MILLIMAN WHITE PAPER

Is your dental rating manual stale?

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Pricing plays a key role in creating a marketable, sustainable, and profitable dental insurance product offering, and actuarially sound rating manuals are essential to adequate and competitive pricing of dental insurance risks.

Rating manuals are detailed descriptions of pricing methodologies, including starting claim costs and pricing factors, used to develop final premium rates. They are typically filed with regulators and form the framework for pricing. Compared with medical lines of business, dental products typically have more predictable claim patterns, lower overall claim dollar amounts, and much lower risks and severities of catastrophic claims. This predictability can foster complacency in dental rate-setting—some companies go several years without a robust dental rating manual review or refresh. Companies may instead choose to focus on rating manual updates for higher-risk lines of business, and insurers may simply "trend forward" their dental rating manuals year after year without taking a critical look at what should be changed.

While it is logical to expend more resources mitigating hazards for the higher-risk products your company may sell, it is important to periodically review dental rating methodologies for actuarial soundness and to maintain competitive rates. If the starting claim costs and pricing factors in your rating manual are stale, your premiums will likewise be stale and competitive positioning in the market could suffer as a result. The longer you go without an update, the more likely your premiums are to drift away from competitive levels.

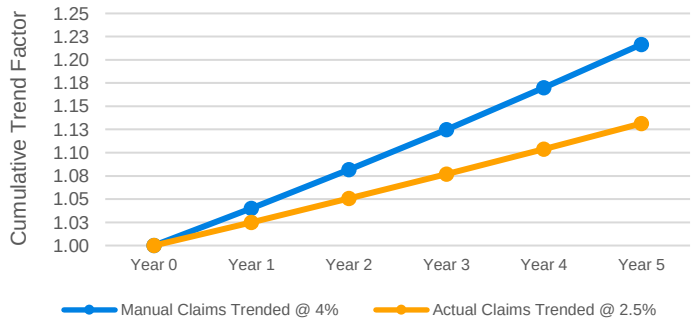
Starting claim costs and trend

A critical step to developing a pricing manual is determining the starting claim costs, which form the foundation for computing premium rates. Rating manuals trend and adjust these starting claim costs to account for case-specific attributes (e.g., demographics, industry, plan design), then apply loads for administrative expenses, taxes and fees, and a risk margin to produce final premiums. The starting costs can be derived from an insurer's existing experience if a credible block is available, or rating manuals can be leased from various consulting firms (e.g., Milliman's Health Cost Guidelines™ – Dental).

Regularly reviewing the basis for the starting claim cost and routinely ensuring that other factors in the rating manual are on consistent bases is important to avoid mispricing. Changes to the underlying claim cost basis should result in changes to manual rating factors. For example, geographic area factors should be updated with changes in the starting claim costs, particularly if those costs were generated and summarized using experience from growing cities where demographic landscapes can shift rapidly.

Mispricing commonly occurs when the starting claim costs are trended from year to year to update the rating manual, and no other updates are made. At a minimum, a study should be done to confirm that the pricing trend is consistent with actual observed historical trends. The graph in Figure 1 shows how a mismatch between pricing trend and actual claim trend can accumulate over time.

FIGURE 1: MANUAL CLAIMS VS. ACTUAL CLAIM TREND



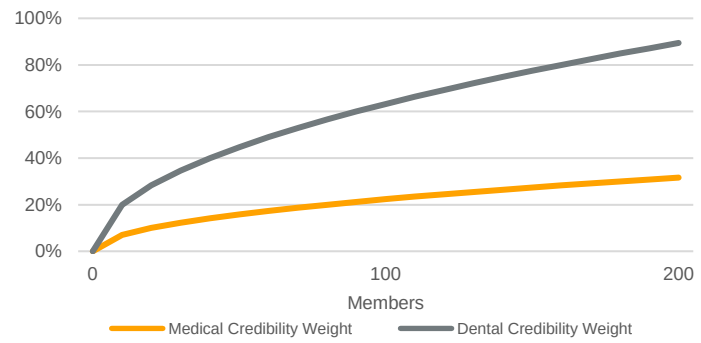
In this simple example, if the manual claim costs are blindly trended at a rate of 4% annually while actual claim trend is closer to 2.5%, premiums can be overinflated by almost 8% after a five-year period.

Additionally, carriers should monitor changes in the American Dental Association (ADA) code set, which is the collection of procedure codes used by dentists to bill for the procedures they perform. The ADA updates the code set annually by adding codes for new procedures or to make coding of existing procedures more specific, by removing obsolete codes, and sometimes by editing the definition of a particular procedure code. It is critical for carriers to understand and price for likely utilization of new procedures and for how utilization of clinically similar procedures will be affected (i.e., will utilization in a new procedure code replace some utilization previously under other codes).

Credibility

The credibility formula is a key component for adjusting manually calculated premiums to reflect the actual historical experience of an employer group. This formula uses some measure of group size to determine which groups are fully experience-rated and, for groups not large enough to be fully credible, produces weights for blending experience-based claim projections with manual claims. Credibility formulas should be reviewed regularly to ensure they are appropriate for the book of business being priced. A carrier using credibility formulas that produce lower experience weights than its competitors will tend to win the "bad" business (whose experience therefore receives less weight) and lose the "good" business (who will seek a carrier that applies more credibility to its favorable experience). The credibility formula used for dental products should be different from major medical credibility, because the nature of the risk is different. Dental plans typically can substantiate higher credibility weights for a given level of membership because dental claims are relatively less volatile. The chart in Figure 2 compares illustrative credibility weights for medical and dental products by group size.

