation between actual cost or quality.

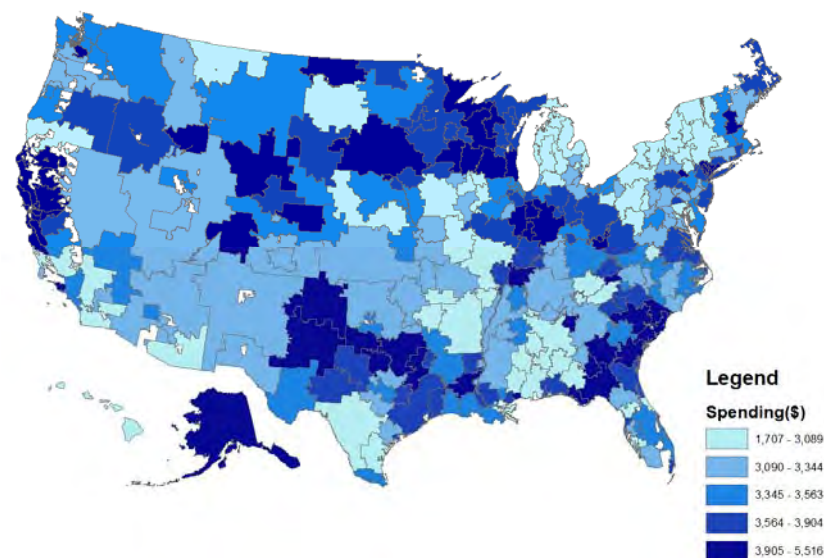
Let's discuss how the price vs. cost of services is central to the long-term prospects of provider risk sharing.

Medicare and ESI Overall Spending Per Beneficiary

Total Medicare Spending Per Beneficiary, 2011



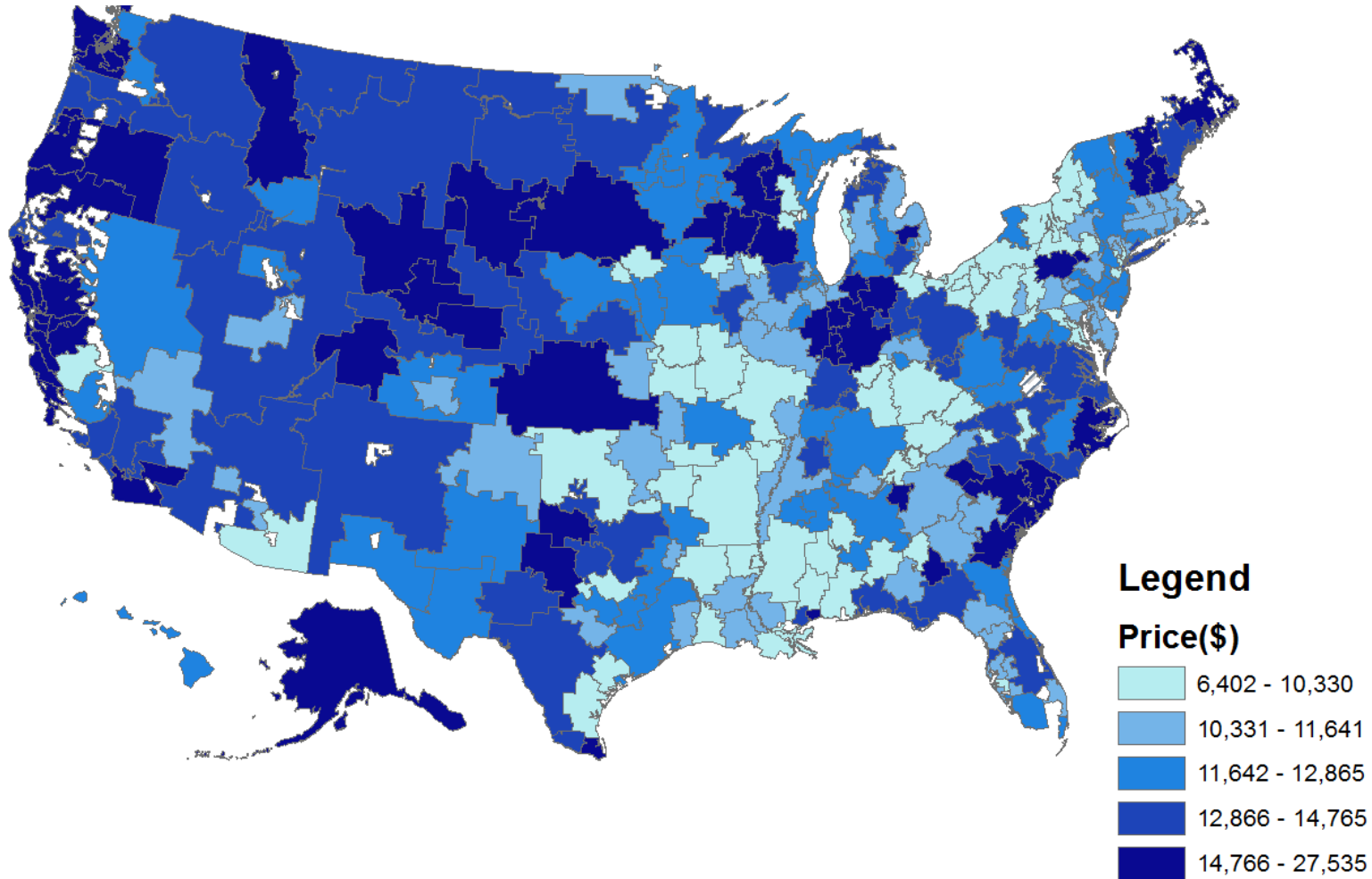
Total Private Spending Per Beneficiary, 2011



