

Session 33PD, Key Medicaid Experience Analytics: From Data to Action

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2018 SOA Health Meeting

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Introductions

- Dave Neiman, FSA, MAAA – Wakely Consulting Group
 - Principal & Sr. Consulting Actuary
 - Health Plan Consulting Focus: Analytics & Rate Negotiations 10+ States
- Taylor Pruisner, FSA, MAAA – Wakely Consulting Group
 - Sr. Consulting Actuary
 - Health Plan Association Consulting Focus: Analytics & Rate Negotiations 15+ States
- Henry Burden, ASA, MAAA – Commonwealth Care Alliance
 - Vice President, Actuarial Services
 - Health Plan Focus: Analytics & Rate Negotiations
- Tom Garrity, ASA, MAAA – Wakely Consulting Group
 - Consulting Actuary
 - Health Plan & State Consulting Focus: Analytics & Rate Negotiations
- Zach Aters, ASA, MAAA – Optumas
 - Lead Actuary
 - State Rate Setting Focus: Certifies Capitation Rates Four States

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Social Q&A

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**Poll: How much of your time is dedicated
to support Medicaid financial
management?**

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**Poll: If you know Medicaid in one State,
you know Medicaid in one state – what is
your exposure by count of States?**

Audience Question #1

How much of your time is dedicated to support Medicaid financial management?

- A. My focus is elsewhere (0%)
- B. I get my hands dirty (<25%)
- C. It is a focus but not my main squeeze (25% - 50%)
- D. I can't get enough of it (50% - 75%)
- E. There are other lines of business? (75%+)

Audience Question #2

If you know Medicaid in one State, you know Medicaid in one state – what is your exposure by count of States?

- A. Medicaid is new to me (0)
- B. One state is my jam (1)
- C. I dabble across state lines (2 - 5)
- D. Know enough to be dangerous (6 – 10)
- E. I think I have seen it all but know better (11+)

Strategic Medicaid Analytics Session Goals

The session will explore optimal Medicaid data management development and specific analytics to support the spectrum of Medicaid managed care financial management: reporting, forecasting and rate negotiations.

The emphasis will be on how to be prepared to answer the what happened and why it happened to inform the key questions around will it continue and how do we address it strategically.

Actual case studies will highlight success stories that supported operational and rate negotiation strategies.

The session is intended for Medicaid managed care actuaries working to develop comprehensive data management and analytics for financial management functions to support strategy development.

Strategic Medicaid Analytics

- Definition: use of Medicaid data to evaluate key past and future experience drivers and inform decision making
- Goal: answer key business questions
 - What happened?
 - Why did it happen?
 - What could happen next?
- Process: use claims and enrollment data to develop concise models
 - Ideally, models will have the ability to analyze more detailed drivers as appropriate

Strategic Medicaid Analytics

- Step 1: What happened?
 - Historical loss ratio by eligibility category, region, etc.
 - Identify key drivers of favorable/unfavorable experience
 - Evaluation of programmatic costs and trends
 - Compare to rate setting assumptions
 - Unit cost and utilization/intensity components of trend
 - Specific services driving costs? Specific providers?
 - Evaluation of administrative costs and trends

