Session 88 PD, Risk Adjusters in Medicaid

Moderator:
Robert Michael Damler, FSA, MAAA

Presenters:
Denise Blank
Todd Gilmer, Ph.D.
2015 Annual Meeting & Exhibit
Session 88PD: Risk Adjusters in Medicaid

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Risk Adjustment in Medicaid Using CDPS

Todd Gilmer, PhD
University of California, San Diego
Department of Family Medicine and Public Health
Overview

- Program and Policy Goals of Risk Adjustment
- Brief History of Risk Adjustment
- Risk Adjustment using CDPS
- Opportunity Frameworks Supported by Risk Adjustment
Program and Policy Goals of Risk Adjustment
What is Risk Adjustment?

- Health based risk assessment – measuring illness burden at the individual or group level using indicators of health status such as diagnoses, pharmaceuticals, cognitive / functional limitations.

- Health based risk adjustment – using estimated illness burden to compare populations, adjust outcomes, or adjust health plan payments.
### Why is Risk Adjustment Necessary?

<table>
<thead>
<tr>
<th>% of Population</th>
<th>% of Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>30%</td>
</tr>
<tr>
<td>10%</td>
<td>72%</td>
</tr>
<tr>
<td>50%</td>
<td>95%</td>
</tr>
</tbody>
</table>
Goals of Risk Adjustment

- To make **equitable comparisons** among health plans that take the health status of their enrolled members into consideration
- To **minimize the incentives** for plans and providers from selectively enrolling healthier members
- To provide **adequate financing** for those who treat individuals with higher-than-average health needs
Reason for Risk Variation

- A particular health plan’s provider network may predispose it to certain risk selections (e.g., those affiliated with academic medical centers)
- Some geographic regions may include a sicker-than-average mix of enrollees
- Some provider groups may attract specific population subsets (e.g. diabetes, AIDS, children with disabilities)
Benefits of Risk Adjustment

- Allows states to foster competition based on quality and efficiency rather than on risk selection.
- Allows health plans to promote efficiency in care management without the accompanying expenditure risk that results from attracting a sicker population.
- Supports health plans that attract clients with specific service needs.
Key Ingredients for Successful HBP
equitable data
equitable data
equitable data
equitable data
Brief History of Risk Adjustment
History of Risk Adjustment

- Risk adjustment systems developed in academia in the 1990s as a method to adjust capitated payments
- First models targeted Medicare (DCGs, ACGs)
- Medicare was an early promoter but a late adaptor
- Medicaid risk adjustment begins in 1997 (ACGs, CDPS)
- Medicare Part C risk adjustment in 2004 (mod-HCC)
- Medicare Part D risk adjustment in 2006 (mod-HCC)
### Medicaid Health-Based Payment Activities

<table>
<thead>
<tr>
<th>State</th>
<th>Population Covered</th>
<th>Year Implemented</th>
<th>Classification System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maryland</td>
<td>SSI + TANF</td>
<td>1997</td>
<td>ACG</td>
</tr>
<tr>
<td>Colorado</td>
<td>SSI + TANF</td>
<td>1997</td>
<td>CDPS</td>
</tr>
<tr>
<td>Oregon</td>
<td>SSI + TANF</td>
<td>1998</td>
<td>CDPS</td>
</tr>
<tr>
<td>Utah</td>
<td>SSI</td>
<td>1998</td>
<td>CDPS</td>
</tr>
<tr>
<td>Michigan</td>
<td>SSI</td>
<td>2000</td>
<td>CDPS</td>
</tr>
<tr>
<td>Minnesota</td>
<td>TANF</td>
<td>2000</td>
<td>ACG</td>
</tr>
<tr>
<td>Delaware</td>
<td>SSI + TANF</td>
<td>2000</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>Tennessee</td>
<td>SSI + TANF</td>
<td>2000</td>
<td>ACG</td>
</tr>
<tr>
<td>New Jersey</td>
<td>SSI + TANF</td>
<td>2000</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>SSI + TANF</td>
<td>2003</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>Virginia</td>
<td>SSI + TANF</td>
<td>2003</td>
<td>CDPS</td>
</tr>
<tr>
<td>Washington</td>
<td>TANF</td>
<td>2003</td>
<td>CDPS</td>
</tr>
<tr>
<td>Ohio</td>
<td>SSI + TANF</td>
<td>2006</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>Florida</td>
<td>SSI + TANF</td>
<td>2006</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>California</td>
<td>SSI + TANF</td>
<td>2009</td>
<td>Medicaid Rx</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>SSI + TANF</td>
<td>2009</td>
<td>DxCG</td>
</tr>
<tr>
<td>Arizona</td>
<td>SSI + TANF</td>
<td>2009</td>
<td>ERG</td>
</tr>
<tr>
<td>Louisiana</td>
<td>SSI + TANF</td>
<td>2012</td>
<td>ACG</td>
</tr>
<tr>
<td>New York</td>
<td>SSI + TANF</td>
<td>2012</td>
<td>CRG</td>
</tr>
<tr>
<td>Missouri</td>
<td>TANF</td>
<td>2012</td>
<td>CDPS+Rx</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>SSI + TANF</td>
<td>2014</td>
<td>Medicaid Rx</td>
</tr>
</tbody>
</table>
Risk Adjustment in Health Care Reform

