

2016 SOA
**Health
Meeting**

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**Session 34 PD, The ACA, Transitional Relief, and Group Migration
Modeling**

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2016 SOA Health Meeting

Tony Piscione, FSA, MAAA
The ACA, Transitional Relief and Group Migration Modeling
June 15, 2016



ACA Transitional Relief

- Issue Overview
- Why does this matter
- Group Options
- Carrier Considerations

Issue Overview

- Migration of business to ACA
- Impacts Small Groups
- CMS allows transition delay to 1/1/18
- States may adopt relief provision
- States can end relief sooner than 1/1/18
- Carriers can choose not to participate

Why Does This Matter

- Groups will experience premium disruption
- Groups will have options
- Groups will be looking for solutions
- Carriers will need to make decisions

Group Options

- Move to ACA early
- Take advantage of transitional relief
 - Could involve change in renewal date
- Move to Self-Funded (e.g., level funding)
- “Move” to Large Group
- Drop coverage

Carrier Considerations

- Competition
 - ACA versus Legacy
- Profitability
 - ACA versus Legacy
- Options to offer groups
- Timing of offer to groups
- Alternative options to retain business

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Joe Slater, FSA, MAAA
Migration Modeling
June 15, 2016



Allied Health Migration Modeling: Overview

- The following uses the results market simulation work to illustrate a 2018 migration analysis for Allied Health's transitional relief business.
- Migration modeling steps:
 - Develop 2018 Premium disruption analysis assuming all of AH's transitional business moves to AH's SG ACA block.
 - Have discussions with company leadership to inform modeling inputs including the relationship between group decision making and premium differences, desired margins, the availability of alternatives to ACA coverage, etc.
 - Run migration scenarios assuming different combinations of inputs and determine the 2018 financial impact.
 - Review results with leadership and repeat process to develop strategy.

Allied Health Migration Modeling: Basic Information

- Allied Health (not meant to be a real company) has 2,480 Small Groups with over 130,000 members that are covered under transitional relief in 2017.
- Simplifying assumptions used for Allied Health migration modeling illustration:
 - All groups are January 1 renewals.
 - All groups will obtain some sort of health coverage in 2018.
 - All 2017 transitional plan designs are coincidentally ACA compliant, therefore no need for plan mapping exercise.

Allied Health Migration Modeling: Premium Disruption Analysis

- The initial step in this migration modeling exercise is a premium disruption analysis which assumes that all of Allied Health's 2017 transitional groups migrate to one of Allied Health's ACA plans in 2018.
- Each group's members are rated assuming they maintain their 2017 health coverage in 2018, using calibrated 2018 Plan Adjusted Index rates, the CMS' age factors, and capping the number of child dependents at three.

Allied Health Migration Modeling: Premium Disruption Analysis

- Each of the groups are placed in one of ten risk score bands (i.e., 1st-10th percentile, 11th-20th percentile, ..., 91st-100th percentile) based on the group's average risk score.
- Each band contains the same number of groups (i.e., 248), but not the same number of members.
- For each risk score band the following metrics are calculated:
 - Average risk score
 - Average 2017 SG transitional premium PMPM
 - Average 2018 SG ACA premium
 - Average 2018 rate increase.

Allied Health Migration Modeling: Premium Disruption Analysis

Group Risk Score Percentile Band	Member Months	Average Risk Score	2017 Allied Health Premium PMPM	2018 Allied Health ACA Premium PMPM	Average 2018 Rate Change
1 st - 10 th	196,040	0.6012	\$281.43	\$390.99	38.9%
11 th - 20 th	187,314	0.6864	\$308.35	\$402.53	30.5%
21 st - 30 th	179,776	0.8223	\$331.89	\$408.25	23.0%
31 st - 40 th	165,255	0.9132	\$381.39	\$453.87	19.0%
41 st - 50 th	168,315	0.9759	\$416.88	\$463.05	11.1%
51 st - 60 th	159,277	1.0234	\$441.72	\$474.51	7.4%
61 st - 70 th	149,969	1.1351	\$497.25	\$494.66	-0.5%
71 st - 80 th	143,330	1.1704	\$513.27	\$503.96	-1.8%
81 st - 90 th	130,526	1.2498	\$527.62	\$511.33	-3.1%
91 st - 100 th	109,548	1.3164	\$548.35	\$523.41	-4.5%
All	1,589,350	0.9550	\$411.00	\$455.82	10.9%

Allied Health Migration Modeling: Executive Team Input

- Before modeling migration scenarios, Allied Health's actuaries met with the company's executive team (i.e., the CEO, Sales VP, UW VP, CFO, etc.) to incorporate their thoughts and guidance into the modeling.
- Types of issues discussed with executive team:
 - Desired margins on Small Group ACA business.
 - Availability of a Level-Funding (i.e., SG self-funded) product, expected expense costs, and desired margins.
 - Expected 2018 Admin and Commission expenses.
 - Availability of Large Group alternatives (e.g., PEOs, more FTEs).
 - The expected relationship between premium differentials and group choices.

