Session 14OF, Dental Actuarial Roundtable

Moderator/Presenter:
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Presenters:
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SOA Antitrust Disclaimer
SOA Presentation Disclaimer
2018 SOA Health Meeting

TOM LEIBOWITZ, FSA, MAAA - DELTA DENTAL OF CALIFORNIA
YI-LING LIN, FSA, MAAA, FCA – THE TERRY GROUP
TOM MURAWSKI, FSA, MAAA – MILLIMAN
MARTHA STUBBS, ASA, MAAA – BCBS OF MICHIGAN

Session 14 – Dental Actuarial Roundtable

June 25, 2018
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Active participation in the Society of Actuaries is an important aspect of membership. While the positive contributions of professional societies and associations are well-recognized and encouraged, association activities are vulnerable to close antitrust scrutiny. By their very nature, associations bring together industry competitors and other market participants.

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While participating in all SOA in person meetings, webinars, teleconferences or side discussions, you should avoid discussing competitively sensitive information with competitors and follow these guidelines:

- **Do not** discuss prices for services or products or anything else that might affect prices
- **Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
- **Do** leave a meeting where any anticompetitive pricing or market allocation discussion occurs.
- **Do** alert SOA staff and/or legal counsel to any concerning discussions
- **Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior which might be so construed. These guidelines only provide an overview of prohibited activities. SOA legal counsel reviews meeting agenda and materials as deemed appropriate and any discussion that departs from the formal agenda should be scrutinized carefully. Antitrust compliance is everyone’s responsibility; however, please seek legal counsel if you have any questions or concerns.
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Introduction to SOA
Dental Subgroup
Joanne Fontana, FSA, MAAA - Milliman
SOA Health Section: Dental Subsection

- More dental-specific content
- Learning from others
- You’re not alone
- Dental actuaries with varied experience
- Discuss current dental issues with focus on general actuarial considerations
Dental Actuarial Roundtable: Starter Topics

- Dental networks and true net discount
- Dental disruption analysis
- Dental coverage for special populations
- Health reform and dental
- Open forum
SOA Health Meeting 2018
Session 14 Open Forum: Dental Actuarial Roundtable

True Net Discount – The Competitive Advantage

Martha M Stubbs
A great woman once said

Great minds discuss ideas.
Average minds discuss events.
Small minds discuss people.
— ELEANOR ROOSEVELT

And since we have the very best minds right here at the SOA meeting, let’s discuss the idea of total net discounts!
We are often asked for our dental PPO discount, but that is not the whole story or the way to show your competitive advantage.
## A Tale of Two Companies’ Dental Net Discounts

<table>
<thead>
<tr>
<th></th>
<th>Coyote Company</th>
<th>Acme Company</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPO Dental Discount</td>
<td>30%</td>
<td>25%</td>
<td>Business goes to Coyote?</td>
</tr>
<tr>
<td>PPO Dental Utilization</td>
<td>35%</td>
<td>40%</td>
<td>Maybe not?</td>
</tr>
<tr>
<td>Net PPO Discount</td>
<td>10.5%</td>
<td>10%</td>
<td>Looks like Coyote needs something more to close the deal!</td>
</tr>
</tbody>
</table>

- Discounts are calculated as:
  
  \[
  \frac{(\text{Billed Charges} - \text{Allowed Amount})}{\text{Billed Charges}}
  \]

  Where Allowed Amount reflects the fee schedule paid to providers

- Utilization is calculated as percentage of Billed Charges (or Services) in PPO
## A Tale of Two Companies’ Dental Net Discounts

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<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Net PPO Discount</strong></td>
<td>10.5%</td>
<td>10%</td>
</tr>
<tr>
<td><em><em>OON</em> Discount</em>*</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td><em><em>OON</em> Utilization</em>*</td>
<td>65%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Total Net Discount</strong></td>
<td>14.4%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

*Coyote can close the deal, the client can clearly see the net discount advantage

* Out of Network (OON)
Three Tier Networks

- Some dental companies have a participating out of network (OON) tier of providers in addition to their PPO network
- The dentists contractually agree to accept the participating fee as payment in full (less any deductibles, coinsurance, etc.)
- The benefits generally follow the out of network benefits as shown in the example below:

<table>
<thead>
<tr>
<th>Class of Benefits</th>
<th>In Network Percentage</th>
<th>Out of Network Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PPO Providers</td>
<td>Both Participating OON and Non Participating OON Providers</td>
</tr>
<tr>
<td>Class 1 (Preventative)</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>Class 2 (Minor Restorative)</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>Class 3 (Major Restorative)</td>
<td>60%</td>
<td>50%</td>
</tr>
</tbody>
</table>
What’s that noise I hear – beep beep?
## A Tale of Two Three Companies’ Dental Net Discounts

<table>
<thead>
<tr>
<th></th>
<th>Coyote Company</th>
<th>Acme Company</th>
<th>RoadRunner Company</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPO Dental Discount</strong></td>
<td>30%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>PPO Dental Utilization</strong></td>
<td>35%</td>
<td>40%</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Net PPO Discount</strong></td>
<td>10.5%</td>
<td>10%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Participating OON* Discount</td>
<td>-</td>
<td>-</td>
<td>12%</td>
</tr>
<tr>
<td>Participating OON* Utilization</td>
<td>-</td>
<td>-</td>
<td>55%</td>
</tr>
<tr>
<td><strong>PPO &amp; Participating Net Discount</strong></td>
<td>-</td>
<td>-</td>
<td>17.1%</td>
</tr>
<tr>
<td>OON* Discount</td>
<td>6%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>OON* Utilization</td>
<td>65%</td>
<td>60%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total Net Discount</strong></td>
<td>14.4%</td>
<td>11.8%</td>
<td>17.4%</td>
</tr>
</tbody>
</table>

* Out of Network (OON)
• If you want to show your value proposition, you need to show your company’s total net discount, and educate your sales team so they have the competitive advantage story to close the deal.

• Because – even if Coyote can beat Acme, RoadRunner leaves Coyote in the dust!
Dental Disruption Analysis
What it is, How it Works, Setting Parameters, Analyzing Results
Agenda

 What is Dental Disruption Analysis
 Applications of Disruption Analysis
  ▪ Rating
  ▪ Performance guarantees
 Data and Data-related Issues
  ▪ Data Sources
  ▪ Data Quality
  ▪ Data Cleansing
 Disruption Matching Process, Considerations and Concerns
  ▪ Matching Examples and Concerns (false positives)
What is Dental Disruption Analysis?

- When an employer group moves from one dental carrier to another –
  - Most dentists who were in the old network will be in the new network, but
  - Some dentists who were in the old network will be non-par in the new one, and
  - Other dentists who non-par before will be par under the new carrier

- Disruption analysis looks at the impact on patients and groups of the disruption that could take place if a group changed carriers

- Disruption is often also used as the basis for underwriting

- Disruption is often used in RFPs, and performance guarantees around network recruitment may be set based on disruption

- Note that medical disruption analysis follows the same basic principles
Simple Underwriting Example Using Disruption

<table>
<thead>
<tr>
<th>Provider Tier</th>
<th>% of Claims $ (billed)</th>
<th>Base Cost PMPM</th>
<th>Discount</th>
<th>Expected Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core PPO</td>
<td>50.0%</td>
<td>$50.00</td>
<td>30.0%</td>
<td>$17.50</td>
</tr>
<tr>
<td>Expanded Network</td>
<td>30.0%</td>
<td>$50.00</td>
<td>20.0%</td>
<td>$12.00</td>
</tr>
<tr>
<td>Non-par</td>
<td>20.0%</td>
<td>$50.00</td>
<td>0.0%</td>
<td>$10.00</td>
</tr>
<tr>
<td>Total / Average</td>
<td>100.0%</td>
<td>$50.00</td>
<td>21.0%</td>
<td>$39.50</td>
</tr>
</tbody>
</table>

- Note – having disruption at the claims level rather than the provider level enables more accurate rating
Sample Performance Guarantees Using Disruption

- Note – performance guarantees on provider recruitment can be provider-based, claims-based (% of claims or $ in-network), or discount-based
- Disruption enables targeted contracting based on highly utilized dentists

<table>
<thead>
<tr>
<th>Provider Tier</th>
<th>Starting % Of Claims</th>
<th>Targeted % of Claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core PPO</td>
<td>50.0%</td>
<td>55.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actual % at target date</th>
<th>Penalty PEPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>$0.25</td>
</tr>
<tr>
<td>51%</td>
<td>$0.20</td>
</tr>
<tr>
<td>52%</td>
<td>$0.15</td>
</tr>
<tr>
<td>53%</td>
<td>$0.10</td>
</tr>
<tr>
<td>54%</td>
<td>$0.05</td>
</tr>
<tr>
<td>55% +</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
Data Sources for Disruption Analysis

- Incumbent’s self-reported dental provider or claims data
- Prospective carrier’s internal provider file
- Industry benchmark information on competitors’ dental provider networks
Why use Industry Benchmark Data?