- State health insurance exchanges will use risk adjustment to adjust payments to health plans that are participating in the exchange.

- Medicaid programs may use risk adjustment to adjust capitation payment to managed care plans that provide coverage for their expansion populations.
Risk Adjustment using CDPS
Chronic Illness and Disability Payment System

- CDPS is a risk adjustment system for Medicaid that maps diagnoses to 58 CDPS categories corresponding to major body systems or chronic diseases
- CDPS is similar to the HCC models used for Medicare, but places a greater emphasis on less common, but costly chronic conditions that are more prevalent among disabled Medicaid beneficiaries
- CDPS models for disabled, TANF Adults, and TANF Children
Major CDPS Categories

- Cardiovascular, Psychiatric, Skeletal, Central Nervous System, Pulmonary, Gastrointestinal, Diabetes, Skin, Renal, Substance Abuse, Cancer, Developmental Disability, Genital, Metabolic, Pregnancy, Eye, Cerebrovascular, AIDS/Infectious Disease, Hematological
Medicaid RX Model

- Pharmaceutical based model uses National Drug Codes (NDC) to assign 45 therapeutic categories
- Developed as an alternative to diagnosis based models when the health plan encounter data is low quality
- Combined CDPS + Rx model using 15 MRX categories that were considered to be the least affected by practice patterns
Pharmacy-based models

• Diagnostic vs. pharmacy-based classification
• Advantages:
  – Accessible data source
  – Completes very quickly (less data “lag”)
  – Relatively straightforward claims processing
• Disadvantages:
  – Only utilizes one data source
  – Changes in drug usage and prescription patterns
  – Not as clinically robust
• Considerations for ACA Medicaid expansion
## Prospective CDPS Weights

- Cardiovascular, very high: 2.037
- Cardiovascular, medium: 0.805
- Cardiovascular, low: 0.368
- Cardiovascular, extra low: 0.130
- Psychiatric, high: 0.955
- Psychiatric, medium: 0.626
- Psychiatric, medium low: 0.325
- Psychiatric, low: 0.206
Calculating Payments for Health Plans

- Average the risk scores of all plan enrollees with eligibility in the ‘observation’ period
- Calculate weighted average of all plans; normalize to 1.0 to assure budget neutrality
- Pay each plan its normalized risk score multiplied by the base rate (e.g., $800 PMPM for disabled)
Actuarial Adjustments

- Partial capitation
- Partial risk adjustment
- Risk corridors
- Reinsurance
- Carve-outs (with weight options)
  - Behavioral health carve-outs
  - Pregnancy / delivery carve-outs
  - Pharmacy carve-outs
Opportunity Frameworks Supported by Risk Adjustment
Opportunity Frameworks to Improve the Quality and Efficiency of Health Care

- Chronic Care Model
- Accountable Care Organizations
- Health Homes
- Integration of Physical and Mental Health and Substance Abuse Services
- Disease Care Management
- Complex Chronic Disease Case Management
Common Elements