Allied Health Migration Modeling: Executive Team Input

- Allied Health's executive team requested that the actuaries start the 2018 migration modeling work with two scenarios:
 1. Allied Health will offer ACA compliant coverage only to all groups in its 2017 Small Group transitional block.
 2. Allied Health will offer ACA compliant coverage to all groups as well as a Level-Funding product to better risk groups with at least 25 subscribers in its 2017 Small Group transitional block.
- The executive team also provided detailed input on group choices based on premium differentials and pricing inputs.

Allied Health Migration Modeling: Scenario 1

- Migrating groups have two choices for coverage effective January 1, 2018:
 1. Purchase a Small Group ACA compliant plan with Allied Health.
 2. Purchase a Small Group ACA compliant plan with a competitor.
 - Assumption: ACA “Market” rates for all of Allied groups would be 2% less than Allied’s ACA rates.
- Allied Health’s actuaries developed average 2018 premium PMPMs for each of Allied’s ten risk score percentile bands for Allied and Market ACA coverage.

Allied Health Migration Modeling: Scenario 1

- Projected premiums and rate increases:

Group Risk Score Percentile	Member Months	2017 Allied Health Premium PMPM	2018 Allied Health ACA Premium PMPM	2018 Market ACA Premium PMPM	Rate Increase Allied Health ACA	Rate Increase Market ACA
1 st - 10 th	196,040	\$281.43	\$390.99	\$383.17	38.9%	36.1%
11 th - 20 th	187,314	\$308.35	\$402.53	\$394.48	30.5%	27.9%
21 st - 30 th	179,776	\$331.89	\$408.25	\$400.09	23.0%	20.5%
31 st - 40 th	165,255	\$381.39	\$453.87	\$444.79	19.0%	16.6%
41 st - 50 th	168,315	\$416.88	\$463.05	\$453.79	11.1%	8.9%
51 st - 60 th	159,277	\$441.72	\$474.51	\$465.02	7.4%	5.3%
61 st - 70 th	149,969	\$497.25	\$494.66	\$484.76	-0.5%	-2.5%
71 st - 80 th	143,330	\$513.27	\$503.96	\$493.88	-1.8%	-3.8%
81 st - 90 th	130,526	\$527.62	\$511.33	\$501.10	-3.1%	-5.0%
91 st - 100 th	109,548	\$548.35	\$523.41	\$512.94	-4.5%	-6.5%
All	1,589,350	\$411.00	\$455.82	\$446.70	10.9%	8.7%

Allied Health Migration Modeling: Scenario 1

- Allied Health’s actuaries developed the table of group migration probabilities by risk score percentile band using the following:
 - Projected Allied Health 2018 Premium PMPMs for ACA coverage
 - Projected “Market” (i.e., lowest cost competitor) 2018 Premium PMPMs for ACA coverage
 - Executive team inputs on the expected relationship between Premium differentials and group decision-making.

Allied Health Migration Modeling: Scenario 1

- Migration probabilities by risk score percentile band:

Group Risk Score Percentile	Allied Health ACA Coverage	Competitor ACA Coverage
1 st - 10 th	90.00%	10.00%
11 th - 20 th	90.00%	10.00%
21 st - 30 th	90.00%	10.00%
31 st - 40 th	95.00%	5.00%
41 st - 50 th	95.00%	5.00%
51 st - 60 th	95.00%	5.00%
61 st - 70 th	95.00%	5.00%
71 st - 80 th	95.00%	5.00%
81 st - 90 th	95.00%	5.00%
91 st - 100 th	95.00%	5.00%

- Migration probabilities are used to assign the membership in each band to one of the two 2018 choices available in Scenario 1.