Correlation of Public and Private Total Spending Per Beneficiary: 0.140

Note: Data on Medicare is for 2011 and from the Dartmouth Atlas. Spending for Medicare beneficiaries includes Part A & B and is risk adjusted by age, race, and sex. Spending on private enrollees is adjusted by age and sex and includes all inpatient, outpatient, and physician claims

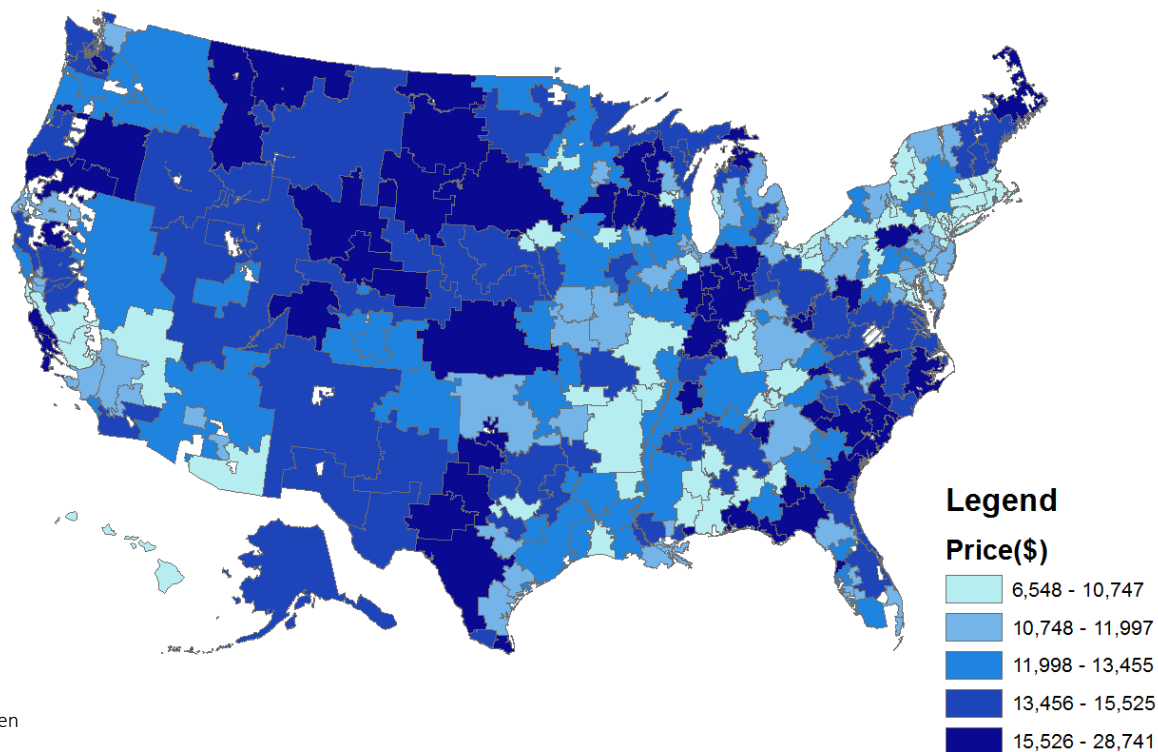
Risk-Adjusted Inpatient Hospital Price, 2008-2011