- Team based care
  - Reorientation from the physician centric model
  - Collaboration and communication is essential
  - Expanded workforce

- Care management
  - Nurses focused on complex chronic conditions
  - Social workers focused on mental health, care transitions, social issues
  - Pharmacists focused on complex pharmacotherapy
  - Peers focused on education and self management training

- IT needed to support the above efforts
Summary

- Risk adjustment is necessary to promote efficiency and to reduce incentives for risk selection
- Risk adjustment appears to get more money to plans that serve sicker people
- Equitable data is a key challenge
- Opportunities for health plans to improve the quality and efficient of health care while supported by risk adjustment
Additional Resources

- CDPS website: cdps.ucsd.edu
- Email: tgilmer@ucsd.edu
MAKING YOUR DATA WORK FOR YOU

TURNING RISK ASSESSMENT RESULTS INTO MEANINGFUL INFORMATION

OCTOBER 13, 2015

Denise Blank
Principal, Mercer Government Human Services Consulting
Getting the most out of risk adjustment — practical applications
- Rate adjustment
- Targeting disease and case management efforts
- Benchmarking
- Others (replacing age/sex)

Claims-data extraction — getting the most out of your claims
- Impact of data on risk scores
- “Real world” lessons learned

Long-term care risk models

Closing remarks
- Actuarial considerations
- Additional resources
GETTING THE MOST OUT OF RISK ADJUSTMENT RESULTS
PRACTICAL APPLICATIONS
PRACTICAL APPLICATIONS
RISK ADJUSTING CAPITATION PAYMENTS

• Commonly used application in Medicaid, Medicare, and Commercial markets.

• Goal is to:
  – Increase revenue for plans enrolling sicker members
  – Reduce revenue for plans enrolling healthier members
  – Redistribute payments among plans
  – Impact of budget neutrality

<table>
<thead>
<tr>
<th></th>
<th>Plan A</th>
<th>Plan B</th>
<th>Plan C</th>
<th>All Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base rate</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Raw risk score</td>
<td>1.1550</td>
<td>1.0290</td>
<td>0.9660</td>
<td>1.0500</td>
</tr>
<tr>
<td>Budget neutral risk</td>
<td>1.1000</td>
<td>0.9800</td>
<td>0.9200</td>
<td>1.0000</td>
</tr>
<tr>
<td>Risk adjusted rate</td>
<td>$1,100</td>
<td>$ 980</td>
<td>$ 920</td>
<td>$1,000</td>
</tr>
</tbody>
</table>
### Practical Applications

**Identifying Members for Care Intervention**

- Risk adjustment can be used to identify members for care and/or disease management.
- Using available risk scores and disease classifications.

#### Population XYZ - Chronic Disease Summary

<table>
<thead>
<tr>
<th>Clinical Profile</th>
<th>Risk profile</th>
<th>Members</th>
<th>Distribution</th>
<th>Avg Risk score</th>
<th>Average PMPM</th>
<th>Total Dollars</th>
<th>% of Total Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>no conditions</td>
<td>17,850</td>
<td>18.9%</td>
<td>0.09</td>
<td>$55.97</td>
<td>$999,149</td>
<td>1.8%</td>
</tr>
<tr>
<td>Level 2</td>
<td>1 condition</td>
<td>15,371</td>
<td>16.3%</td>
<td>0.33</td>
<td>$198.38</td>
<td>$3,049,362</td>
<td>5.4%</td>
</tr>
<tr>
<td>Level 3</td>
<td>2-3 comorbidities</td>
<td>27,549</td>
<td>29.2%</td>
<td>0.77</td>
<td>$462.21</td>
<td>$12,733,550</td>
<td>22.5%</td>
</tr>
<tr>
<td>Level 4</td>
<td>4-5 comorbidities</td>
<td>19,297</td>
<td>20.4%</td>
<td>1.37</td>
<td>$823.05</td>
<td>$15,882,477</td>
<td>28.1%</td>
</tr>
<tr>
<td>Level 5</td>
<td>6+ comorbidities</td>
<td>14,298</td>
<td>15.2%</td>
<td>2.79</td>
<td>$1,675.37</td>
<td>$23,954,462</td>
<td>42.3%</td>
</tr>
<tr>
<td>Total</td>
<td>All</td>
<td>94,365</td>
<td>100.0%</td>
<td>1.00</td>
<td>$600.00</td>
<td>$56,619,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