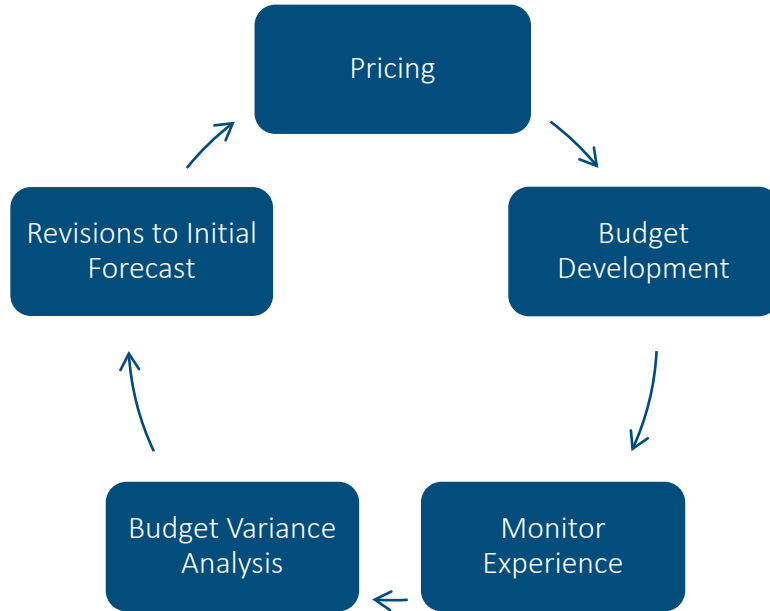
Strategic Medicaid Analytics

- Step 2: Why did it happen?
 - Critical to identify what changes may help address underlying issues
 - Rate setting assumptions vs experience
 - Which eligibility categories contributed to favorable/unfavorable results?
 - Which categories of service?
 - Impact of member duration
 - Longitudinal comparison of care management efficiencies
 - IP readmissions, ER efficiency stratification, generic dispensing, etc.
 - Have efficiencies changed over time? How do efficiency changes compare to rate setting assumptions?
 - Population and Risk score analytics
 - Identify changes in population risk or demographic profile
 - Is member turnover impacting population risk/cost? How to “joiners” compare to “stayers” and “leavers”?
 - Impact of large claims
 - Are these driven by recent high-cost drugs? Were these drugs considered in rate setting?
 - Evaluate impact of potential changes to reinsurance contracts

Strategic Medicaid Analytics

- Step 3: What could happen next?
 - Monitor emerging experience
 - Including analysis of emerging costs for new populations, benefits, high-cost emerging drugs, etc.
 - Evaluate “actual-to-expected” results
 - Comparison of observed costs to those assumed in rate setting
 - Perform at detailed enough level to identify specific drivers
 - May raise material deviations from rate setting expectations with state
 - Maintain organizational flexibility to address areas of deficiency
 - E.g., address contracting issues with targeted providers, changes to prior authorization criteria, etc.
 - Forecasting
 - What changes in financial performance are expected based on known changes to rates, population risk, contracting, etc.?
 - What risks exist that may impact profitability?

Financial Management Cycle

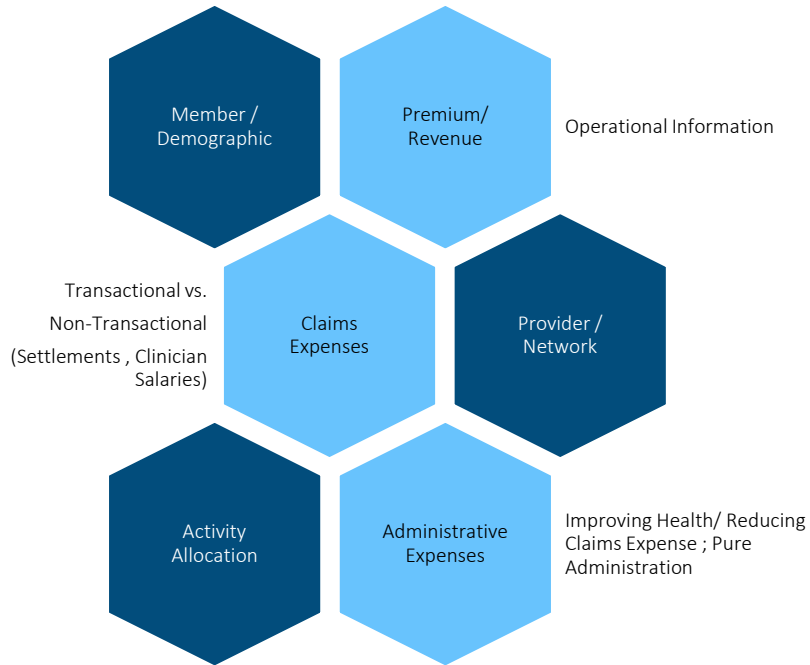


- Process is reliant on:
 - Quality control of data and report development process
 - Regular monitoring of emerging results
 - Identification of key drivers
- Communication with state on programmatic variances may:
 - Identify need for mid-year or retroactive rate adjustments
 - Help inform future rate setting periods