© Cooper, Craig, Gaynor, and Van Reenen

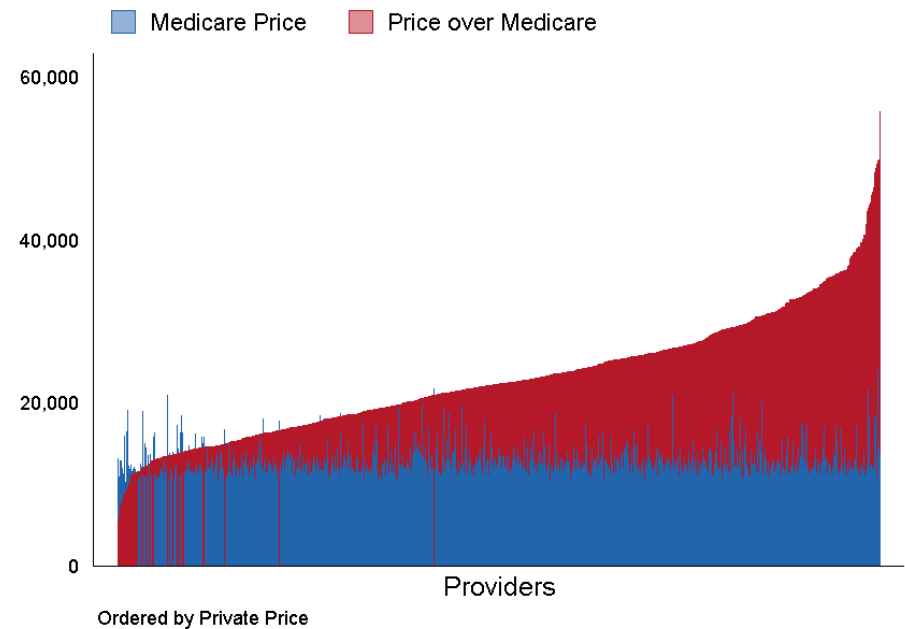
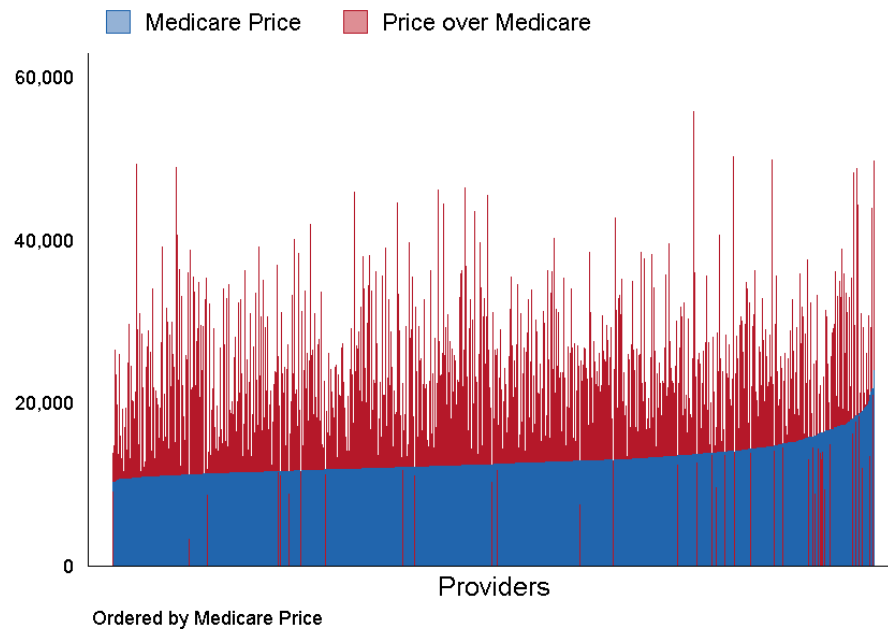
Inpatient Prices—normalized using the wage index

Wage-Adjusted Inpatient Hospital Price, 2008-2011



© Cooper, Craig, Gaynor, and Van Reenen

National Variation in Prices and Medicare Fees: Knee Replacement



Medicare Knee Replacement Prices

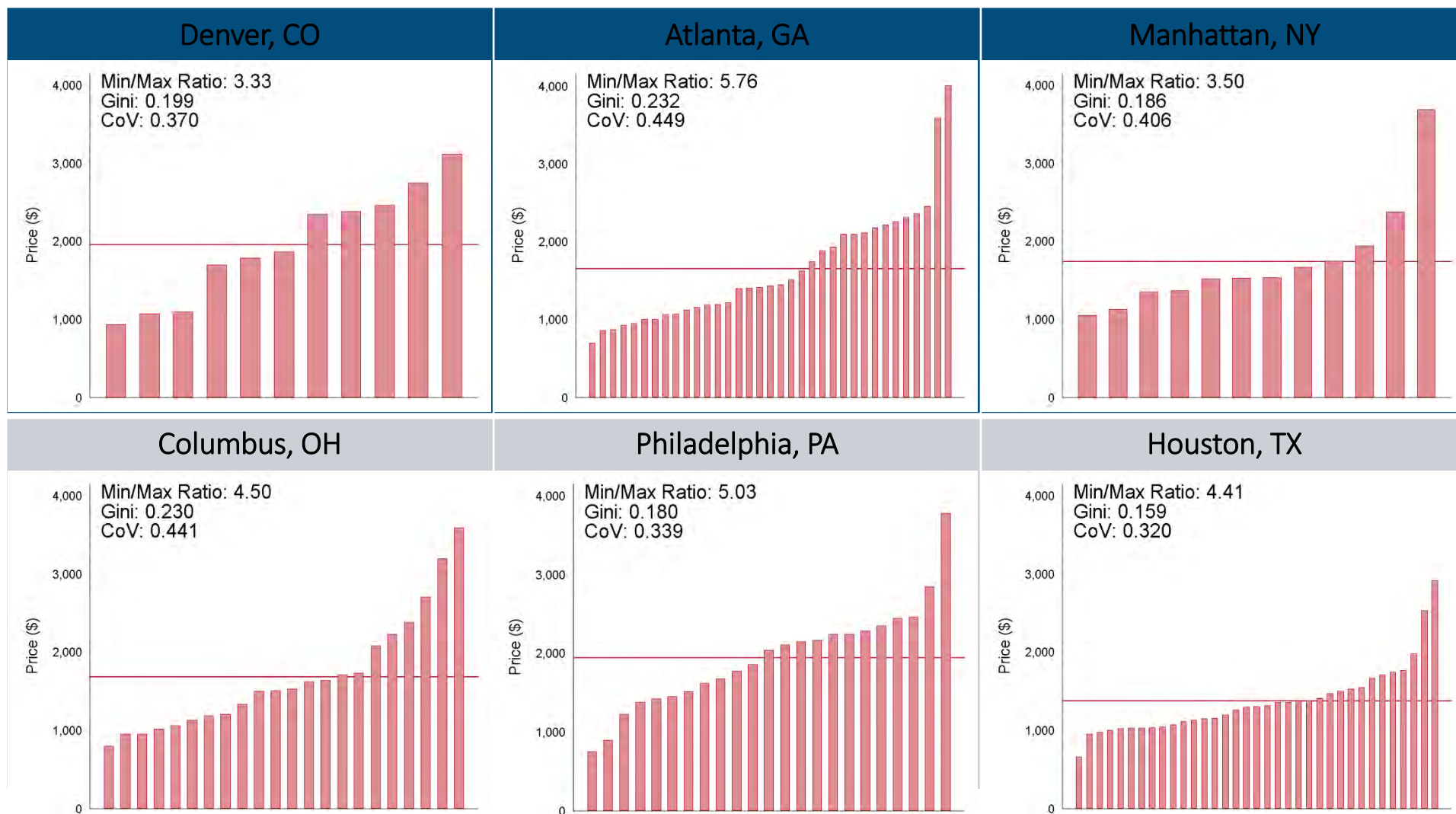
Mean	12,986
Min - Max	10,254 - 24,021
p10-p90	11,213 - 15,441
IQR	11,734 - 13,605
p90/10 ratio	1.38
IQR ratio	1.16
Coefficient of Variation	0.15
Gini Coefficient	0.07