#### Disease Condition Summary

- **Members**
  - no conditions: 17,850
  - 1 condition: 15,371
  - 2-3 comorbidities: 27,549
  - 4-5 comorbidities: 19,297
  - 6+ comorbidities: 14,298

- **Dollars by Condition Summary**
  - no conditions: 1.8%
  - 1 condition: 5.4%
  - 2-3 comorbidities: 22.5%
  - 4-5 comorbidities: 28.1%
  - 6+ comorbidities: 42.3%
PRACTICAL APPLICATIONS
IDENTIFYING MEMBERS FOR CARE INTERVENTION (CONT’D)

Some risk adjustment models have specific modules to identify:

- Members likely to be high utilizers
- Members at risk for hospitalization
- Members at risk for unexpected high pharmacy utilization
- Members non-compliant with drug treatment protocols

Benefits of risk assessment tools for care intervention:

- Can identify members earlier
- Use a limited amount of data

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Risk adjustment allows for a meaningful comparison of plans/providers experience.

Plan example: measuring plan efficiency:
- Adjust plan-reported per member per month (PMPM) costs by population risk
- Places all plans on a comparable basis
- Measure which plans are providing care at the lowest cost

<table>
<thead>
<tr>
<th></th>
<th>Plan A</th>
<th>Plan B</th>
<th>Plan C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported PMPM costs</td>
<td>$450.00</td>
<td>$500.00</td>
<td>$550.00</td>
</tr>
<tr>
<td>Budget neutral risk score</td>
<td>0.8800</td>
<td>0.9700</td>
<td>1.1500</td>
</tr>
<tr>
<td>Adjusted PMPM costs</td>
<td>$511.36</td>
<td>$515.46</td>
<td>$478.26</td>
</tr>
</tbody>
</table>
• Provider example — Provider Profiling:
  – Measure expected costs/utilization based on member risk profile.
  – Comparison of actual versus expected costs and/or utilization.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Observed (O)</th>
<th>Expected (E)</th>
<th>O/E Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hospital Utilization per 1,000</td>
<td>35</td>
<td>40</td>
<td>0.88</td>
</tr>
<tr>
<td>Emergency Department Utilization per 1,000</td>
<td>150</td>
<td>130</td>
<td>1.15</td>
</tr>
<tr>
<td>Pharmacy PMPM costs</td>
<td>$130</td>
<td>$125</td>
<td>1.04</td>
</tr>
</tbody>
</table>
**PRACTICAL APPLICATIONS**

**ADDITIONAL ANALYSES**

- Essentially risk scores can substitute any analysis where traditional age/gender information is used:
  - Pricing new populations compared to existing
  - Selection adjustment
  - Geographic studies
  - Trend evaluation (example provided below)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Annual Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed PMPM</td>
<td>$300.00</td>
<td>$306.00</td>
<td>$325.00</td>
<td></td>
</tr>
<tr>
<td>Risk Scores</td>
<td>0.9000</td>
<td>0.8800</td>
<td>0.8825</td>
<td></td>
</tr>
<tr>
<td>Adjusted PMPM</td>
<td>$333.33</td>
<td>$347.73</td>
<td>$368.27</td>
<td></td>
</tr>
<tr>
<td>Observed Trend</td>
<td>2.0%</td>
<td>6.2%</td>
<td>4.1%</td>
<td></td>
</tr>
<tr>
<td>Adjusted Trend</td>
<td>4.3%</td>
<td>5.9%</td>
<td>5.1%</td>
<td></td>
</tr>
</tbody>
</table>
CLAIMS DATA EXTRACTION
GETTING THE MOST OUT OF YOUR CLAIMS
CLAIMS DATA EXTRACTION
DATA IMPACT ON RISK SCORES

• While there are many different models and assumptions impacting results, risk adjustment is a data intensive process.

