Value Based P4P: Risk Adjustment Methodology

Value Based P4P – Webinar Series
May 11, 2015
Value Based P4P – Webinar Series

Today’s session is a bonus webinar in a series that digs into the Value Based P4P methodology:

• **101**: Value Based P4P 101
• **102**: Worksheet Review
• **103**: Performance Gates and TCC Specifications
• **201**: Shared Savings Calculation
• **202**: Resource Use Measure and Specifications
• **203**: Full Risk Organization Methodology
• **Extra Credit**: Risk Adjustment in Depth

*Did you miss a previous webinar? Slides and recording are now available at www.iha.org*
Risk Adjustment

• Accounts for illness burden of population

• Increasing use in health care
  • ACA health plan premium adjustment
  • Medicare Advantage health plan payment
  • Pioneer and Next Generation ACO benchmarking

• In Value Based P4P, allows for fair comparisons on key resource use measures (1) across POs for a given point in time and (2) across time for a given PO
  • Inpatient Bed Days (IPBD)
  • All-Cause Readmissions (PCR)
  • Emergency Department Visits (EDV)
  • Total Cost of Care (TCC)
Importance of Risk Adjustment

- Proper documentation of member risk supports more accurate measure of performance, better results
- Higher risk $\rightarrow$ higher expected costs (or utilization) $\rightarrow$ lower risk adjusted costs

<table>
<thead>
<tr>
<th></th>
<th>Observed costs</th>
<th>Relative Risk Score</th>
<th>Expected costs</th>
<th>Total Cost of Care $^1$ (risk-adjusted, lower is better)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO A</td>
<td>$3,500</td>
<td>1.0</td>
<td>$3,500</td>
<td>$3,500</td>
</tr>
<tr>
<td>PO B</td>
<td>$3,500</td>
<td>1.2</td>
<td>$4,200</td>
<td>$2,917</td>
</tr>
<tr>
<td>PO C</td>
<td>$4,200</td>
<td>1.0</td>
<td>$3,500</td>
<td>$4,200</td>
</tr>
<tr>
<td>PO D</td>
<td>$4,200</td>
<td>1.2</td>
<td>$4,200</td>
<td>$3,500</td>
</tr>
</tbody>
</table>

$^1$ TCC = Observed/Expected * Population Average
Risk Adjustment Generally

- Statistical and actuarial models that organize and translate clinical information about members into a prediction of health care resource use (e.g. costs, bed days)

**INPUTS**
- Clinical info
  - Clinical info may include:
    - Diagnoses codes
    - Prescription fills
    - Procedures

**RISK ADJUSTMENT MODEL**
- Condition mapping
- Statistical model

**OUTPUTS**
- Risk Score
  - or Predicted Utilization
  - or Cost

Examples of models:
- HCC
- DCG
- ACG
- ERG

**Condition mapping** (part of the model that organizes clinical information)
### Risk Adjustment in Value Based P4P

<table>
<thead>
<tr>
<th>P4P Measure</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-Cause Readmissions (PCR)</td>
<td>HCC</td>
</tr>
<tr>
<td>Inpatient Bed Days (IPBD)</td>
<td>DCG</td>
</tr>
<tr>
<td>Inpatient Discharges (IPU)</td>
<td>DCG</td>
</tr>
<tr>
<td>Emergency Department Visits (EDV)</td>
<td>DCG</td>
</tr>
<tr>
<td>Total Cost of Care (TCC)</td>
<td>DCG</td>
</tr>
<tr>
<td>Frequency of Selected Procedures</td>
<td>Age and gender</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>CMS DRG</td>
</tr>
</tbody>
</table>
DCG used in Value Based P4P

• DCG developed and licensed from Verisk Healthcare.
• Measures run by Truven Health Analytics on data supplied by the health plans.
• Concurrent
  • Uses claims and encounters for the same period as the cost or utilization being adjusted
• Diagnosis codes from all medical claims and encounters, except:
  • Pharmacy claims/encounters
  • Radiology claims/encounters
  • Laboratory claims/encounters
• Two models used:
  • IPBD, IPU, EDV → Model 18 (not truncated)
  • TCC → Model 19 (truncated at $100,000, i.e. predicts costs up to $100,000)
Each ICD-9-CM code maps to one DxGroup (clinically homogeneous). Most patients have multiple DxGroups.

CCs are clinical groupings of DxGroups that are related and imply similar resource use (organized by body system or disease group).