Private Knee Replacement Prices

Mean	23,102
Min - Max	3,298 - 55,825
p10-p90	14,338 - 33,236
IQR	17,365 - 27,151
p90/10 ratio	2.32
IQR ratio	1.56
Coefficient of Variation	0.33
Gini Coefficient	0.18

Note: Each column is a hospital; Medicare prices are calculated using Medicare Impact Files

Colonoscopy Facility Prices Within Markets



Case Study



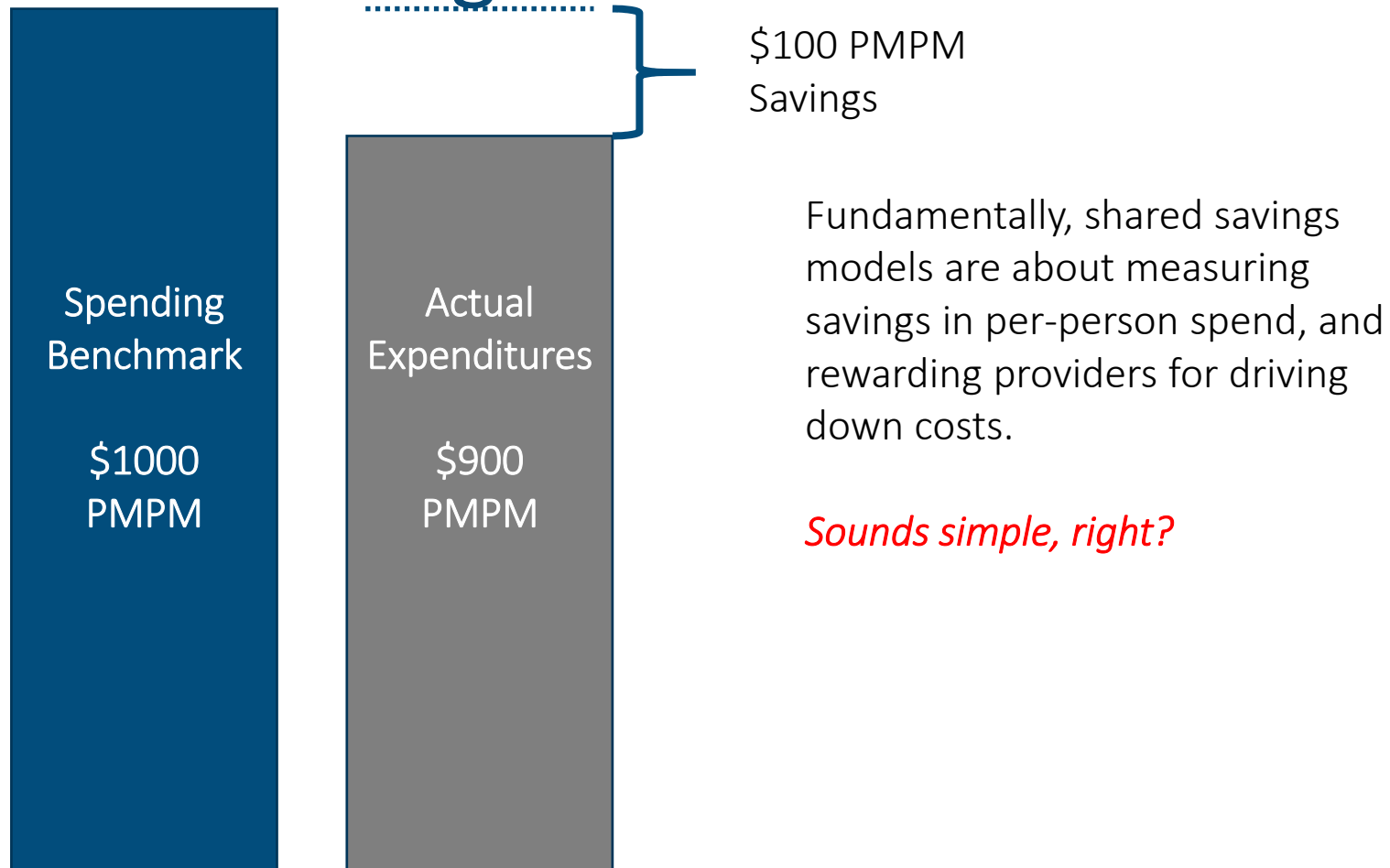
Putting it all together
Using actuarial techniques
to improve provider risk
sharing



