Why Risk Adjustment Is Every Lab’s Sure-Fire Way to Add Value: What It Is, How It Works, and Where Savings Are Found

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Northwell Health Labs
Creating a new market for lab data and analytics to mitigate financial exposure for payers and health systems
Outline

1. CareConnect saga
2. Risk adjustment background
3. The payer experience
4. Where lab comes in
5. Building the market
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2014: Northwell opens insurance arm

CareConnect

Markets:
- Individual
- Small Group
- Large Group

Enroll 11k people
2015: Rapid, unplanned growth

Health Republic of NY shut down: 200k people without coverage

65k new members
2016: Looming risk adjustment loss

In August, actuarial estimates show $100M liability.
2017: Decision to close

Lost $131M for 2016

Anticipating another $100M loss for 2017

Wound down operations Dec 2018
5 year misadventure; $263M loss

“Meanwhile, as CareConnect grew and enrollment increased, it became increasingly difficult to ignore the downstream effect of the ACA's risk-adjustment program... New York's smaller, more-innovative insurers like CareConnect wound up subsidizing larger competitors.”

- Michael Dowling, CEO Northwell Health
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Risk adjustment is a policy tool

• ≠ risk stratification

• Designed to pay health plans and providers in proportion to members’ expected costs

• Goals
  • Disincentivize cherry-picking
  • Resource payers and providers who care for high-risk populations
  • Allow fair comparisons of quality & performance metrics
Creating risk adjustment models

Member data

Demographics (age, sex)
Coverage eligibility (Medicaid, disability status)
Medical conditions (diagnosis codes)
Treatment received (drugs, procedure codes)
Prior healthcare expenses

Regression model

Cost of care
History: Managed Medicare

• 1980’s: payments adjusted geographically (county)

• 1990’s: age, gender, Medicaid status, nursing home resident status

• 2000: Diagnostic Cost Groups (DCG) based on prior year’s inpatient conditions

• 2004: Hierarchical Condition Categories (HCC) based on prior year’s treated conditions from any setting
Hierarchical Condition Categories

- Clinically meaningful
- Mostly chronic, predictable conditions
- Hard to up-code
- Defined by ICD diagnosis codes
## Example HHS-HCCs

<table>
<thead>
<tr>
<th>HCC</th>
<th>Condition</th>
<th>Score</th>
<th>PMPM</th>
<th>PMPY</th>
</tr>
</thead>
<tbody>
<tr>
<td>G01</td>
<td>Diabetes</td>
<td>1.3</td>
<td>$470</td>
<td>$5,645</td>
</tr>
<tr>
<td>G18</td>
<td>Newborn</td>
<td>3.7</td>
<td>$1,277</td>
<td>$15,334</td>
</tr>
<tr>
<td>254</td>
<td>Amputation of lower limb</td>
<td>5.3</td>
<td>$1,841</td>
<td>$22,100</td>
</tr>
<tr>
<td>2</td>
<td>Sepsis</td>
<td>10.7</td>
<td>$3,739</td>
<td>$44,877</td>
</tr>
<tr>
<td>159</td>
<td>Cystic fibrosis</td>
<td>18.0</td>
<td>$6,307</td>
<td>$75,692</td>
</tr>
<tr>
<td>158</td>
<td>Lung transplant</td>
<td>36.4</td>
<td>$12,747</td>
<td>$152,964</td>
</tr>
<tr>
<td>66</td>
<td>Hemophilia</td>
<td>46.7</td>
<td>$16,350</td>
<td>$196,207</td>
</tr>
</tbody>
</table>
New Health Plans Offer Discounts For Diabetes Care

Talk about targeted. Consumers scrolling through the health plan options on the insurance marketplaces in a few states this fall may come upon plans whose name — Leap Diabetes Plans — leaves no doubt about who should apply.

Offered by Aetna in four regions next year, the gold-level plans are tailored for the needs of people with diabetes. They feature $10 copays for the specialists diabetics need such as endocrinologists, ophthalmologists and podiatrists, and offer free blood sugar test strips, glucose monitors and other diabetic supplies.
Financial implementation

- Medicare Advantage: funded by our tax dollars
  - CMS pays payers with sicker patients ↑ capitated payments

- ACA: zero-sum redistribution among payers by state
  - Payers with healthier patients transfer payments to payers with sicker patients

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**The Price of Risk**
The Medicare Advantage program pays insurance companies a yearly fee for each person they enroll. And it pays more for people who are sick, to keep insurers from rejecting them because their care will cost more. The practice, called “risk adjustment,” gives insurers an incentive to tell the government that people are sicker than they may, in fact, be.