Keys to Ensuring Adequate Rates (plan perspective)

- Validation of underlying data
- Thorough review of rate setting assumptions, and comparison to Association/plan experience
 - Accurate models and data summaries are key to this comparison
 - Review emerging experience, especially around new benefits, populations, and recently approved drugs
- Communication with state and rate setting actuary
 - Provide timely feedback
 - Maintain collaborative/constructive environment

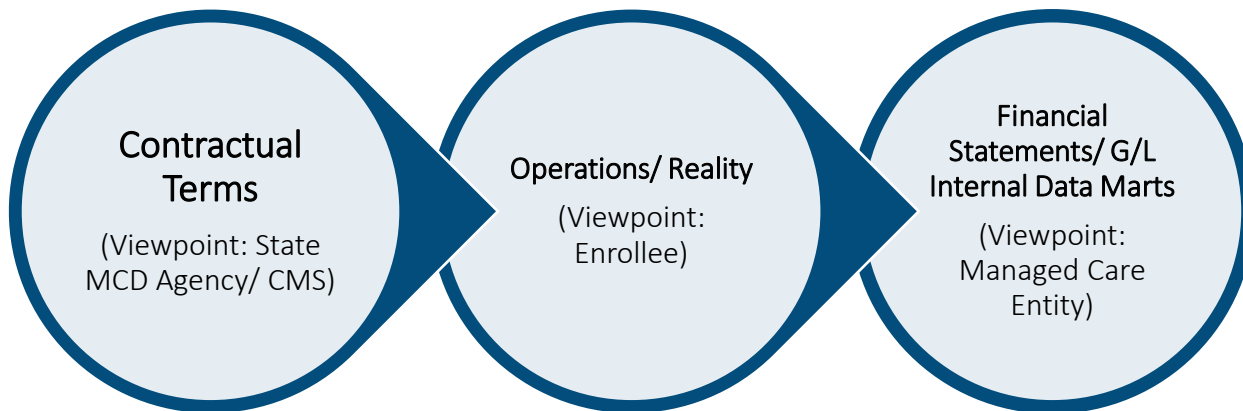
There are various types of data to consider...



Key considerations when preparing to build your data mart:

- Inventory data subject areas
 - Lift vs Impact
- Assess quality
 - Validation (*looks right @ high level*)
 - Reconciliation (*what's in vs. out*)
 - G/L vs Data Mart
 - Data Mart vs Filed Reports

There are differing perspectives related to Medicaid coverage/experience to consider when using your data mart for rate negotiations.



Premium rate negotiations are conversations and require alignment of perspectives

- Member Rate Cells/Risk Classification
 - Understand classification scheme used by State's actuary for premium projection.
 - Determine if there are any disconnects either through contractual terms or operational performance.
 - Contractual terms should be closely aligned with classification scheme used in rating methodology.
 - Plan underperforming operationally is not a basis for rate increases (e.g., member assessment completion, encounter reporting)
- Claims Expenses
 - Understand claims expense classification system used by State's actuary and replicate in data mart as much as possible
 - Understand claims expense frequency counting methodology used by State's actuary and replicate in data mart
- Generally
 - You want to use your data mart to serve as a comparator to the State's actuary's data mart/book across multiple dimension.
 - You need to understand the drivers of observable differences and determine if rate action is warranted.