What are we going to cover in this section?

- Circle back to continue our case study on shared savings, focusing on more of the nuanced features of these arrangements
- Useful data sets
- Actuarial techniques and modeling approaches for the provider risk sharing space

Continuing our case study into shared savings models...



Fundamentally, shared savings models are about measuring savings in per-person spend, and rewarding providers for driving down costs.

Sounds simple, right?

Challenges with Prospective Risk Adjustment

Prospective Risk Adjustment

- Uses this year's diagnoses to predict next year's costs
- Originally developed for MA, the CMS-HCC is a prospective model
- Lower predictive power than a concurrent model

Concurrent Risk Adjustment

- Uses this year's diagnoses to predict this year's costs
- No CMS-developed concurrent risk adjuster currently exists for the Medicare population.

Challenges in Risk Adjustment

- Inherent variation in risk adjustment
- Prospective model
- Normalization factors
- Capping of the risk score (and impact for prospective attribution models)
- Different risk adjustment models for each year
- Regional costs

Risk Score Normalization

- The process of risk score normalization essentially accounts for national trends in coding improvement or changes.

$$\textit{Adjustment} = \left(\frac{RS_{PY}}{NF_{PY}} \right) / \left(\frac{RS_{BY3}}{NF_{BY3}} \right)$$

Risk Score Normalization

- The process of risk score normalization essentially accounts for national trends in coding improvement or changes.

$$\textit{Adjustment} = \left(\frac{RS_{PY}}{RS_{BY3}} \right) / \left(\frac{NF_{PY}}{NF_{BY3}} \right)$$

