The Role of Risk Adjustment in Accountable Care Organization

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DISCLAIMER

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AGENDA

- Foundation - what is risk adjustment?
- Landscape - RA in provider payment reforms
- Challenges and important considerations
- Q&A

What is Risk Adjustment?

- Claim-based scoring of individuals
  - Rank patients
  - Rank groups
- Reflect the relativities of resource use among different patients/groups/populations
- Level the playing field for different risk-taking organizations
- Examples:
  - Medicare Advantage
  - MassHealth MCO contracting
  - Mass Connector Authority CommCare procurement
  - BCBSMA’s AQC
Where Risk Adjustment Matters

Health Care
  - Financing
  - Delivery
  - Feasibility and sustainability
  - Cost, Quality, and Efficacy

RA is a Two-Step Process
Step 1 – Risk Assessment

Risk Distribution Histogram

Risk Score
Percent of Total Population
Risk Score
RA is a Two-Step Process

Step 2 – Funds Transfer

Table A – Budget Reallocation – Age/Gender Adjusted

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Age/Gender Score</th>
<th>Age/Sex Adjusted PMPM Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>3,040</td>
<td>1.25</td>
</tr>
<tr>
<td>Group II</td>
<td>4,075</td>
<td>0.80</td>
</tr>
<tr>
<td>Group III</td>
<td>2,900</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Table B – Budget Reallocation – Risk Adjusted

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Relative Risk Score</th>
<th>Risk Adjusted PMPM Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>3,040</td>
<td>1.14</td>
</tr>
<tr>
<td>Group II</td>
<td>4,075</td>
<td>0.86</td>
</tr>
<tr>
<td>Group III</td>
<td>2,900</td>
<td>1.05</td>
</tr>
</tbody>
</table>

How are Risk Scores Developed?
- 55 yo male patient -

<table>
<thead>
<tr>
<th>Service From Date</th>
<th>Service Thru Date</th>
<th>Claim Paid Date</th>
<th>ICD-9-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/14/2009</td>
<td>7/14/2009</td>
<td>8/6/2009</td>
<td>496 Chronic airway obstruction</td>
</tr>
<tr>
<td>8/14/2009</td>
<td>8/14/2009</td>
<td>8/27/2009</td>
<td>496 Chronic airway obstruction</td>
</tr>
</tbody>
</table>
Risk Scoring

Sample Patient
Age: 55
Sex: M

- Hypertension
- COPD
- Other Arthropathies

Relative Risk Score: 2.23

Risk Adjustment Vendors

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Open Source?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG</td>
<td>Johns Hopkins Univ.</td>
</tr>
<tr>
<td>CCS</td>
<td>AHRQ</td>
</tr>
<tr>
<td>CDPS</td>
<td>UC San Diego</td>
</tr>
<tr>
<td>CRG</td>
<td>3M</td>
</tr>
<tr>
<td>DCG</td>
<td>Verisk Health (DxCG)</td>
</tr>
<tr>
<td>ERG</td>
<td>Ingenix</td>
</tr>
<tr>
<td>MARA</td>
<td>Milliman</td>
</tr>
</tbody>
</table>

Note:
1. Sorted alphabetically.
2. The SOA conducted a RA comparison study and produced predictive accuracy benchmarks for commercial RA tools.
Risk Adjustment in ACOs

- ACO
  - Legal entity to take financial risks and accountable for economic and quality outcomes
  - ACO establishment and operational considerations
    - Patient assignment and volume
    - Data flow and collection
    - Reporting and evaluation
  - Risk adjustment for global payments
    - Risk adjustment formula
    - Reinsurance
    - Risk corridor
  - (Predictive) Analytics for ACOs

Transparency (and the lack of) in Risk Adjustment

- Methodology Transparency
- Fact check – Most risk adjustment models and methodologies are proprietary and not available to users
  - No complete transparency in most cases
  - How much insight can we gain beyond a simple risk score?

- Process Transparency
  - Data requirement
  - Data quality
How to Improve Transparency?

- Risk Score Composition -

Risk Score Composition

- Clinical Contributions -

Prospective Risk Drivers

Total Risk Score = 4.244

- Fatigue, Asthenia
- Other Than Chronic Fatigue Syndrome
- CHF
- Pneumonia
- Chest Pain
- Hypertension
- Sinusitis
- Other
- Appendicitis
- Diabetes
- Age/Sex

Contribution

3%
Risk Adjustment and Other Risk Mitigation Programs

RA often works together with other risk mitigation programs:

- Reinsurance – protection against catastrophic cases
  - Mostly stop-loss reinsurance
- Risk corridor – making payments more smoothed

Physician’s Checklist for RA-Related Questions

<table>
<thead>
<tr>
<th>Patients</th>
<th>Which patients are included in the global payment contract?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
<td>Are there any services carved out from global payment?</td>
</tr>
<tr>
<td>Model Choice</td>
<td>Which risk adjustment model is used in setting risk scores?</td>
</tr>
<tr>
<td></td>
<td>What information is used to generate risk scores?</td>
</tr>
<tr>
<td></td>
<td>Which software version, model ID, and specification</td>
</tr>
<tr>
<td></td>
<td>How well does the model predict for the kind of patients that I will be responsible for under the new global contract?</td>
</tr>
</tbody>
</table>
Physician’s Checklist for RA-Related Questions (cont.)

<table>
<thead>
<tr>
<th>Checklist</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Risk</td>
<td>Is there reinsurance provided and how?</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Is there risk corridor</td>
</tr>
<tr>
<td>Risk Adjustment</td>
<td>How often is budget settled based on risk adjustment</td>
</tr>
<tr>
<td>Process</td>
<td>How often are the risk scores reported back to me?</td>
</tr>
<tr>
<td></td>
<td>How does the risk adjustment process handle patients with partial-year eligibility?</td>
</tr>
<tr>
<td></td>
<td>What other factors are also included in determining the final risk scores?</td>
</tr>
</tbody>
</table>

**Benchmarks**
- Can risk scores on historical data be provided to me?

## Takeaways

- Risk adjustment is intended to level the playing field
- Risk adjustment is not perfect, but
  - Can be improved
  - Better than age/gender adjustment
- Coding accuracy and persistency affects the results of risk adjustment