Case Studies

- Stayer / Leaver / Joiner Analytics
 - Member Churn Impact
 - Pent Up Demand / Duration
- Risk Adjustment Analytics
 - Coding Persistency
 - Market Prevalence

Case Study 1: Member Churn Attribution Logic

- Key Considerations
 - Continuous Enrollment?
 - Enrollment during a calendar year?
 - Rate Cell or Cohort Level?
 - Migration across Rate Cells or Cohorts?
- Enrollment Metrics
 - Map members by enrollment months into quartiles or no enrollment
 - Greater than 9 months → Full Year
 - Between 7 and 9 months → Three Quarters
 - Between 4 and 6 months → Two Quarters
 - Between 1 and 3 months → One Quarter
 - Zero → No Enrollment
 - Determine enrollment to qualify for stayer / leaver / joiner

Case Study 1: Member Churn Attribution Logic Example

Months of Enrollment			
<u>Year 1</u>	<u>Year 2</u>	<u>ID Y1 / Y2</u>	<u>Attribution</u>
Over 9	Over 9	F / F	Stayer
Over 9	7 - 9	F / 3Q	Stayer
Over 9	4 - 6	F / 2Q	Stayer
Over 9	1 - 3	F / 1Q	Leaver
Over 9	0	F / N	Leaver
7 - 9	Over 9	3Q / F	Stayer
7 - 9	7 - 9	3Q / 3Q	Stayer
7 - 9	4 - 6	3Q / 2Q	Stayer
7 - 9	1 - 3	3Q / 1Q	Leaver
7 - 9	0	3Q / N	Leaver
4 - 6	Over 9	2Q / F	Stayer
4 - 6	7 - 9	2Q / 3Q	Stayer
4 - 6	4 - 6	2Q / 2Q	Stayer
4 - 6	1 - 3	2Q / 1Q	Leaver
4 - 6	0	2Q / N	Leaver
1 - 3	Over 9	1Q / F	Joiner
1 - 3	7 - 9	1Q / 3Q	Joiner
1 - 3	4 - 6	1Q / 2Q	Joiner
1 - 3	1 - 3	1Q / 1Q	NA
1 - 3	0	1Q / N	NA
0	Over 9	N / F	Joiner
0	7 - 9	N / 3Q	Joiner
0	4 - 6	N / 2Q	Joiner
0	1 - 3	N / 1Q	NA
0	0	N / N	NA

Case Study 1: Member Churn Impact Analysis

- Key Drivers of Member Churn
 - State Redetermination
 - Economic Changes
 - MCO Market changes
 - State policy changes
- Key Analytic Considerations
 - Concurrent risk scores or claim costs?
 - What is the nominal trend?
 - Isolate turnover – joiners vs leavers – from potential stayer trends
 - Consider turnover mix change

Case Study 1: Member Churn Impact Analysis Example

Cohort	Member Mix		Risk Score Normalized to Year 1		
	Year 1	Year 2	Year 1	Year 2	Change
Stayer	53.7%	57.4%	1.182	1.237	4.6%
Leaver	42.5%	1.9%	0.795	0.653	-17.9%
Joiner	1.7%	37.7%	0.678	1.030	51.9%
NA	2.1%	3.0%	0.754	0.782	3.8%
Total	100.0%	100.0%	1.000	1.134	13.4%

- Is the member churn impact simply $(1+13.4\%) / (1+4.6\%) - 1$ or 8.4%?
- How much does change in Stayer member mix impact total change?
- Is the demographic mix of rate cell changing due to churn?
- What would we expect in a steady state environment?
- How should migration between rate cells be considered?
- How does duration or pent-up demand impact results?
- Is this best analyzed as a multi-year model to include durational impact estimates?

Case Study 1: Rate Negotiation Considerations

- In states with known redetermination or significant population changes, this analysis must be completed.
- Critical to discuss “trend drivers” or ensure population morbidity changes are considered separate from nominal utilization or unit cost trend.
- Using historical experience to estimate potential impact on future payment supports conversations with state actuaries.
- Be prepared to discuss why historical patterns are likely to continue.
- Understand the external resources available to support analysis:
 - Other states that include rate adjustment for duration or membership turnover (Oregon)
 - Prior SOA presentation: <https://www.soa.org/Files/e-business/pd/events/2017/health-meeting/pd-2017-06-health-session-127.pdf>
 - Avalare Medicaid Expansion Study: <http://go.avalare.com/acton/attachment/12909/f-0517/1/-/-/-/-/Avalare%20Medicaid%20Expansion%20Analysis.pdf>