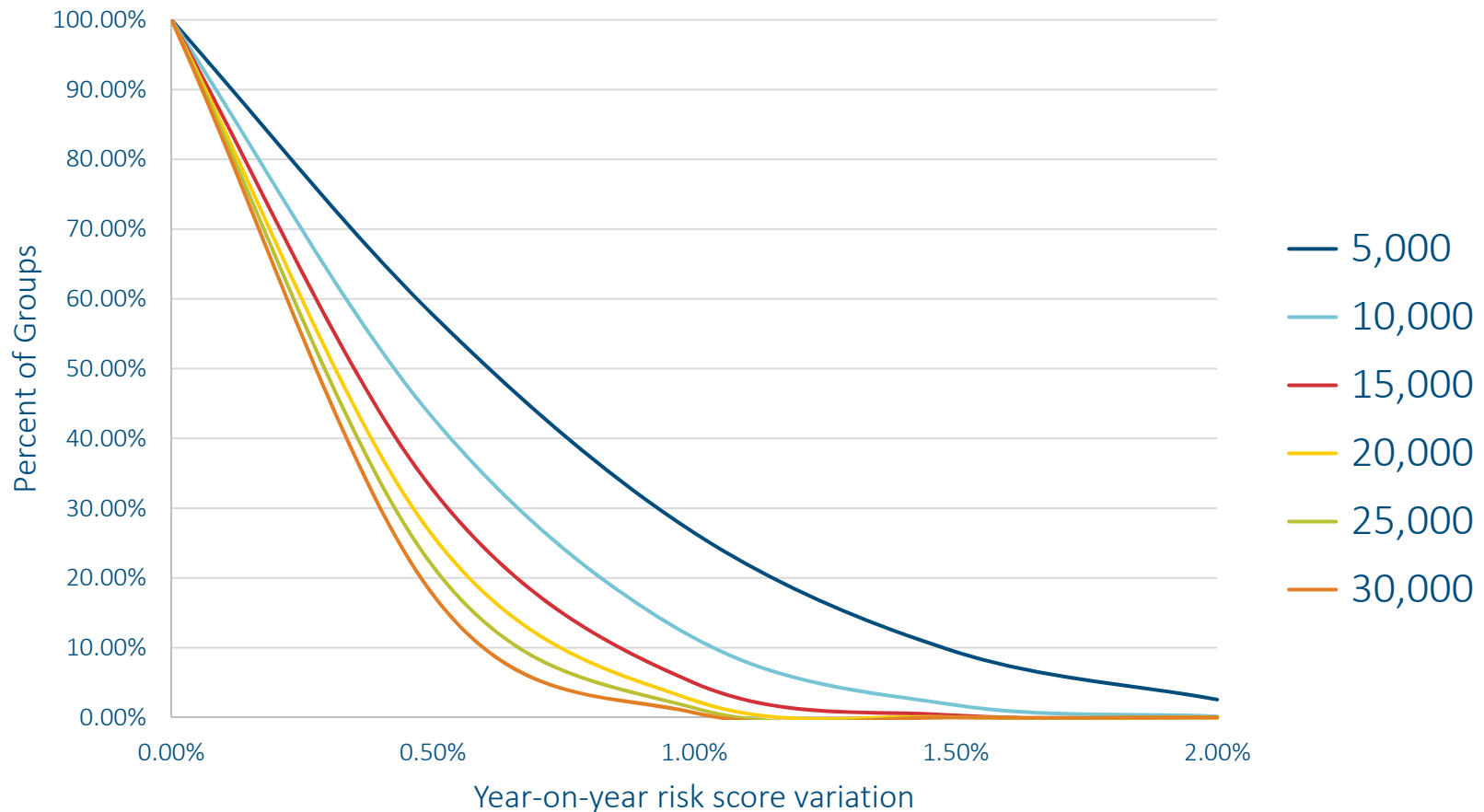
Risk Score Normalization

- The process of risk score normalization essentially accounts for national trends in coding improvement or changes.

$$\textit{Adjustment} = \frac{(\textit{Morbidity Adjustment})}{(\textit{National FFS RS Trend})}$$

- The challenge is that these factors have meaningful variation year-on-year and are not known until after the performance year, leading to variation in the final benchmark.