• #1 lesson learned in risk adjustment: Data is a big deal!

• Accuracy — specificity and accuracy in coding for:
  – Member eligibility/cohort classification
  – Provider coding (including coding intensity)
  – Claims reporting, processing procedures, MMIS edits, etc.

• Completeness:
  – Claims volume
  – Claims payment/processing lag
  – Diagnosis code volume

• Importance of Budget Neutrality.
**DATA IMPACT ON RISK SCORES**

**“REAL WORLD” EXAMPLES**

- Developed case studies based on actual data from three Medicaid health plans operating in a Northeastern state:
  - Temporary assistance to needy families adult populations.
  - Chronic Illness and Disability Payment System with pharmacy model was utilized.

- Studies were developed to gauge the impact on raw and budget neutral risk scores within the following areas related to data completeness:
  - Length of data lag
  - Missing monthly data
  - Missing diagnosis information

- Looked at results overall.
- Isolated “Plan B” in each scenario.
“REAL WORLD” EXAMPLES

CASE STUDY #1 — SHORTEN DATA LAG

Timely (or untimely) data reporting can have a significant impact on health plan risk scores.

Mercer tested the impact on risk scores of using various lengths of claims lag within the risk adjustment process.

Overall program results were calculated, and Plan B was isolated to determine individual impact.
“REAL WORLD” EXAMPLES
CASE STUDY #1 — SHORTEN DATA LAG (CONT’D)

• Six months of data lag is commonly used within risk adjustment.
• What impact does data lag have on risk scores?
• Example claims volume chart:
"REAL WORLD" EXAMPLES
CASE STUDY #1 — SHORTEN DATA LAG (CONT’D)

Data Lag Impact - Budget Neutral

<table>
<thead>
<tr>
<th>BN Risk Score</th>
<th>6 months lag</th>
<th>3 month lag</th>
<th>0 month lag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A</td>
<td>0.967</td>
<td>0.967</td>
<td>0.969</td>
</tr>
<tr>
<td>Plan B</td>
<td>0.952</td>
<td>0.952</td>
<td>0.950</td>
</tr>
<tr>
<td>Plan C</td>
<td>1.040</td>
<td>1.040</td>
<td>1.041</td>
</tr>
</tbody>
</table>

0.3%  -0.2%  0.1%
CASE STUDY #1 — SHORTEN DATA LAG (CONT’D)

Plan B Impact - Budget Neutral

<table>
<thead>
<tr>
<th></th>
<th>6 months lag</th>
<th>3 month lag</th>
<th>0 month lag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A</td>
<td>0.967</td>
<td>0.967</td>
<td>0.976</td>
</tr>
<tr>
<td>Plan B</td>
<td>0.952</td>
<td>0.951</td>
<td>0.934</td>
</tr>
<tr>
<td>Plan C</td>
<td>1.040</td>
<td>1.041</td>
<td>1.051</td>
</tr>
</tbody>
</table>

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Incomplete and/or missing data submission can have a significant impact on health plan risk scores.

Mercer tested the impact of removing months of claims data reported by the health plans.

Overall program results were calculated, and Plan B was isolated to determine individual impact.
"REAL WORLD" EXAMPLES
CASE STUDY #2 — MISSING MONTHS OF DATA (CONT’D)

- Plans will occasionally report lower claims volume during a given month.
- What impact do low monthly data submissions have on risk scores?
- Example claims volume chart:
**“REAL WORLD” EXAMPLES**

**CASE STUDY #2 — MISSING MONTHS OF DATA (CONT’D)**

![Graph showing missing months impact - Budget Neutral](image_url)

<table>
<thead>
<tr>
<th></th>
<th>All Months</th>
<th>Missing 1 Month</th>
<th>Missing 2 Months</th>
<th>Missing 3 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan A</strong></td>
<td>0.967</td>
<td>0.967</td>
<td>0.967</td>
<td>0.967</td>
</tr>
<tr>
<td><strong>Plan B</strong></td>
<td>0.952</td>
<td>0.952</td>
<td>0.952</td>
<td>0.952</td>
</tr>
<tr>
<td><strong>Plan C</strong></td>
<td>1.040</td>
<td>1.040</td>
<td>1.040</td>
<td>1.040</td>
</tr>
</tbody>
</table>

