Comprehensive Health without Oral Health
A Medicare Paradox
Integrating Dental to Improve Healthcare Value
May 9, 2019
Agenda

1. Different Ways to Measure Health
   - Medical Cost Differences
   - Decrements to Life Expectancy

2. The Total Health Program

3. Medical Cost and Life Expectancy Differences

4. Integration in Action
Different Ways to Measure Health

• We usually look at medical and dental claims data to see differences in medical cost depending if the individual was having some type of dental services.
• There is an actuarial way of using medical claims data to look at person’s longevity based on whether they have a medical diagnosis of a serious dental or periodontal condition.
• The conclusion from the first analysis would be to say that differences in medical costs are a proxy for member or population health. The conclusion from the second would be the change of life expectancy from poor oral health.
The Total Health Program

1. **Member education** on the importance dental benefits have to overall health particularly those with a chronic condition.

2. **Data integration** using diagnosis codes to identify eligible members based on condition for auto enrollment into the program.

3. **Personalized benefits** for qualifying members to improve overall health (e.g., specialized care programs, additional cleanings, periodontal scaling, etc.)

4. **Targeted outreach** to identified members through direct mail, electronic communication and care coordination programs.
Average Medical Costs by Age Band for Members with CAD or Diabetes

<table>
<thead>
<tr>
<th></th>
<th>ALL</th>
<th>51+ to 60</th>
<th>61+ to 64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>$23,329</td>
<td>$21,171</td>
<td>$22,871</td>
<td>$26,410</td>
</tr>
<tr>
<td>DIABETES</td>
<td>$14,434</td>
<td>$13,887</td>
<td>$14,539</td>
<td>$17,840</td>
</tr>
</tbody>
</table>

**Medical Cost Differences**

DIABETES  CAD

$23,329   $21,171
$14,434   $13,887
$14,539   $12,871
$17,840   $16,410

$0       $5,000   $10,000  $15,000  $20,000  $25,000  $30,000
Impact of Dental Care on Total Medical Costs for Members with CAD and Diabetes Depending on if they were getting Dental Care

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>51+ to 60</th>
<th>61+ to 64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>20%</td>
<td>17%</td>
<td>12%</td>
<td>36%</td>
</tr>
<tr>
<td>DIABETES</td>
<td>11%</td>
<td>15%</td>
<td>14%</td>
<td>18%</td>
</tr>
</tbody>
</table>

**CAD**

- 51 - 60: $19,167
- 61 - 64: $24,593
- 65+: $21,622
- Total: $20,754

**DIABETES**

- 51 - 60: $12,800
- 61 - 64: $13,612
- 65+: $16,343
- Total: $15,592
Comparison of Total Medical Cost Differences Compared to Risk Scores

<table>
<thead>
<tr>
<th></th>
<th>CAD</th>
<th>DIABETES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL</td>
<td>51+ - 60</td>
</tr>
<tr>
<td>CAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Score</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Score</td>
<td>11%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Member Count

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>51 - 60</th>
<th>61 - 64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>6,130</td>
<td>2,158</td>
<td>1,346</td>
<td>1,902</td>
</tr>
<tr>
<td>Diabetes</td>
<td>17,515</td>
<td>6,681</td>
<td>3,119</td>
<td>3,241</td>
</tr>
</tbody>
</table>
Medical Cost Difference of CAD Members with Additional Comorbidities Included

- **Depression**: 32% vs. 46%*
  - 22% vs. 23%* for Anxiety/Phobia
- **Cerebral Vascular Accident**: 19% vs. 39%*
- **Diabetes**: 17% vs. 22%*
- **Emphysema/Chronic Bronchitis**: 17% vs. 18%*

* Denotes 65+

BCBSMA Member Data as of 2017 12 through 2018 11
Medical Cost Difference of Diabetic Members with Additional Comorbidities Included

- **18% 22%***
  Coronary Artery Disease

- **9% 18%***
  Retinopathies and Vascular Disorders

- **29% 2%***
  Cerebral Vascular Accident

- **37% 2%***
  Chronic Renal Failure

* Denotes 65+

BCBSMA Member Data as of 2017 12 through 2018 11
### Medical and Co-Morbidity Costs All Members