Year-on-year variation in average risk score for enrollees



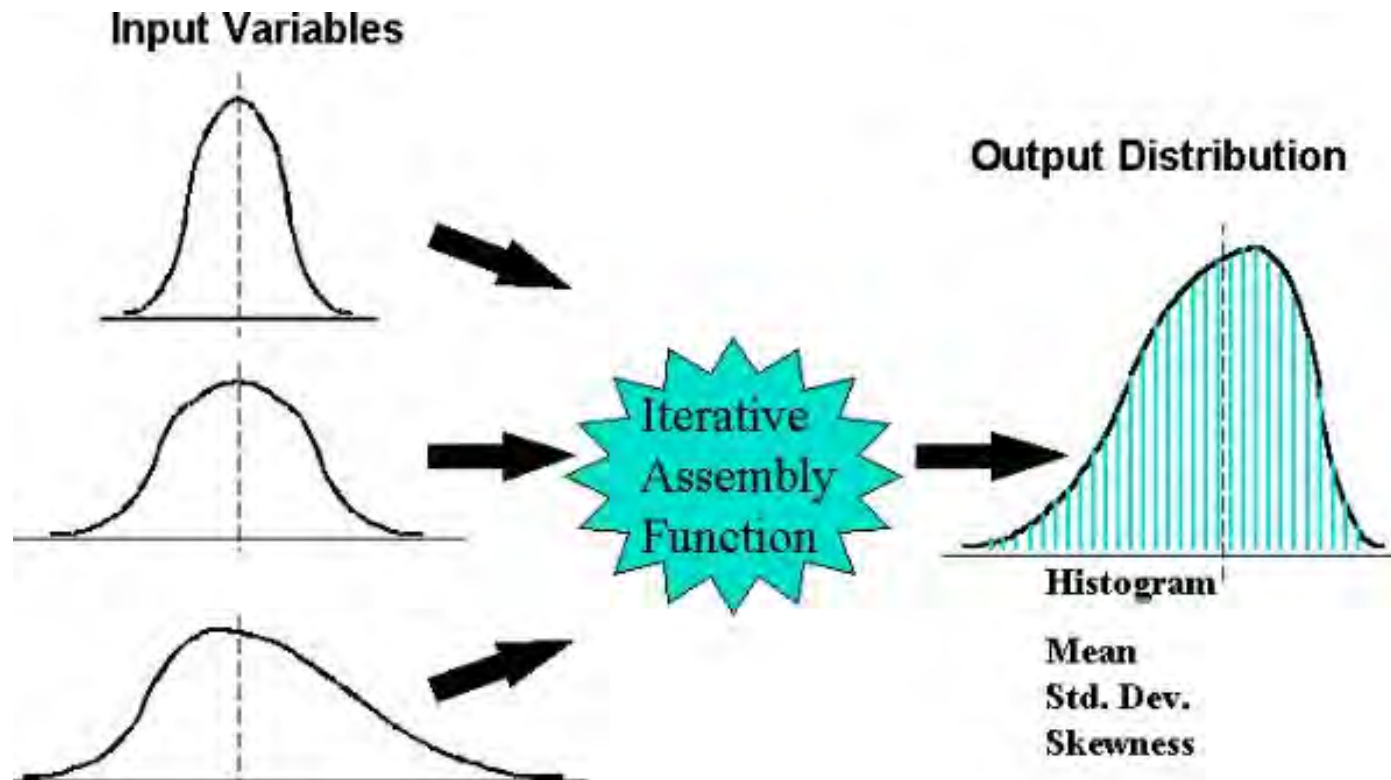
Challenges with rebasing

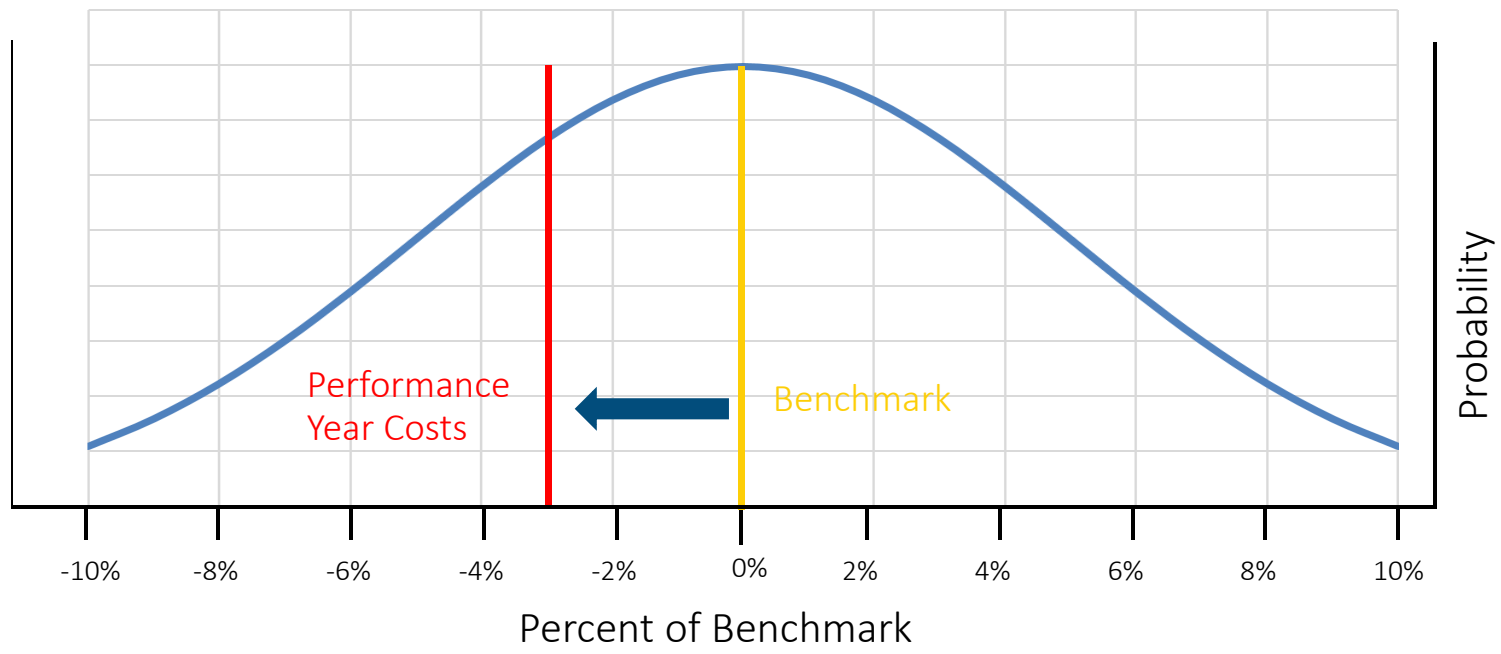
- Competing against past success
- Regional issues
- Risk adjustment issues

Data Sources and analytic techniques

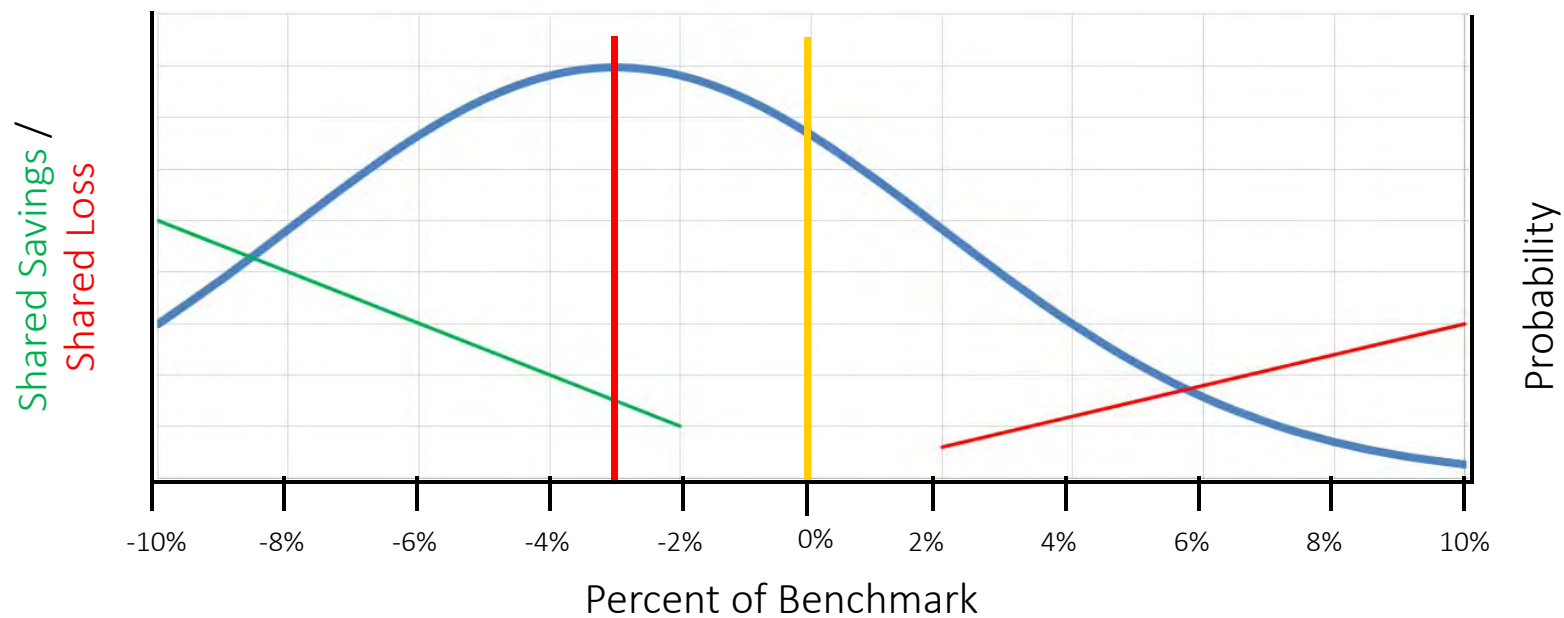
- CCLF Data
- QRUR Data
- Medicare 5% data
- Commercial Claims data
- EHR Data