FIGURE 2: ILLUSTRATIVE MEDICAL VS. DENTAL CREDIBILITY WEIGHTS



In our consulting work we have seen that some insurers use medical credibility weights for dental pricing, which could create competitiveness issues as discussed above.

Adjustment factors

Rating manuals rely on adjustment factors to modify experience-based or manual claims to reflect the expected costs of the projected insured population. Adjustments should be made to account for differences in provider contracting, plan richness, utilization control measures, and membership composition between the experience period and the pricing period, among other things. Using outdated adjustment factors can lead to misstated experience projections. For example, if a company has recently renegotiated provider discounts or fee schedules within its dental networks, the rating manual must include claim cost adjustments to reflect current payment levels in the rates.

Adjustment factors based on old or incomplete actuarial analysis could result in rates that are less competitive in the market or are insufficient to cover claims.

Experience-based adjustments should be updated in tandem with the other assumptions in a rating manual. For carriers using experience rating for groups, factors to adjust the experience for benefit and population changes should be based on the latest information to appropriately project future claims.

Leveraging effect of annual benefit maximums

Many dental plans have fixed dollar benefit maximums to limit plan liability. As claim costs increase over time with unit cost inflation and changes in utilization, there is a leveraging effect of the change in the value of fixed dollar limits. For example, a plan with a fixed benefit maximum will become leaner if the maximum doesn't increase along with claim inflation. This effect is illustrated in Figure 3.

FIGURE 3: BENEFIT RICHNESS BY YEAR WITH FLAT ANNUAL BENEFIT MAXIMUM

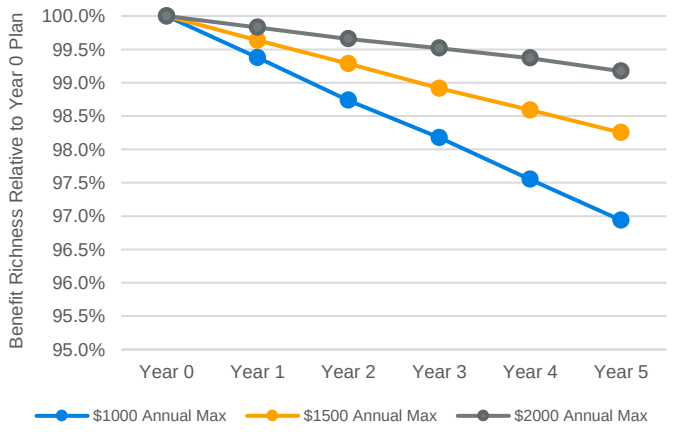


Figure 3 shows the change in benefit richness of three sample plans over the course of five years relative to the starting benefit richness in Year 0. Each plan is modeled as having no deductible and coinsurance levels of 100%, 80%, and 50% for Class I, Class II, and Class III procedures, respectively. The plans vary by benefit maximum, which remains flat over the five-year period. Claims are trended annually with 3% unit cost trend and 1% utilization trend. The results demonstrate that, because of trend, the same benefit maximum over time will produce a leaner plan design, all else equal. As illustrated by the steepest slope for the plan with a $1,000 annual benefit maximum, plans with lesser benefit maximums have faster rates of benefit richness reduction, because the lower the benefit maximum the more claims are affected by the benefit limitation. Carriers whose rating manuals

are not updated to reflect the leveraging dynamic for plan features such as a static benefit maximum may be overstating their claim costs. As a simple example, if a carrier has an adjustment factor associated with a $1,000 benefit maximum of 0.9 each year, as opposed to an adjustment factor that decreases from 0.9 (in Year 1) to 0.89 (in Year 2) to 0.88 (in Year 3) to reflect a decline in benefit richness, then this carrier risks quoting rates that become less competitive over time.

Product innovations

Performing rating manual updates for benefit maximums and other plan parameters may also present key opportunities for carriers to review their product portfolios to ensure they are keeping pace with innovative products or plan design offerings; such options may attract membership through differentiation from more traditional product offerings. These nontraditional product designs might include:

- Annual maximum rollover benefits
- Implant coverage
- Preventive service incentives (e.g., non-application to the annual maximum)
- Additional periodontal exams for members who meet particular requirements
- Cosmetic procedure coverage (e.g., teeth whitening)
- Graduated coinsurance (e.g., from 90% coverage to 100% coverage over a multiyear period)
- Disease-specific plans (e.g., variations in benefits for diabetic population)
- Hybrid plans (e.g., monthly switch allowed from preferred provider organization [PPO] plan to health maintenance organization [HMO] plan)

Carriers that offer benefits like these should record their data with sufficient detail to track the claim experience of these product features—doing so will increase the pricing team's ability to set premiums accurately in the future. For example, insight can be gained from maintaining claims in such detail that a plan offering annual maximum rollover benefits could be compared to the performance of plans with no maximum rollover provision, or with various levels of annual maximum rollover benefit. Even with granular product tracking, estimating utilization for these new product features may be difficult due to impacts of adverse selection and low credibility. In the initial product stages when experience for new product features is limited or unavailable, it is important to understand which internal or external resources are available to your company to assist with developing appropriate rating factors for use in pricing and to benchmark new product performance.

Conclusion

Rating manuals convert the various pricing considerations—claim experience, employer group attributes, plan design, non-benefit expenses, and other factors—into the appropriate premium rate for a given population. Insurers who forgo periodic, comprehensive analyses to ensure the appropriateness of their dental rating manuals risk reduced product marketability (if rates are too high) or non-profitability and adverse selection (if rates are too low). They also may limit the ability to understand key drivers underlying their dental lines of business. The considerations highlighted above represent important starting points for revitalizing a stale rating manual and developing a sound framework for pricing decisions.

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