- Access to data from a third party vendor with an application that details which providers are in which dental carriers’ networks.

- Having all major dental carriers and their respective networks included in benchmark data enables carriers to assess how their networks compare to their competitors’ networks for each employer group.
Issues with Incoming Dental Disruption Data

- Disruption files vary in format, levels of completeness, order, etc.
- A Provider’s status can vary by location
- Multiple dentists have the same name and / or address
- The name given for a specific provider can vary significantly
  - E.g., need algorithms to determine that Tom Leibowitz and Thomas Leibowitz, DDS, are the same person
- Providers move or open new offices (often without telling us)
- Locations can have multiple address names
  - E.g., Route 66 is also the Will Rogers Highway, Market Street and Manchester Road

- Therefore disruption analysis requires data scrubbing and inferences
Steps to Prepare Data for Dental Disruption

- Clean and normalize the data
- Set aside exact matches
- Infer matching to a specific provider when data for provider name and address closely approximate a given, known provider’s
- Narrow down any remaining providers
- Manually match
Matching Process, Strong, Weak, and Super Weak Matches

- When carriers perform matching, there is a need to balance between false negatives (i.e., saying a dentist is non-par when it is par) and false positives.
- Each carrier runs a variety of match thresholds, with increasingly loose levels of certainty that a provider is in that carrier’s network.
  - E.g., name, address and Tax Identification Number (TIN) is a stronger match than name and TIN.
- The weaker the matching criteria, the higher the likelihood of false positive matches.
- Carriers vary significantly in terms of what they consider strong or weak criteria.
- Carriers often have their own preferred criteria, and provide additional information to enable an employer group or consultant to compare apples to apples.
Examples of Match Thresholds from Stronger to Weaker

- **Strong**
  - Name, Address, Zip
  - Practice Name, Address, Zip

- **Moderate**
  - Name, Tax ID, Zip
  - Name, ZIP

- **Weak**
  - Address, Tax ID, ZIP

- **Very Weak**
  - Address, ZIP
  - Tax ID, Zip
FAQ / Quiz

- Doesn’t each provider have a unique TIN?
  - No. Many providers can bill from a single TIN
  - Quiz – what is the highest number of providers to share a single TIN?

- Can there be providers who share an address or office but not par status?
  - Yes
  - Quiz – what is the highest number of providers sharing one street address?
Opportunities to Increase Accuracy and Ensure Consistency of Disruption Analyses

- Carriers will typically provide their standard methodology unless otherwise directed.

- Steps to increase consistency among carriers when a disruption is requested as part of an RFP:
  - Explicitly lay out the matching criteria for the disruption analysis.
  - For self-funded cases, if the disruption analysis looks unreasonably favorable for a given carrier, ask for an insured quote.
2018 SOA Health Meeting

YI-LING LIN
Session 14 – Dental Actuarial Roundtable
June 25, 2018
Dental Insurance for Seniors

Benefit design
• Exclusions/waiting periods
• Coordination with Medicare Advantage plans
• Snowbirds

Pricing
• Utilization of services and manual rates (fluoride, bridges, etc.)
• Persistency
• Basis of geographic factors
Dental Insurance for Nursing Home Residents

Network
• In-home services
• Travel benefit

Sales/Distribution
• Nursing home director/consent
• Persistency
• Medicaid and Incurred Medical Expense (IME)
Health Reform and Dental
Tom Murawski, FSA, MAAA - Milliman
Health Reform Update

- Affordable Care Act/Actuarial Value
- Loss ratio regulations
- Medical/dental convergence
Health Reform Update – Affordable Care Act

- Pediatric dental essential health benefit may be offered standalone or embedded in medical coverage