Stochastic modeling of outcomes





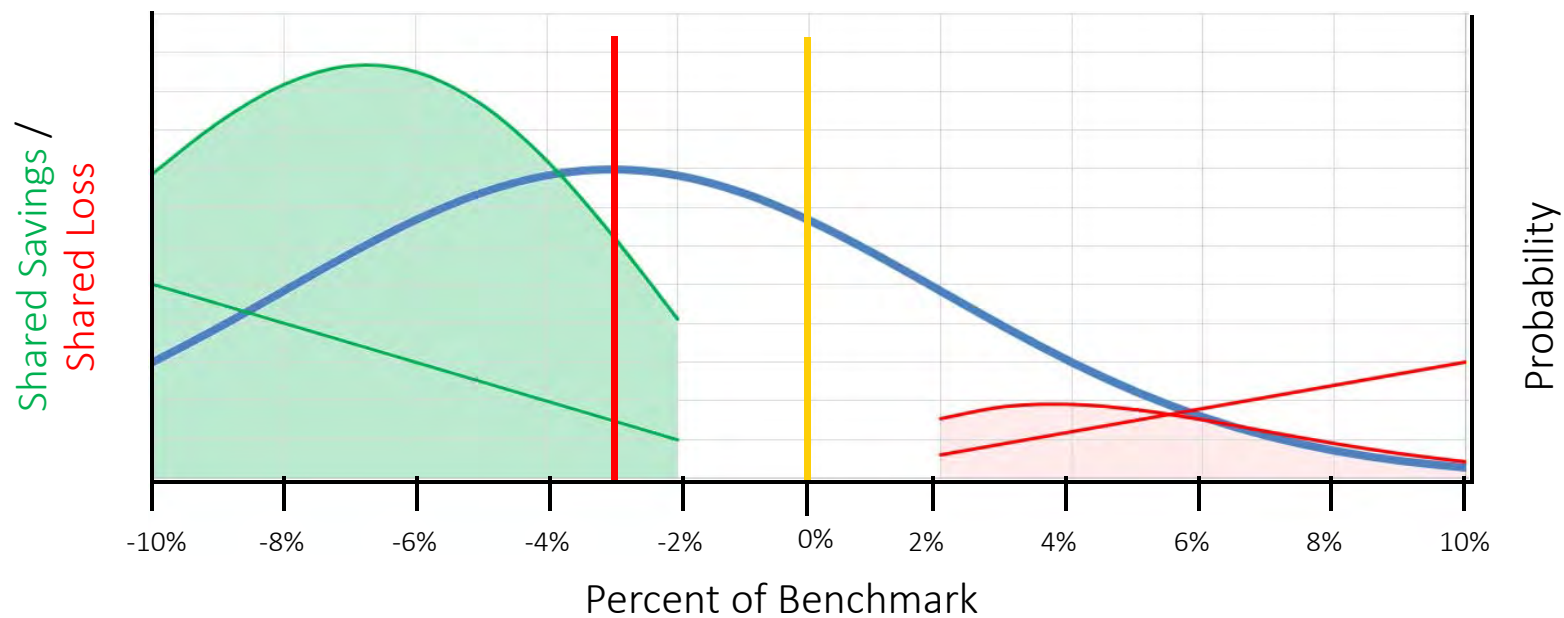
- What track do you choose?
- What corridors do you choose (if applicable)?



- What track do you choose?
- What corridors do you choose? *(if applicable)*

Indirect variables that influence shared savings

- Size of the aligned population
- Benchmark
- Trend
- Risk Adjustment



- What track do you choose?
- What corridors do you choose? *(if applicable)*

Indirect variables that influence shared savings

- Size of the aligned population
- Benchmark
- Trend
- Risk Adjustment