

Plan Management Navigator

Analytics for Health Plan Administration



Douglas Sherlock, CFA
sherlock@sherlockco.com

Christopher de Garay
cgaray@sherlockco.com

Erin Ottolini
erin.ottolini@sherlockco.com

John Park, CFA
jpark@sherlockco.com

Andrew L. Sherlock
asherlock@sherlockco.com

(215) 628-2289

APPLES TO APPLES, OR HOW WE ELIMINATE MIX DISTORTIONS

In any sort of health plan comparison, it is important to exclude cost differences stemming solely from differences in products offered. This is true not only in cases in which different health plans are being compared but also when a single plan’s product mix differs from year to year. This *Plan Management Navigator* discusses the elimination of product mix differences in both of these analytical contexts.

We address this article to both participants and to other non-participating licensees of the Sherlock Benchmarks. We receive questions bearing on this often enough to consider it important to discuss in the broadest possible forum. After all, most Americans are served by insurance carriers that use the *Sherlock Benchmarks*.

Mix Matters

Figure 1 shows the median per member per month administrative costs for each of the products offered by Blue Cross Blue Shield plans and Independent / Provider – Sponsored plans. These values were published in our *Plan Management Navigator* in June and July of 2018 and excerpt from the *Sherlock Benchmarks*, costs differ quite a bit in aggregate (Comprehensive Total) but much less product by product. While there is a one-third difference in comprehensive costs, product costs themselves are much closer together. For instance, there is only a 4% difference between the two universe’s administrative costs for HMO insured products.¹

Accordingly, much the difference in administrative costs of total comprehensive products stems from differences in product mix. Since ASO products cost less than similar insured products and Medicare Advantage costs much more, a difference in mix affects the totals. These product cost differences are reported to us by the plans themselves, based on resource consumption. (We validate their reported results.) Drivers of costs that differ from product to product include volumes of claims, member services inquiries, enrollment transactions and so forth.

¹ This is slightly more complex in application. The practical complexities stem from our use of medians, the fact that sub-function reporting may be incomplete and that not all organizations report all products. A full discussion of this complexity and how we resolve it is beyond the scope of this *Navigator*. Please feel free to call us with any questions.

Figure 1. Apples to Apples
Independent/Provider-Sponsored and Blue Cross Blue Shield Product Costs
Median Per Member Per Month

	Commercial Products														
	HMO		POS		Indemnity & PPO		Total	Medicare		Medicare		Medicaid	Compre.		
	Insured	ASO/ASC	Insured	ASO/ASC	Insured	ASO/ASC	ASO/ASC	FEP	Supplement	Advantage	SNP	Cost	HMO	Chip	Total
Blue Cross Blue Shield	\$48.87	\$24.51	\$45.13	\$24.14	\$43.85	\$26.70		\$23.63	\$33.29	\$98.76			\$43.22		\$34.99
Independent/Provider-Sponsored	\$46.95		\$43.10		\$49.67		\$21.68	\$54.35	\$84.73	\$146.97	\$57.71	\$26.34	\$26.24	\$38.35	

The first row in Figure 2 illustrates that the overall cost of a company's ("Plan A's") services to its members can be expressed as its total costs divided by its total membership. The third row, which represents the weighted average of the cost values for each of the products, calculates to the same result. Calculated either way, Plan A's administrative expenses PMPM for all its comprehensive products is \$38.73.

Note that if we change the mix to increase Medicare Advantage mix by five percentage points of the product portfolio and decrease POS ASO by five percentage points, the overall PMPM costs would be \$42.70 or 10.2% higher.

Incidentally, the calculation advantage of weighting is the concept behind our *Sherlock Benchmark Calculator*, available on our website, <https://sherlockco.com/test-drive/>. To compare your health plan's results to your peers, you don't need to know your own product costs, just your product mix: based on your mix and our calculations of industry norms, we calculate your expected total costs. If you supply your own administrative costs, then the application can inform you of your variance from those expected costs.

Calculating a Comparison to Your Universe

Suppose a health plan, Plan A, represented in Figure 2 using the initial product mix, is considered similar to a Blue Cross Blue Shield Plan. Its general product focus is similar, its size is similar, its organization type is similar and so forth. By weighting the Blue Cross Blue Shield PMPM cost values from Figure 1 by the Figure 2 Plan A original product mix, we have eliminated the effect of product mix differences from comparisons between the plan and the Blue universe. This is shown in Figure 3.