Allied Health Migration Modeling: Scenario 1

- 2018 financial forecast for Allied Health's Small Group line of business:

	2017	2018	Δ
Member Months	2,390,000	2,282,376	-107,624
Average Claims PMPM	\$347.54	\$402.25	\$54.71
Average Premium PMPM	\$431.49	\$491.04	\$59.55
Average Risk Score	1.049	1.057	0.008
Net Risk Adjustment Receiv ables PMPM	\$0.85	\$2.48	\$1.63
Average Premium Post Risk Adjustment	\$432.34	\$493.52	\$61.18
Loss Ratio Post Risk Adjustment	80.4%	81.5%	1.1%
Admin, Selling, and Tax Expense PMPM	\$73.93	\$84.39	\$10.46
Operating Gain PMPM	\$10.87	\$6.88	-\$3.99
Operating Margin	2.5%	1.4%	-1.1%

Allied Health Migration Modeling: Scenario 2

- Migrating groups have three choices for coverage effective January 1, 2018:
 1. Purchase a Small Group ACA compliant plan with Allied Health.
 2. Purchase a Small Group ACA compliant plan with a competitor.
 - Assumption: ACA “Market” rates for all of Allied groups would be 2% less than Allied’s ACA rates.
 3. Purchase a Small Group ACA Level Funding plan with Allied Health.

Allied Health Migration Modeling: Scenario 2

- Projected Premiums and Rate Increases (Less than 25 subscribers):

Group Risk Score Percentile	2017 Allied Health Premium PMPM	2018 Allied Health ACA Premium PMPM	2018 Market ACA Premium PMPM	2018 Allied Health Level Funding Prem Equiv PMPM	Rate Increase Allied Health ACA	Rate Increase Market ACA	Rate Increase Allied Health LF
1 st - 10 th	\$285.66	\$394.90	\$387.00	N/A	38.2%	35.5%	N/A
11 th - 20 th	\$314.83	\$407.36	\$399.21	N/A	29.4%	26.8%	N/A
21 st - 30 th	\$339.52	\$413.56	\$405.29	N/A	21.8%	19.4%	N/A
31 st - 40 th	\$388.64	\$457.95	\$448.79	N/A	17.8%	15.5%	N/A
41 st - 50 th	\$423.96	\$466.29	\$456.96	N/A	10.0%	7.8%	N/A
51 st - 60 th	\$451.44	\$480.20	\$470.60	N/A	6.4%	4.2%	N/A
61 st - 70 th	\$510.67	\$503.07	\$493.00	N/A	-1.5%	-3.5%	N/A
71 st - 80 th	\$520.45	\$506.48	\$496.35	N/A	-2.7%	-4.6%	N/A
81 st - 90 th	\$544.50	\$522.07	\$511.63	N/A	-4.1%	-6.0%	N/A
91 st - 100 th	\$567.00	\$534.93	\$524.23	N/A	-5.7%	-7.5%	N/A
All	\$437.97	\$470.33	\$460.93	N/A	7.4%	5.2%	N/A

Allied Health Migration Modeling: Scenario 2

- Projected Premiums and Rate Increases (25 or more subscribers):

Group Risk Score Percentile	2017 Allied Health Premium PMPM	2018 Allied Health ACA Premium PMPM	2018 Market ACA Premium PMPM	2018 Allied Health Level Funding Prem Equiv PMPM	Rate Increase Allied Health ACA	Rate Increase Market ACA	Rate Increase Allied Health LF
1 st - 10 th	\$280.14	\$389.79	\$382.00	\$262.35	39.1%	36.4%	-6.4%
11 th - 20 th	\$305.06	\$400.07	\$392.07	\$327.03	31.1%	28.5%	7.2%
21 st - 30 th	\$326.53	\$404.53	\$396.44	\$387.33	23.9%	21.4%	18.6%
31 st - 40 th	\$375.55	\$450.57	\$441.56	\$438.61	20.0%	17.6%	16.8%
41 st - 50 th	\$412.61	\$461.10	\$451.87	\$477.28	11.8%	9.5%	15.7%
51 st - 60 th	\$428.94	\$467.02	\$457.68	\$507.16	8.9%	6.7%	18.2%
61 st - 70 th	\$481.57	\$484.84	\$475.14	\$577.42	0.7%	-1.3%	19.9%
71 st - 80 th	\$505.84	\$501.36	\$491.33	\$618.01	-0.9%	-2.9%	22.2%
81 st - 90 th	\$510.20	\$500.25	\$490.25	\$679.75	-1.9%	-3.9%	33.2%
91 st - 100 th	\$532.80	\$513.81	\$503.53	\$720.87	-3.6%	-5.5%	35.3%
All	\$390.81	\$444.96	\$436.06	\$458.02	13.9%	11.6%	17.2%

Allied Health Migration Modeling: Scenario 2

- Migration probabilities by group risk score percentile band (Less than 25 subscribers):