- Adult dental coverage not essential health benefit but may be offered standalone or embedded
Health Reform Update – Affordable Care Act

1.5M SADP selections in the 39 states using healthcare.gov

496K SADP selections in 11 SBMs

Age breakdown for healthcare.gov states:

<table>
<thead>
<tr>
<th>SADP Selections by Age</th>
<th>% of SADP Total</th>
<th>% QHP Enrolled in SADP</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>18-25</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>26-34</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>35-44</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td>45-54</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td>55-64</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>65+</td>
<td>1%</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Health Reform Update – Actuarial Value

- 2018 enrollment: 75% of SADP enrollees chose “Low Coverage”, 25% chose “High Coverage”
- Standalone pediatric dental benefit Actuarial Value 70% Low/85% High
- 2019 Benefit and Payment Parameters Rule removes AV requirement for standalone pediatric dental
- Are carriers making changes to position the benefit differently? Richer/leaner/better aligned against embedded pediatric dental?
Health Reform Update – Dental Minimum Loss Ratios

- Dental plans currently exempt from ACA MLR rules
- States have considered ways to regulate dental insurer LRs

**California (SB 1008):**

- Dental MLR reporting currently required, with goal of setting dental MLR using that data.
- 75% large group/70% small group dental MLR proposed earlier this year, with intent to increase incrementally until equal to medical MLR (85%/80%).
- Those elements of the bill were removed after successful lobbying efforts. Future potential consideration of “outlier” approach to dental MLR, proposed by CADP.

**Indiana (HB 1049):**

- Bill requiring dental plans to submit MLR information using federal medical loss ratio reporting format; DOI to make recommendation for setting standard dental loss ratios in 2021. Status: No Action

**Massachusetts (S.505):**

- Bill would create a minimum dental loss ratio of 80%. Status: study order (study further, likely won’t advance)
Health Reform Update – Dental Minimum Loss Ratios

- Important to consider how dental MLR would affect insurers, consumers, and providers
- Important to consider how dental MLR would need to differ from medical
- This topic not likely to disappear
Health Reform Update – Dental/Medical Convergence

Without Good Periodontal Health, You Can’t Have Good General Health.

Dental disease (gum disease) can affect your general health and it can be affected by your general health. Here are a few examples:

**Respiratory Infections**
- Evidence indicates that people with periodontal disease may have an increased risk of respiratory infections.

**Stroke**
- People with adult periodontitis may have an increased risk of stroke.

**Heart Disease**
- People with adult periodontitis may have an increased risk of heart disease.

**Severe Osteoporosis**
- Bone density in lower jaws is lower in mouth with gum disease.

**Premature or Low Birth Weight Babies**
- Babies with advanced gum disease are more likely to be born premature or of low birth weight or preterm babies.

Do You Have Adult Periodontitis? What Are You Doing About It?

**Oral Health is Linked to Overall Health**

The health of your mouth is linked to...

1. **Heart Disease & Stroke**
2. **Respiratory Disease**
3. **Arthritis**
4. **Diabetes**
5. **Gastrointestinal Disease**
6. **Pre-Term Low Birth Weight Babies**

**What Problems Could Poor Dental Health Cause?**

- Strokes
- Lung Conditions
- Mouth Cancer
- Diabetes
- Gum Disease
- Poor Bone Health

Your mouth is a mirror to your body.

A healthy mouth and a healthy body go hand in hand. It's important to understand the close relationship between oral health and general health – and the impact that one has on the other – to know how to protect your mouth and body at all ages.

A Two Way Street

Milliman
halton.ca/oralhealth

Research has shown that certain gum disease medications can improve heart health.

Not only are people with diabetes more susceptible to gum disease, but people with gum disease are more likely to develop diabetes, especially after losing their tooth or tooth.
Health Reform Update – Dental/Medical Convergence

- 2018 survey by West Monroe Partners:
  - 96% of insurance executives believe that dental benefits are or will soon be embedded into medical plans
    - Systems to facilitate holistic view of patients
    - Government actions (Medicaid/Medicare changes)
    - Connections between oral and physical health
- Health plans have advantage over dental plans in bundled environment
- Dental plans should prepare to be attractive partners
- Impact on actuarial work for health and dental actuaries?
Thank you

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joanne.fontana@milliman.com