<table>
<thead>
<tr>
<th>MEDICARE ADVANTAGE PROGRAM</th>
<th>ANNUAL RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, age 70-74</td>
<td>$3,866</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL PAYMENT TO INSURER FOR SELECTED CONDITIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes without complications</td>
<td>$1,058</td>
</tr>
<tr>
<td>Breast, prostate and other cancers and tumors</td>
<td>1,480</td>
</tr>
<tr>
<td>Diabetes with acute complications</td>
<td>3,251</td>
</tr>
<tr>
<td>Drug/alcohol dependence</td>
<td>3,910</td>
</tr>
<tr>
<td>Major depressive, bipolar and paranoid disorders</td>
<td>4,039</td>
</tr>
<tr>
<td>Lung and other severe cancers</td>
<td>9,904</td>
</tr>
<tr>
<td>Metastatic cancer and acute leukemia</td>
<td>26,795</td>
</tr>
</tbody>
</table>

Source: Center for Public Integrity

By The New York Times
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Documenting HCCs in claims

1. Face-to-face encounter
2. During measurement period
3. With appropriate diagnosis code
4. Paid

Repeat annually
Payer challenges

- Reliance on claims data
- Timeliness
- Data gaps
- Member churn
Approaching risk adjustment..

Passively

- Wait for bills to roll in organically
- Audit sample of patient charts for missing diagnoses at the end of the year

Proactively

- Use historical HCCs, denied claims, prior authorizations, etc. to identify high risk members
- Incentivize members to get annual health assessments
- Give providers tools to encourage accurate documentation
Payers can be deeply involved
Risk adjusted populations ↑ coding


**Exhibit 2. Growth in Risk Scores Among Stayers, MA vs. FFS, 2004–2013**

*NOTE: 2004 HCC model, which here has been normalized to 1.00 for FFS in 2004. For payment purposes, this model was modified and recalibrated in 2007, 2009, 2013, and 2014. Risk scores were adjusted by –3.41%, starting in 2010. Diagnoses from FFS diagnostic radiology claims were excluded starting in 2008.*

*SOURCE: Authors' analysis of Medicare administrative data.*
Unintended consequences

Medicare Advantage: fraud

ACA: favored established companies with experience & longitudinal data
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Northwell timeline

2014 2015 2016 2017 2018

Opened CareConnect
0 → 11k members
$0.3 M loss

Closed CareConnect
19k → 0 members
$121 M loss

55k members
$11 M loss

86k members
$131 M loss

Decision to close

Lab involved
### Lab approach to HCC-identification

#### ACA Small Group & Individual Market

**2018 Hierarchical Condition Categories (HHS-HCC) Model**

Platinum level plans, Adult model segment

<table>
<thead>
<tr>
<th>HCC</th>
<th>HCC Name</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>Hemophilia</td>
<td>41.81</td>
</tr>
<tr>
<td>184</td>
<td>End Stage Renal Disease</td>
<td>33.27</td>
</tr>
<tr>
<td>125</td>
<td>Respirator Dependence/Tracheostomy Status</td>
<td>29.21</td>
</tr>
<tr>
<td>128</td>
<td>Heart Assistive Device/Artificial Heart</td>
<td>29.06</td>
</tr>
<tr>
<td>129</td>
<td>Heart Transplant</td>
<td>29.06</td>
</tr>
<tr>
<td>41</td>
<td>Intestine Transplant Status/Complications</td>
<td>29.06</td>
</tr>
<tr>
<td>158</td>
<td>Lung Transplant Status/Complications</td>
<td>28.34</td>
</tr>
<tr>
<td>251</td>
<td>Stem Cell, Including Bone Marrow, Transplant Status/Complications</td>
<td>27.36</td>
</tr>
<tr>
<td>8</td>
<td>Metastatic Cancer</td>
<td>25.16</td>
</tr>
<tr>
<td>23</td>
<td>Protein-Calorie Malnutrition</td>
<td>22.07</td>
</tr>
<tr>
<td>9</td>
<td>Lung, Brain, and Other Severe Cancers, Including Pediatric Acute Lymphoid Leukemia</td>
<td>12.16</td>
</tr>
<tr>
<td>67</td>
<td>Myelodysplastic Syndromes and Myelofibrosis</td>
<td>11.57</td>
</tr>
<tr>
<td>68</td>
<td>Aplastic Anemia</td>
<td>11.45</td>
</tr>
<tr>
<td>34</td>
<td>Liver Transplant Status/Complications</td>
<td>11.45</td>
</tr>
<tr>
<td>42</td>
<td>Peritonitis/Gastrointestinal Perforation/Necrotizing Enterocolitis</td>
<td>11.06</td>
</tr>
<tr>
<td>106</td>
<td>Traumatic Complete Lesion Cervical Spinal Cord</td>
<td>10.40</td>
</tr>
<tr>
<td>107</td>
<td>Quadriplegia</td>
<td>10.38</td>
</tr>
</tbody>
</table>