- **Plan A**: -0.006%
- **Plan B**: 0.005%
- **Plan C**: -0.002%

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CASE STUDY #2 — MISSING MONTHS OF DATA (CONT’D)

Plan B Impact - Budget Neutral

<table>
<thead>
<tr>
<th></th>
<th>All Months</th>
<th>Missing 1 Month</th>
<th>Missing 2 Months</th>
<th>Missing 3 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A</td>
<td>0.967</td>
<td>0.974</td>
<td>0.983</td>
<td>0.992</td>
</tr>
<tr>
<td>Plan B</td>
<td>0.952</td>
<td>0.937</td>
<td>0.920</td>
<td>0.903</td>
</tr>
<tr>
<td>Plan C</td>
<td>1.040</td>
<td>1.049</td>
<td>1.058</td>
<td>1.068</td>
</tr>
</tbody>
</table>

2.6%    -5.2%    2.6%
Diagnosis codes (ICD-9 codes) are the building blocks within many risk adjustment models (soon to be ICD-10).

Mercer tested the impact of removing diagnosis codes reported by the health plans.

Overall program results were calculated, and Plan B was isolated to determine individual impact.
“REAL WORLD” EXAMPLES
CASE STUDY #3 — MISSING DIAGNOSIS CODES (CONT’D)

- Plans may have challenges collecting and reporting complete diagnosis data from providers.

- What impact does incomplete diagnosis data have on risk scores?

- Example diagnosis data statistics:

<table>
<thead>
<tr>
<th>% Dx Populated</th>
<th>Plan A</th>
<th>Plan B</th>
<th>Plan C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Diagnosis</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2nd Diagnosis</td>
<td>56%</td>
<td>52%</td>
<td>73%</td>
</tr>
<tr>
<td>3rd Diagnosis</td>
<td>33%</td>
<td>0%</td>
<td>41%</td>
</tr>
<tr>
<td>4th Diagnosis</td>
<td>20%</td>
<td>0%</td>
<td>24%</td>
</tr>
<tr>
<td>5th Diagnosis</td>
<td>13%</td>
<td>0%</td>
<td>15%</td>
</tr>
</tbody>
</table>
“REAL WORLD” EXAMPLES
CASE STUDY #3 — MISSING DIAGNOSIS CODES (CONT’D)

**Missing Diagnosis Impact - Budget Neutral**

<table>
<thead>
<tr>
<th>BN Risk Score</th>
<th>5 Dx</th>
<th>4 Dx</th>
<th>3 Dx</th>
<th>2 Dx</th>
<th>1 Dx</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan A</strong></td>
<td>0.967</td>
<td>0.967</td>
<td>0.970</td>
<td>0.976</td>
<td>0.964</td>
</tr>
<tr>
<td><strong>Plan B</strong></td>
<td>0.952</td>
<td>0.954</td>
<td>0.956</td>
<td>0.961</td>
<td>0.955</td>
</tr>
<tr>
<td><strong>Plan C</strong></td>
<td>1.040</td>
<td>1.039</td>
<td>1.037</td>
<td>1.032</td>
<td>1.039</td>
</tr>
</tbody>
</table>

-0.2% 0.3% -0.1%
“REAL WORLD” EXAMPLES
CASE STUDY #3 — MISSING DIAGNOSIS CODES (CONT’D)

Plan B Impact - Budget Neutral

<table>
<thead>
<tr>
<th>BN Risk Score</th>
<th>5 Dx</th>
<th>4 Dx</th>
<th>3 Dx</th>
<th>2 Dx</th>
<th>1 Dx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan A</td>
<td>0.967</td>
<td>0.968</td>
<td>0.974</td>
<td>0.987</td>
<td>1.018</td>
</tr>
<tr>
<td>Plan B</td>
<td>0.952</td>
<td>0.950</td>
<td>0.938</td>
<td>0.912</td>
<td>0.851</td>
</tr>
<tr>
<td>Plan C</td>
<td>1.040</td>
<td>1.042</td>
<td>1.048</td>
<td>1.063</td>
<td>1.096</td>
</tr>
</tbody>
</table>

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Budget neutrality may be a new, but important concept.