Case Study 2: Coding Persistency

Diagnostic Category and Condition Description	# of Members				Condition Persistency
	Base Year		Stay Year		
	Active Base	Termed	Active Any	Stay Condition	

Cancer

Cancer, very high	2,161	851	1,310	849	65%
Cancer, high	4,882	936	3,946	2,121	54%
Cancer, medium	2,090	369	1,721	757	44%
Malignancies	4,198	633	3,565	2,329	65%
Cancer, low	6,125	895	5,230	2,602	50%

Cardiovascular

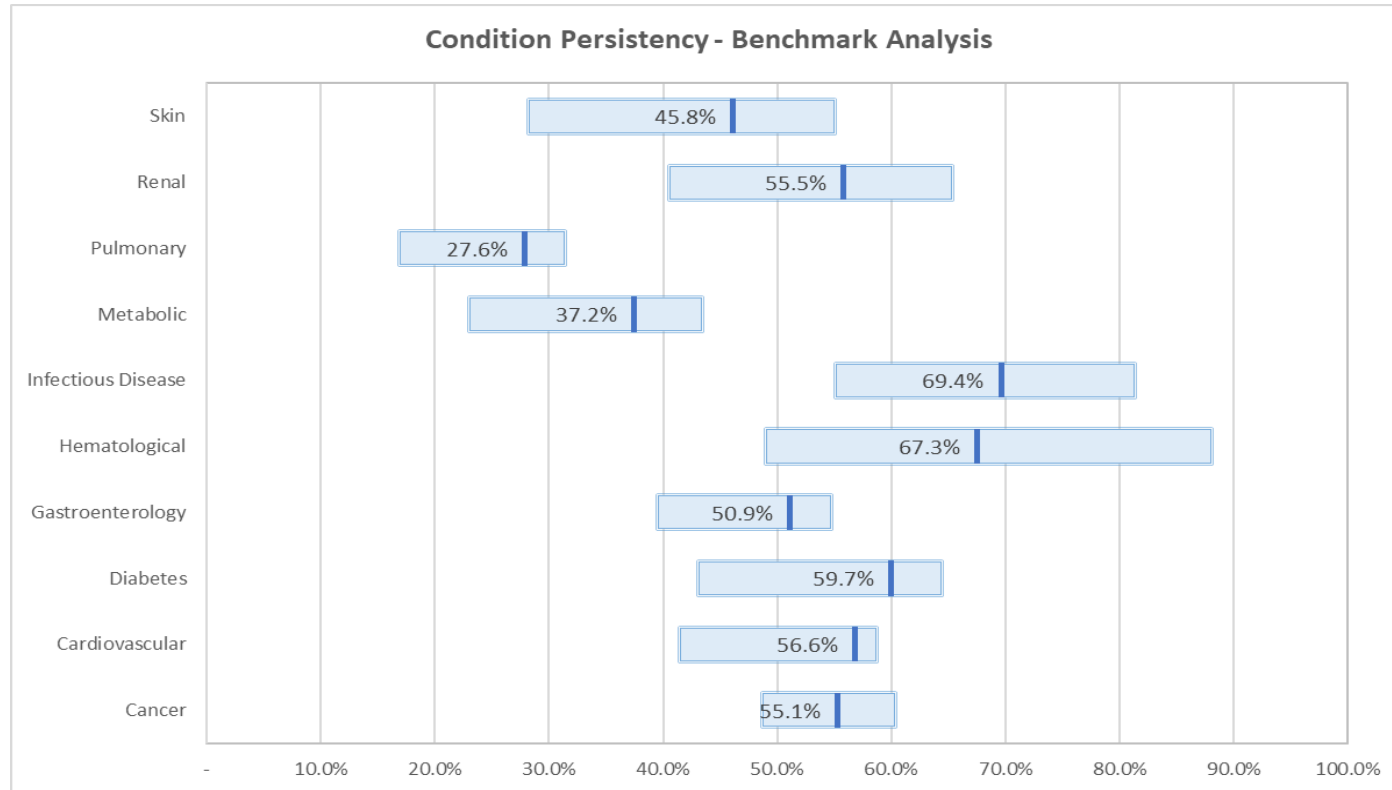
Cardiovascular, very high	1,485	294	1,191	368	31%
Cardiovascular, medium	18,694	3,298	15,396	8,356	54%
Anti-coagulants	6,051	957	5,094	2,353	46%
Cardiovascular, low	48,580	6,932	41,648	14,908	36%
Cardiovascular, extra low	83,680	10,913	72,767	42,171	58%
Cardiac	55,699	8,675	47,024	22,118	47%