1. Assessed list of HCCs → which are **diagnosed** or **monitored** by lab test?

2. Focused on high-value, under-documented or under-recognized conditions
Lab approach to HCC-identification

- Roster of enrolled members
- Match to laboratory data warehouse
- Algorithms to identify HCCs
- HCC prediction to payer
Operationalizing lab insights

Retrospective approach

Supplemental diagnoses – HCCs not on claim but supported by clinical documentation

- Compare lab suspects against claims & isolate gaps
- Find eligible patient encounters
- Retrieve patient charts
- Code patient charts (ICD)
- Submit supplemental diagnoses to CMS
Lab impact on CareConnect in 2016

6% of lab leads operationalized with >10:1 ROI

<table>
<thead>
<tr>
<th>Condition</th>
<th>Identified via</th>
<th># Patients: Gap</th>
<th># Patients: Documented</th>
<th>Mitigation ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancers</td>
<td>Cancer Antigen 125 ≥ 200; AP</td>
<td>17</td>
<td>3</td>
<td>214,693</td>
</tr>
<tr>
<td>Diabetes</td>
<td>A1C ≥ 6.5</td>
<td>249</td>
<td>30</td>
<td>153,509</td>
</tr>
<tr>
<td>Transplant</td>
<td>Tacrolimus level</td>
<td>6</td>
<td>2</td>
<td>107,345</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Positive blood culture</td>
<td>9</td>
<td>1</td>
<td>88,870</td>
</tr>
<tr>
<td>Chronic hepatitis</td>
<td>Hepatitis B Surface Antigen</td>
<td>22</td>
<td>2</td>
<td>18,704</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>CCP Antibody</td>
<td>17</td>
<td>1</td>
<td>12,143</td>
</tr>
<tr>
<td>Seizures</td>
<td>Carbamazepine</td>
<td>6</td>
<td>1</td>
<td>6,987</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>Lithium</td>
<td>25</td>
<td>1</td>
<td>5,040</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>351</td>
<td>41</td>
<td>607,291</td>
</tr>
</tbody>
</table>
Improving our algorithms

- Clinical expertise
  - What tests would you use to diagnose/monitor this condition?

- Local practice of medicine
  - Ex: orders from hospital transplant unit

- Predictive analytics
  - Characterize test-ordering phenotype of patients with particular conditions

- Contribution of inpatient vs. outpatient data
Identifying HIV/AIDS

Commercial population in 2017:

100,000 members
↓
44,000 enrolled all year
↓
26,000 saw the lab
↓
54 had HIV documented in claims

+ 3 additional cases found via lab data

Diagnosis confirmed: $\text{3 \times 37,560 PMPY = 112,680}$
Identifying drug dependence

Commercial population in 2017:

100,000 members ↓
44,000 enrolled all year ↓
26,000 saw the lab ↓
100 had drug dependence documented in claims

+ 7 additional cases found via lab data

Multiple tests:
1. Alcohol Biomarkers Quant UR
2. Suboxone
3. Methadone Confirmation, UR
4. Amphetamine Confirmation UR
5. Opiate Confirmation UR
6. Cocaine Confirmation UR
7. Benzodiazepine Confirmation UR

Diagnosis confirmed:
7 x $16,094 PMPY = $112,658
Where lab adds value

Lab knows first
Data are diagnostic, discrete, objective, granular
Insurance coverage & setting of care agnostic
Reflect intention of providers
Stakeholders

• Payers
  • Medicare Advantage
  • ACA Small Group & Individual plans
  • Medicaid Managed (varies by state)

• Providers at shared/full risk
  • Value based contracts
  • Medicare Shared Savings Program
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To succeed at risk adjustment, payers & providers need to correctly identify members with risk adjustable conditions.

Can we predict who has ____?
Payers & providers already have tools to optimize risk adjustment. Can we convince them of the predictive power of lab?
Special Thanks

Tylis Y Chang, MD
Vice-Chair, Pathology Informatics
Northwell Health

James M Crawford, MD, PhD
Chair, Department of Pathology and Laboratory Medicine
Northwell Health

Rick VanNess, MS
Director, Product Management
TriCore Reference Laboratories

Michael Crossey, MD, PhD
Chief Executive Officer
TriCore Reference Laboratories