Group Risk Score Percentile	Allied Health ACA Coverage	Competitor ACA Coverage
1 st - 10 th	90.00%	10.00%
11 th - 20 th	90.00%	10.00%
21 st - 30 th	90.00%	10.00%
31 st - 40 th	92.50%	7.50%
41 st - 50 th	95.00%	5.00%
51 st - 60 th	95.00%	5.00%
61 st - 70 th	95.00%	5.00%
71 st - 80 th	95.00%	5.00%
81 st - 90 th	95.00%	5.00%
91 st - 100 th	95.00%	5.00%

Allied Health Migration Modeling: Scenario 2

- Migration probabilities by group risk score percentile band (25 or more subscribers):

Group Risk Score Percentile	Allied Health ACA Coverage	Competitor ACA Coverage	Allied Health LF Coverage
1 st - 10 th	9.00%	1.00%	90.00%
11 th - 20 th	13.50%	1.50%	85.00%
21 st - 30 th	36.00%	4.00%	60.00%
31 st - 40 th	69.38%	5.62%	25.00%
41 st - 50 th	94.05%	4.95%	1.00%
51 st - 60 th	95.00%	5.00%	0.00%
61 st - 70 th	95.00%	5.00%	0.00%
71 st - 80 th	95.00%	5.00%	0.00%
81 st - 90 th	95.00%	5.00%	0.00%
91 st - 100 th	95.00%	5.00%	0.00%

Allied Health Migration Modeling: Scenario 2

- 2018 financial forecast for Allied Health's Small Group line of business:

	2017	2018	Δ
Member Months	2,390,000	2,310,418	-79,582
Average Claims PMPM	\$347.54	\$382.54	\$35.00
Average Premium PMPM	\$431.49	\$471.37	\$39.89
Average Risk Score	1.049	1.052	0.003
Net Risk Adjustment Receiv ables PMPM	\$0.85	\$2.23	\$1.38
Average Premium Post Risk Adjustment	\$432.34	\$473.61	\$41.27
Loss Ratio Post Risk Adjustment	80.4%	80.8%	0.4%
Admin, Selling, and Tax Expense PMPM	\$73.93	\$83.06	\$9.13
Operating Gain PMPM	\$10.87	\$8.01	-\$2.86
Operating Margin	2.5%	1.7%	-0.8%

Allied Health Migration Modeling: Scenario Comparison

	2017	Scenario #1 2018	Scenario #1 Δ	Scenario #2 2018	Scenario #2 Δ
Member Months	2,390,000	2,282,376	-107,624	2,310,418	-79,582
Average Risk Score	1.049	1.057	0.008	1.052	0.003
Operating Gain PMPM	\$10.87	\$6.88	-\$3.99	\$8.01	-\$2.86
Operating Margin	2.5%	1.4%	-1.1%	1.7%	-0.8%

- In both scenarios, Allied Health's total Small Group membership decreases slightly as some groups are expected to purchase ACA coverage with a competing carrier.
- The average risk score goes up in both scenarios.
- While the Operating Gain PMPM decreases in both scenarios, it decreases by a lower amount when the Level Funding product is available.

Allied Health Migration Modeling: Additional Modeling Scenarios

- Based on the migration modeling results of the first two scenarios, Allied Health’s executive team requests that the actuaries run several more scenarios which include different combinations of the following:
 1. Offer Level Funding to groups with 25 or more subscribers, but price it with higher margin.
 2. Offer Level Funding to groups with ten or more subscribers with and without higher margins.
 3. Offer Small Group ACA at lower (to retain more groups) and at higher margins (to offset margin compression).
 4. Assume that the Level Funding product will attract a certain percentage of other carriers’ better risk SG transitional relief business.
 5. Assume “Market” rate is 5%, 10%, and 15% lower than Allied Health’s 2018 premiums.

Allied Health Migration Modeling: Summary and Suggestions

- The analysis shown is very simple.
- Actual modeling should be much more detailed and should make allowances for many complex realities.
- The basic modeling steps outlined in this presentation should provide an idea of how a modeling exercise like this might be done, but yours will be different.
- Start modeling process early (e.g., 2016 for 2018 migration).
- Make the modeling work a collaborative effort: get buy-in from business leaders, other departments, and other actuaries.
- Have a broad and diverse group of people reviewing the model's inputs and/or mechanics.

2016 SOA Health Meeting

Josh Strupcewski, ASA, MAAA
Market Simulation Modeling
June 15, 2016



Market Simulation Modeling: Why We Simulated a Small Group Market

- We needed group, carrier, and market specific information for an illustrative transitional relief migration analysis.
- We first considered asking one of our clients if we could use their data, but decided that wouldn't be practical.
- We decided instead to simulate our own data for the migration analysis. Not a perfect solution, but the best available.