- Based on CDPS+Rx Model
- Limited to members enrolled in two subsequent calendar years
- Persistency reflects members with condition identified in both years.
- Opportunities for Coding Improvement

Case Study 2: Coding Persistency Movement Analysis

Base Year		Stay Year # of Members						
CDPS Description	# of Members	<i>Cancer, very high</i>	<i>Cancer, high</i>	<i>Cancer, medium</i>	<i>Malignancies</i>	<i>Cancer, low</i>	Dropped from Group	Member Termed
<i>Cancer, very high</i>	2,161	849	116	55	13	55	222	851
<i>Cancer, high</i>	4,882	235	2,121	205	114	228	1,043	936
<i>Cancer, medium</i>	2,090	73	96	757	17	96	682	369
<i>Malignancies</i>	4,198	26	56	22	2,329	85	1,047	633
<i>Cancer, low</i>	6,125	107	114	71	86	2,602	2,250	895
New to Diagnostic Category		662	1,706	817	1,237	2,403		
New Member		568	1,051	401	894	1,239		
Total Members in Stay Year		2,520	5,260	2,328	4,690	6,708		

Case Study 2: Benchmark Analysis



Case Study 2: Considerations

- Work with clinical experts to separate diagnostic condition categories between chronic and acute.
- Utilize results to understand potential diagnosis documentation gaps or provider education opportunities.
- Consider state eligibility requirements and risk score procedures to prioritize documentation improvements (i.e., prioritize members most likely to be enrolled during payment year).
- In states that allow supplemental diagnosis files, consider tactics to improve documentation submissions (e.g., chart reviews).
- If tactics are implemented, track improvement of diagnosis recapture rate over time to measure potential revenue increases and program value.
- Repurpose output to line up plan specific prevalence to state published reports.

Data Considerations

- Data Validation is key in mitigating projection error and misinterpretation
- Key Steps in Data Validation
 - Use multiple sources of data so that they can be benchmarked to each other
 - Conduct longitudinal analyses to ensure that there is no missing or duplicative data
 - Check for valid values within the detailed data extracts
 - Identify gaps in the data and determine if they can be filled or identify the limitations of the analysis that are the result of the gaps within the data
- ASOP 23 Data Quality - Data that are completely accurate, appropriate, and comprehensive are frequently not available. The actuary should use available data that, in the actuary's professional judgment, allow the actuary to perform the desired analysis. However, if material data limitations are known to the actuary, the actuary should disclose those limitations and their implications.

Examples of Misleading Data

- Experience data incurred by a population that is not mature (low duration)
 - Expansion population from CY2014 through CY2015 should be carefully reviewed for durational impacts before using it for actuarial analyses
 - Low duration members will have lower PMPMs as it takes time for the member to learn their benefits
 - Disproportionate share of low durational members may cause a temporary low PMPM that could lead to projection error if not adjusted
- Experience data that is incurred by a population that has had an unanticipated change in risk
 - States that have underwent a redetermination effort for their ACA population have seen increases in the PMPM due to the non-utilizers being the primary members impacted by redetermination efforts
 - It is important for the Actuary to understand the timing of such policy decisions and adjust data appropriately.
 - An example would be if using base data that has not been impacted by redetermination to project into a time period in which redetermination has occurred, the resulting PMPM will be too low if not adjusted for the shift in risk due to the healthier members leaving. Discuss actual examples.

Discussion