31 hierarchies are imposed on the CCs to produce HCCs. These clinical hierarchies identify the most costly manifestation of each distinct disease.

- ICD-9-CM codes (n = 15,000+)
  - DxGroups (n ≈ 800)
    - Condition Categories (CCs) (n ≈ 200)
      - 31 hierarchies imposed for predictions
        - Hierarchical Condition Categories (HCCs) (n ≈ 200)
**HCC hierarchy for Diabetes:**

An example of a hierarchy. When a patient is initially diagnosed with a condition, they may receive less severe or less specific diagnoses. As the physician learns more or the patient progresses through the disease, the Dx can get more specific. More specific means better predictive power. The higher predictive power HCC “trumps” the less predictive one. In other words, if you have Diabetes with Acute complications, we expect your cost to be X, regardless of whether you have another Dx of Diabetes with no/unspecified complications.

If someone has both HCC 17 and 19, for example, only 17 will be used in predicting risk.
Risk scores are a function of both:

- **Encounter/claims submission**
  - i.e., are all encounters for office visits (and other appropriate services) sent to health plan and included by health plan in ARU and TCC measure data?
  - If encounters aren’t available in the data, neither will the Dx that would have been captured in the encounters

- **Depth of Dx coding**
  - i.e., on claims and encounters, are physician offices fully coding the member’s clinical conditions?
  - Are those codes being included in the data feeds?
Relative risk scores are the basis for risk adjustment in the Total Cost of Care and several ARU measures. PO risk scores are strongly correlated with encounter rates (correlation of +0.3963, p<0.0001). Higher risk scores reflect a sicker population and more complete diagnosis capture, resulting in higher expected utilization and – in turn – better performance.

![Risk Capture Diagram](image-url)
What you can do?

• Risk adjustment is only as good as underlying data…

• …Make sure the risk of your members is fully coded by providers and transmitted to health plans
  ✓ Ensure providers appropriately and specifically document all acute, chronic, and status conditions every year
  ✓ Support thorough diagnosis coding
    • P4P uses:
      • Up to 7 diagnosis codes on professional
      • Up to 13 diagnosis codes on facility
  ✓ Confirm complete encounter and claims transmission and acceptance by health plans
ARU Report - RRS Tables

Available at [https://analytics.iha.org/](https://analytics.iha.org/) (Measures → ARU Tab → RRS Information)

<table>
<thead>
<tr>
<th>Member Characteristics</th>
<th>Benchmark (Population Rate)</th>
<th>PO's Total (Across All Plans)</th>
<th>Aetna</th>
<th>Anthem Blue Cross</th>
<th>Blue Shield of California</th>
<th>Cigna HealthCare</th>
<th>Health Net</th>
<th>Sharp</th>
<th>UnitedHealthcare</th>
<th>Western Health Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Years of Enrollment</td>
<td>Average Relative Risk Score</td>
<td>Median Age</td>
<td>Percent Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent of Professional Claims/Encounters with Code Available</th>
<th>Benchmark (Population Rate)</th>
<th>PO's Total (Across All Plans)</th>
<th>Aetna</th>
<th>Anthem Blue Cross</th>
<th>Blue Shield of California</th>
<th>Cigna HealthCare</th>
<th>Health Net</th>
<th>Sharp</th>
<th>UnitedHealthcare</th>
<th>Western Health Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dx1</td>
<td>Dx2</td>
<td>Dx3</td>
<td>Dx4</td>
<td>Dx5</td>
<td>Dx6</td>
<td>Dx7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent of Facility Claims/Encounters with Code Available</th>
<th>Benchmark (Population Rate)</th>
<th>PO's Total (Across All Plans)</th>
<th>Aetna</th>
<th>Anthem Blue Cross</th>
<th>Blue Shield of California</th>
<th>Cigna HealthCare</th>
<th>Health Net</th>
<th>Sharp</th>
<th>UnitedHealthcare</th>
<th>Western Health Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dx1</td>
<td>Dx2</td>
<td>Dx3</td>
<td>Dx4</td>
<td>Dx5</td>
<td>Dx6</td>
<td>Dx7</td>
<td>Dx8</td>
<td>Dx9</td>
<td>Dx10</td>
<td>Dx11</td>
</tr>
</tbody>
</table>
Questions

- Questions regarding P4P program and policies should be directed to p4p@iha.org