Figure 2. Apples to Apples
Hypothetical ("Plan A") Product Costs
Median Per Member Per Month

	Commercial Products										
	HMO		POS		Indemnity & PPO		Medicare FEP	Medicare Supplement	Medicare Advantage	Medicaid HMO	Compre. Total
	Insured	ASO/ASC	Insured	ASO/ASC	Insured	ASO/ASC					
Plan A Costs	\$52.55	\$26.53	\$42.11	\$27.00	\$47.55	\$27.09	\$27.12	\$33.05	\$106.33	\$35.62	\$38.73
Product Mix Weighting	10.0%	20.0%	5.0%	17.0%	8.0%	4.0%	6.0%	12.5%	6.5%	11.0%	100.0%
Weight and Total	5.26	5.31	2.11	4.59	3.80	1.08	1.63	4.13	6.91	3.92	\$38.73

Adjusted by 5 Percentage Points: Medicare Advantage and ASO/ASC POS

Hypothetical ("Plan A") Product Costs
Median Per Member Per Month

	Commercial Products										
	HMO		POS		Indemnity & PPO		Medicare FEP	Medicare Supplement	Medicare Advantage	Medicaid HMO	Compre. Total
	Insured	ASO/ASC	Insured	ASO/ASC	Insured	ASO/ASC					
Plan A Costs	\$52.55	\$26.53	\$42.11	\$27.00	\$47.55	\$27.09	\$27.12	\$33.05	\$106.33	\$35.62	\$42.70
Product Mix Weighting	10.0%	20.0%	5.0%	12.0%	8.0%	4.0%	6.0%	12.5%	11.5%	11.0%	100.0%
Weight and Total	5.26	5.31	2.11	3.24	3.80	1.08	1.63	4.13	12.23	3.92	\$42.70

The Blue Cross Blue Shield universe, with Plan A's product weighting, has a cost of \$37.48 PMPM rather than the \$34.99 PMPM reported in the *Sherlock Benchmarks* and published in the *Plan Management Navigator*. Subtracting the weighted universe value from the actual health plan value shows that Plan A is \$1.25 higher in cost than its universe.

In this example, we have focused on *total* PMPM administrative expenses for comprehensive products. But this approach applies to further analyses as well. For instance, since the administrative costs of each product are segmented into 50-60 functions, the dollar variance in each function can be ranked to prioritize the source of total variances. Also, because this eliminates the effect of product mix differences, it is then possible to drill down to the source of differences within each function. In nearly every case, PMPM costs may be analyzed by staffing ratio (also mix adjusted), staffing costs per FTE and non-labor costs per FTE. For participants in our benchmarking studies, we perform these comparisons in an individually tailored *CFO Letter* to summarize the results.

This approach to making comparisons also facilitates comparisons between two or more health plans. In other words, if the same approach was applied to a second plan, call it Plan B, and its variance was \$3.00 PMPM, one could say that Plan A has lower costs since the variance from the mix-adjusted comprehensive PMPM value is \$1.75 lower.

The flexibility of this approach can accommodate every mix of comprehensive product or even the case in which there is only one product offered by the plan. That is because each organization is compared against a common universe value that is weighted by each plan's product mix.

Figure 3. Apples to Apples
Blue Cross Blue Shield Product Costs at "Plan A" Mix
Median Per Member Per Month

	Commercial Products						FEP Supplement	Medicare Advantage	Medicare	Medicaid HMO	Compre. Total
	HMO		POS		Indemnity & PPO						
	Insured	ASO/ASC	Insured	ASO/ASC	Insured	ASO/ASC					
Blue Cross Blue Shield Universe	\$48.87	\$24.51	\$45.13	\$24.14	\$43.85	\$26.70	\$23.63	\$33.29	\$98.76	\$43.22	NM
Plan A, Product Mix Weighting	10.0%	20.0%	5.0%	17.0%	8.0%	4.0%	6.0%	12.5%	6.5%	11.0%	100.0%
Weight and Total	4.89	4.90	2.26	4.10	3.51	1.07	1.42	4.16	6.42	4.75	\$37.48

Note:

Plan A Exceeds Universe Value - Dollars \$1.25
Plan A Exceeds Universe Value - Percent 3.3%