On a budget-neutral (i.e., normalized) basis, risk scores show some resilience to data assumptions when applied in a uniform manner, across all health plans.

Data, data, data, it’s always about the data:

• Whether using a distributed or central data collection method, health plans and states implementing risk adjustment systems should develop strong data reporting and monitoring processes.
• Since risk adjustment uses historical information, by the time risk adjustment is implemented, it may be too late to fix.
• Provider coding is crucial — big changes coming up!
LOOKING ON THE HORIZON
LONG-TERM CARE RISK ADJUSTMENT
LONG-TERM CARE RISK ADJUSTMENT
INTRODUCTION

• Quick Look:
  – Long term care (LTC) services cost $310 billion annually in the United States.*
  – Medicaid covers a little over 50% of these services.*
  – Very high percentage of Medicare/Medicaid Dually Eligible members.

• Risk Adjusting LTC:
  – Traditional risk adjustment models are not as predictive when evaluation home- and community-based (HCBS) and nursing facility services.
  – Still wide variation between Institutional and HCBS service costs between members.
  – Areas such as functional status have yielded much higher predictive results.

Source: Medicaid and Long-Term Services and Supports: A Primer: May 08, 2015 | Erica L. Reaves and MaryBeth Musumeci
Socio-Demographic:
• Age 80+.
• Female.

Functional:
• Bathing.
• Bowel incontinence.
• Dressing lower body limitation.
• Dressing upper body limitation.
• Feeding/eating.
• Grooming limitation.
• Medication management.
• Number of disruptive behaviors demonstrated.
• Number of impaired behaviors demonstrated.
• Speech limitation.
• Etc.

Disease Conditions:
• Examples:
  • Alzheimer’s disease and other dementia.
  • Chronic genitourinary diagnoses.
  • Chronic neuromuscular diagnoses.
  • Neurodegenerative chronic conditions.
  • Chronic renal failure.
  • Congestive heart failure.
  • Etc.

Interaction:
• Specific, high impact diagnosis.
• Ambulation capabilities.
LONG-TERM CARE RISK ADJUSTMENT

CHALLENGES/OPPORTUNITIES

• Challenges:
  – No national models exists.
  – Requires assessment data along with claims/financial information.

• Opportunities:
  – Demographic shifts (65+ double and 85+ triple of next 45 years).*
  – Yield very high predictive results (r-squared of over 0.40).
  – Encourages timely assessment for better outcomes.
  – Leveraging of existing models.

Source: Medicaid and Long-Term Services and Supports: A Primer: May 08, 2015 | Erica L. Reaves and MaryBeth Musumeci
CLOSING REMARKS
ASOP 45: The Use of Health Status Based Risk Adjustment Methodologies


Importance of equitable data

Leverage available risk adjustment expertise (actuarial and otherwise):

- Model to use
- Available weights versus recalibration
- Adjustments needed to accommodate the study
- Approaches to consider for unscored members

Once the data are run through a risk assessment model, the use of risk assessment tools can enhance many analyses.
CLOSING REMARKS
ADDITIONAL RESOURCES

• SOA 2007 evaluation of available models:
  – https://www.google.com/?gws_rd=ssl#q=SOA+risk+adjustment+study

• Web-sites for various risk assessment models:
  – Adjusted Clinical Groups (ACGs): http://acg.jhsph.org/
  – Clinical Risk Groups (CRGs):
  – Chronic Illness and Disability Payment System (CDPS): http://cdps.ucsd.edu/
  – Diagnostic Cost Groups (DxCG):
    http://www.veriskhealth.com/answers/population-answers/dxcg-risk-analytics
  – Episode Risk Groups (ERGs)
  – Milliman Advanced Risk Adjusters (MARA)
    http://us.milliman.com/Solutions/Products/Milliman-Advanced-Risk-Adjusters/