Market Simulation Modeling: Simulation Inputs

- Market Inputs:
 - Three carriers
 - 5,000,000 members months (approximately 417k members)
 - Claim cost trends
 - Area and Industry Cost Relativities (i.e., factors)
- Carrier inputs:
 - Discounts
 - Healthcare Management Indices
 - Benefit Indices (i.e., Paid-to-Ratios)
 - Loss Ratios
 - Margins

Market Simulation Modeling: Items Simulated

- Group Items Simulated:
 - Group Size
 - Group Plan Offerings
 - Group Rating Area and Industry Code
- Subscriber Items Simulated:
 - DOB and Gender
 - Contract Tier (EE, EE+SP/CH, EE+Family)
 - Plan Selection
 - Risk Score
- Dependent Items Simulated:
 - DOB and Gender
 - Risk Score

Market Simulation Modeling: Simulation Miscellanea

- Items Calculated (for 2013, 2017, and 2018):
 - Claims Costs
 - Premiums
- Simulation Simplifying Assumptions:
 - All groups are January 1 Renewals.
 - Groups only migrate to ACA in January 2014 or January 2018.
 - No groups or members leave or enter the market between 2013 and 2018.
 - Carriers do not rate for Tobacco Use.
- Modeling Decisions:
 - We split each carrier's pre-ACA business into ACA and transitional blocks for 2014 based on premium rates available (but decision was not 100% economic).

Market Simulation Modeling: Simulation Results 2013

- Market share:

Carrier	Member Months	Market Share
Allied Health	2,390,000	47.8%
Better Lives	1,958,655	39.2%
Care Sync	651,345	13.0%
Total Market	5,000,000	100.0%

- Carrier financial metrics:

Carrier	Average Claims PMPM	Average Premium PMPM	Average Loss Ratio	Average Expense and Tax Ratio	Average Operating Margin
Allied Health	\$254.00	\$315.62	80.5%	17.4%	2.1%
Better Lives	\$240.34	\$304.15	79.0%	16.9%	4.1%
Care Sync	\$232.86	\$297.60	78.2%	16.8%	5.0%
Total Market	\$245.89	\$308.78	79.6%	17.1%	3.2%

Market Simulation Modeling: Simulation Results 2017 ACA

- Market share:

Carrier	Member Months	Market Share
Allied Health	800,650	58.8%
Better Lives	450,491	33.1%
Care Sync	110,729	8.1%
Total Market	1,361,870	100.0%

- Carrier financial metrics:

Carrier	Average Claims PMPM	Average Premium PMPM	Average Loss Ratio	Average Expense and Tax Ratio	Average Margin
Allied Health	\$400.52	\$474.70	84.4%	17.1%	-1.5%
Better Lives	\$384.99	\$458.98	83.9%	16.3%	-0.2%
Care Sync	\$379.03	\$452.02	83.9%	16.6%	-0.5%
Total Market	\$393.63	\$467.66	84.2%	16.8%	-1.0%

Market Simulation Modeling: Simulation Results 2017 Transitional

- Market share:

Carrier	Member Months	Market Share
Allied Health	1,589,350	43.7%
Better Lives	1,508,164	41.5%
Care Sync	540,616	14.9%
Total Market	3,638,130	100.0%

- Carrier financial metrics:

Carrier	Average Claims PMPM	Average Premium PMPM	Average Loss Ratio	Average Expense and Tax Ratio	Average Margin
Allied Health	\$320.85	\$411.00	78.1%	17.1%	4.8%
Better Lives	\$318.58	\$403.00	79.1%	16.3%	4.6%
Care Sync	\$314.61	\$398.00	79.0%	16.6%	4.4%
Total Market	\$318.98	\$401.20	79.5%	16.4%	4.5%

Market Simulation Modeling: Simulation Results 2017 All SG

- Market share:

Carrier	Member Months	Market Share
Allied Health	2,390,000	47.8%
Better Lives	1,958,655	39.2%
Care Sync	651,345	13.0%
Total Market	5,000,000	100.0%

- Carrier financial metrics:

Carrier	Average Claims PMPM	Average Premium PMPM	Average Loss Ratio	Average Expense and Tax Ratio	Average Margin
Allied Health	\$347.54	\$432.34	80.4%	17.1%	2.5%
Better Lives	\$333.85	\$415.88	80.3%	16.3%	3.4%
Care Sync	\$325.56	\$407.18	80.0%	16.6%	3.4%
Total Market	\$339.31	\$422.61	80.3%	16.7%	3.0%