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# Rethinking Family Tiers

by Kristi Bohn

A few years ago, a very large union proposed to its management that it would be fairer if many tiers were added to its plan in order to charge more for each and every child who was covered. The question we were asked: simply, what is the average cost of a child?

We requested data on the average claims of this employer's children, but by a stroke of luck we received data in a format that instantly showed us a big flaw in the initial presumption. The data was summarized by averages per contract, with a description of the contract makeup and how many contracts were represented within the average.

Displayed this way, we quickly saw that, after accounting for the first child, the number of additional children mattered little to the average cost of this employer's contracts. Further, after digging into the adults' claims for this particular employer, the adults on the employee-only and employee-plus-spouse contracts were much more expensive than the adults on the contracts with children.

There are a few reasonable hypotheses that could explain this phenomenon. First, it is possible that parents of multiple children have less time to take themselves and their children to the doctor, and may be less worried about the daily accidents and illnesses that their children experience, because they have more experience with parenthood. Second, perhaps parents with their own health issues or seriously ill children have smaller families. Finally, adults with no children covered may be older, and thus have a higher prevalence of chronic conditions than adults with children.

We later explored whether this phenomenon applied to our larger commercial group population base. In this second study, we noticed that while the additional children generally led to higher contract costs, the incremental costs were not nearly as high as an average child's cost would suggest. Further, we noticed that the contracts with two adults but no children were much pricier than two multiplied by the average adult costs would suggest. The following table shows the claims ratios we experienced, where we indexed each type of contract's cost to the employee-only contract cost average. Note that we did not adjust our rating tiers because of this expe-



rience, but rather used this information to further understand whether this particular employer's experience was unique given the employer's unusual request for additional tiers.

I think about these studies frequently these days because of health care reform's new requirement to cover dependents to age 26. Specifically, while employers cannot charge differently for these newly eligible members than they could for any other child on the contract, some employers have considered implementing one or two additional tiers to their rating structure. When this request comes in, we want to look holistically at their contract makeup and costs.

In the case I mentioned, the employer decided to maintain its tier structure. I am told by employers that a change in tier structure often poses communication and payroll system challenges that are not "free" in terms of employer resource requirements. Further, by the time these rates reach actual members, the original tiering ratios are often obscured by the employer's philosophy regarding employee



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Ratios of Actual Costs per Contract		
Contract Makeup	Total Cost vs. ee only	Number of Contracts
ee only	1.000	283,786
ee + spouse	2.751	70,287
ee + 1 ch	1.680	22,162
ee + 2 ch	1.787	13,166
ee + 3 ch	2.147	3,991
ee + 4 ch	2.700	944
ee + 5 ch	2.788	293
ee + sp + 1 ch	2.798	38,098
ee + sp + 2 ch	2.743	55,766
ee + sp + 3 ch	3.029	24,865
ee + sp + 4 ch	3.528	7,139
ee + sp + 5 or more ch	4.140	2,604

ee = employee  
 sp = spouse  
 ch = child(ren)

Blue Cross and Blue Shield of Minnesota, 2005, Commercial Accounts

contributions. That is, many employers choose to subsidize their employee premiums to a higher degree than spouses.

The lesson I learned from this project is that it is worthwhile to test the basic assumptions we work with. I believe that many actuaries use a building block approach when building expected costs for a tier structure, using the average costs of adults and children to build ratios. However, I think there is evidence that this approach might not capture the whole story, at least for the commercial group business.

It would be interesting to explore whether this phenomenon occurs in any of the other market segments, particularly for Individual products. For Individual, I suspect that family circumstances and prior underwriting rules played a more critical role in the costs of members within families. However, health care reform's role in the Individual market will likely dramatically change the family tier structure, at least in terms of actual experience. The actual premium tiers that insurers use will likely continue to be an art as well as a science. ■