This focus on differences from mix adjusted universe value is suitable for ranking but should not be overinterpreted. Thus, if the two plans mentioned above have different product mixes, it would not necessarily be accurate to conclude that Plan B would exactly equal the performance of Plan A should it reduce its costs by \$1.75. Remember, each of those cost differences is from a universe that is reweighted for each individual plan's own mix. But the dollar differences between the products remain. In other words, a 10% difference in Medicare Advantage would have a greater dollar impact than a 10% difference in costs of ASO/ASC products. Nevertheless, when we perform the cost comparisons based on the percents of premium equivalents, and rank the plans accordingly, the order is nearly always the same as with the PMPM differences.

Calculating True Cost Trends

Figure 4 shows administrative costs of Plan A, \$38.73, along with equivalent costs of the prior year, \$38.82, columns (5) and (1) respectively. But analyzing the differences between the two years is a challenge. Comprehensive costs declined slightly, by 0.2%, as shown in column (8). This decrease is even though six of the ten products posted increases in costs.

Product mix is complicating the analysis. Note the increase in the ASO/ASC as compared with the insured commercial products. Similarly, Medicaid has increased year over year. These changes would tend to put downward pressure on ostensible cost trends. On the other hand, the increase in Medicare from 5.0% to 6.5% of the product mix should have placed upward pressure on reported costs.

Figure 4. Apples to Apples

Company A Cost Trends	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Year One				Year Two			Year Two versus Year One	
	PMPM	Product Mix	Year One Weight	Year Two Weight	PMPM	Product Mix	Year Two Weight	Percent Change	Percent Chg Constant Mix
Commercial HMO									
Insured	\$54.13	12.0%	6.50	5.41	\$52.55	10.0%	5.26	-2.9%	
ASO / ASC	\$25.97	18.0%	4.68	5.19	\$26.53	20.0%	5.31	2.1%	
Commercial POS									
Insured	\$40.55	6.0%	2.43	2.03	\$42.11	5.0%	2.11	3.8%	
ASO / ASC	\$26.37	16.0%	4.22	4.48	\$27.00	17.0%	4.59	2.4%	
Indemnity & PPO									
Insured	\$49.93	10.0%	4.99	3.99	\$47.55	8.0%	3.80	-4.8%	
ASO / ASC	\$29.53	4.0%	1.18	1.18	\$27.09	4.0%	1.08	-8.3%	
FEP	\$26.12	6.0%	1.57	1.57	\$27.12	6.0%	1.63	3.8%	
Medicare Advantage	\$111.65	5.0%	5.58	7.26	\$106.33	6.5%	6.91	-4.8%	
Medicaid	\$35.09	9.0%	3.16	3.86	\$35.62	11.0%	3.92	1.5%	
Medicare Supplemental	\$32.29	14.0%	4.52	4.04	\$33.05	12.5%	4.13	2.4%	
Comprehensive Total	\$38.82	100.0%	\$38.82	\$39.01	\$38.73	100.0%	\$38.73	-0.2%	-0.7%

As with comparisons of plans with universes and plans with each other, reweighting to eliminate the effect in product mix is also important to identify real cost trends. Column (3) arrives at the Year 1 cost value by weighting costs by mix as we did in Figure 2. Column (4) instead weights the product costs by the product mix of Year Two. The reweighted Year One administrative costs are \$39.01, rather than the \$38.82 that was actually reported. This step eliminates the effect of product mix differences between the years.

The result is shown in Column (9) in which the cost trends are analyzed after eliminating the effect of product mix changes. The \$38.73 value is 0.7% lower than the reweighted year 1 value \$39.01, which is the cost increase without the distortion of product mix differences.

In our *Plan Management Navigators*, in calculating industry trends for the various health plan segments, we perform a similar reweighting. The references to “constant mix” is the output of this approach.

Conclusion

Achieving apples to apples comparisons entails many considerations including universe characteristics, function activities and so forth. Product mix is also an important element. This article shows how Sherlock Company adjusts for product mix to eliminate the distorting effects of mix between plans and their universes, between plans and between years in the same plan or universes.

We hope that you won't hesitate to contact us at (215)-628-2289 or sherlock@sherlockco.com if we can answer any questions on this methodology.

This Page Intentionally Left Blank