#### BOOK OF BUSINESS MEDICAL COSTS (2017 12 through 2018 11)

<table>
<thead>
<tr>
<th></th>
<th>CLAIM FLAG YES (Member who went to dentist)</th>
<th>CLAIM FLAG NO (Member who didn’t go to dentist)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Claim Flag Yes</td>
<td>TOTAL COST</td>
</tr>
<tr>
<td>CAD MEMBERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety/Phobia-00402</td>
<td>306</td>
<td>$13,499,133</td>
</tr>
<tr>
<td>Cerebral Vascular Accident-00608</td>
<td>220</td>
<td>$22,987,066</td>
</tr>
<tr>
<td>Depression-00401</td>
<td>370</td>
<td>$24,730,447</td>
</tr>
<tr>
<td>Diabetes-00201</td>
<td>910</td>
<td>$55,286,138</td>
</tr>
<tr>
<td>Emphysema/Chronic Bronchitis-01003</td>
<td>182</td>
<td>$20,418,213</td>
</tr>
<tr>
<td>DIABETIC MEMBERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebral Vascular Accident-00608</td>
<td>270</td>
<td>$23,826,767</td>
</tr>
<tr>
<td>Chronic Renal Failure-01302</td>
<td>455</td>
<td>$42,432,920</td>
</tr>
<tr>
<td>Coronary Artery Disease-00802</td>
<td>913</td>
<td>$55,824,946</td>
</tr>
<tr>
<td>Retinopaties and Vascular Disorders-00708</td>
<td>167</td>
<td>$6,754,879</td>
</tr>
</tbody>
</table>
**BlueCrossBlueShield Association (BCBSA)**

- **BCBSA** is a federation of 36 separate United States health insurance companies, providing health insurance in the United States to more than 106 million people (1 in 3 people in the US). All health information from the various Plans is collected centrally.
  - There are over 200 conditions that can be identified by medical claim data that are assigned a mortality and disability index which creates a subtraction from an individual's overall life expectancy by actuarial and disability tables. If we know what someone's optimal life expectancy is based on overall mortality and disability factors, knowing the dental related medical diagnoses that have been assigned to these conditions will create a detractive factor from their healthy life expectancy.

- **BCBSA** has developed the Health of America Initiative. This initiative was developed to get data insights of the health of the American public from its medical database using analytical tools.
- This initiative created the **BCBS Health Index**.
- One of the BCBS Health Index Analyses was on medical claims with a dental related diagnosis called **Brush Up on Dental Health**.

A Serious Dental or Periodontal Condition may lead to a loss of 1.7 Years of Healthy Life.
Brush up on Dental Health

About 3.7 million BCBS members had a serious dental or gum condition in 2016.

- Root Canals
- Tooth Loss
- Tooth and Mouth Infections
- Gum Disease: – Gingivitis – Periodontitis

Members with a serious dental or gum condition spend 2x more annually on overall healthcare costs.

Poor oral health can affect you long-term:

- 25% more likely to suffer from heart disease**
- 2x as likely to visit the ER or have a hospital stay
- Likely to suffer from autoimmune disorders, anemia, gastrointestinal disorders or renal disease

A serious dental or gum condition may lead to a loss of:

1.7 years of healthy life

*Source: DCES Health Index 2015, only includes dental conditions identified through medical claims.
**For more information, see: https://www.ada.org/en/public-information/articles/2015/01/01/dental-health-and-heart-health
© 2018 Blue Cross Blue Shield Association. All Rights Reserved. The Blue Cross Blue Shield Association is an association of independent Blue Cross and Blue Shield companies (BCBS).
Integration in action.

Ted is a 51-year-old who has medical and dental coverage with Blue Cross. We have access to more data, which has a positive impact on his health.

Ted participates in a biometric screening, and the results are shared with his physician.

A review of Ted’s data raises concerns, and his physician schedules additional tests.

Because Ted also has Dental Blue coverage, we send him a letter telling him he’s eligible for additional dental services to help control his diabetes, at no cost.

We monitor Ted’s use of his dental benefits and reach out to him by mail, email, text or phone to educate and encourage him.

Ted’s physician diagnoses Ted as a diabetic.

Ted’s medical and dental care coordination is monitored by his nurse case manager, helping him stay in control of his condition, and maintain his health.
Good Oral Health Leads to Better Overall Health

Regular visits with your dentist can improve your overall health.

In addition to no-cost regular dental checkups, members who qualify for Enhanced Dental Benefits can get additional preventive and periodontal dental care that can lead to improved overall health. This program also offers oral health support for members with chronic conditions, such as diabetes.

Learn How to Keep Your Teeth Healthy

Find a Dentist

*Check your plan for details.
Conclusion

- Oral Health is a risk factor to Overall Health
- The effects of poor Oral Health appear to be greater in the 65+ population
- Risk scores generally underpredict the true medical cost difference when dental care is considered
- Decreased longevity is associated with poor Oral Health
- Health plans can integrate oral and overall health initiatives for members with chronic conditions for improved Overall Health