Pitfalls of Physician Profiling

Physician profiles are an important part of compliance with Ongoing Professional Practice Evaluation (CAMH standard MS.4.40). However, profiles can be “problem prone”. This session will examine common problems associated with physician profiling and then show you how to avoid them. Join us to learn about complex measures that are difficult to collect as well as measures with low physician acceptability and how to approach profiles for low volume physicians.

Presented by:

Henry Johnson, MD, MPH
Medical Director, ACS MIDAS+
Post-Symposium Availability

Shortly after the conclusion of this year’s Symposium, some General Session and all Breakout Session presentations will be available for downloading by licensed MIDAS+ clients from our Clients Only Web site.

The presentations will be available online in PDF format. Copies of presentations in native PowerPoint format are not generally available.
Pitfalls of Physician Profiling

Volume

Attribution

Acceptance by physicians
  – Severity adjustment

The search for the perfect metric

Implementation
  – How to roll this out
  – How to deliver the profiles
Volume issues:

- Really two issues here:
  - What percentage of your staff has sufficient volume to create a meaningful report with comparative data?
  - Even with high volume, does case volume allow statistical testing?

### Inpatient volume by attending physician CY 2005

<table>
<thead>
<tr>
<th>Volume Cases/ year</th>
<th># Attending</th>
<th>Percent of Physicians</th>
<th># Cases</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 100 cases / year</td>
<td>52</td>
<td>18.1%</td>
<td>15407</td>
<td>78.8%</td>
</tr>
<tr>
<td>50-99 cases / year</td>
<td>22</td>
<td>7.6%</td>
<td>1552</td>
<td>7.9%</td>
</tr>
<tr>
<td>20-49 cases / year</td>
<td>52</td>
<td>18.1%</td>
<td>1595</td>
<td>8.2%</td>
</tr>
<tr>
<td>10-19 cases per year</td>
<td>38</td>
<td>13.2%</td>
<td>601</td>
<td>3.1%</td>
</tr>
<tr>
<td>5-9 cases / year</td>
<td>30</td>
<td>10.4%</td>
<td>222</td>
<td>1.1%</td>
</tr>
<tr>
<td>&lt; 5 case / year</td>
<td>94</td>
<td>32.6%</td>
<td>179</td>
<td>0.9%</td>
</tr>
<tr>
<td></td>
<td>288</td>
<td></td>
<td>19556</td>
<td></td>
</tr>
</tbody>
</table>
### Volume by procedure: National mortality rates

<table>
<thead>
<tr>
<th>Procedure</th>
<th>National Mortality Rate</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>3.9%</td>
<td>195</td>
</tr>
<tr>
<td>CABG</td>
<td>3.5%</td>
<td>219</td>
</tr>
<tr>
<td>Craniotomy</td>
<td>10.7%</td>
<td>64</td>
</tr>
<tr>
<td>Esophageal resect</td>
<td>9.1%</td>
<td>77</td>
</tr>
<tr>
<td>Total hip</td>
<td>0.3%</td>
<td>2,668</td>
</tr>
<tr>
<td>Pancreatic resect</td>
<td>8.3%</td>
<td>86</td>
</tr>
<tr>
<td>Ped Heart Surg</td>
<td>5.4%</td>
<td>138</td>
</tr>
</tbody>
</table>

Sample size required to detect doubling of the rate

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### Surgical mortality as an indicator of hospital quality

“Except for CABG surgery, the operations for which surgical mortality has been advocated as a quality indicator are not performed frequently enough to judge hospital quality.”

*JAMA* 2004; 292:847–851
Conclusion:

- Don’t rely on volume-sensitive measures for practitioners with low volume
- Consider:
  - Should low-volume providers continue to be on the medical staff if you do not have access to data from other hospitals?
  - Pertains to privileges for even the high-volume physicians

Attribution

- Can the complete hospitalization be attributed to one physician?
  - Yes
    - Elective OR procedures with one responsible surgeon
  - Maybe
    - Admissions by a single physician with little cross coverage
    - Elective OR procedures where hospitalists are also involved for medical management
  - No
    - Non-elective medical admissions cared for by a hospitalist team
Partial Solutions to attribution issues

- Create reports by:
  - Attending physician
    - And be sure you understand what Health Information means by “attending.”
  - Principal procedure provider
  - Discharge physician
- For doctors in groups, profile the group, and let the head of the group work on profiling individual performance:
  - He/she is accountable for the quality delivered by the group
  - This does not completely solve the issue of the individual physician profile on a high volume hospitalist

Acceptance by Physicians

- Measures should be valid, accurate, and reliable
- Severity adjustment, when appropriate
  - “My patients are sicker.”
- “Seek Enlightenment”
  - Lead physicians to understand that payers, including Medicare [CMS], already have access to a wealth of administrative data and routinely profile providers for their own use
Severity adjustment

• A term used almost exclusively for clinical data:
  – A way of “adjusting” for different levels of “illness” within a population of interest

• In epidemiology, commonly known as risk adjustment:
  – The dependent variable is your outcome of interest, the independent variables are the “risk factors” for the outcome, with or without causality

Severity adjustment systems

• APR DRGs:
  – All Patient refined DRGs
  – Four Severity of Illness and four Risk of Mortality subclasses

• CMS-DRGs:
  – The old “federal” DRG system

• MS-DRGs:
  – New CMS set of severity-adjusted DRGs, beginning FY ’08
  – Three levels per DRG, no Risk of Mortality index

• Others:
  – STS, APACHE, disease staging, MedisGroups
APR DRGs

• Expanding scope of diagnosis-related groups to add:
  – Severity of Illness: the extent of physiologic decompensation or organ system loss of function
  – Risk of Mortality: the likelihood of dying

Subclass assignment

• Assign each secondary diagnosis a level from 1–4, for both severity and risk of mortality
• In an iterative fashion, assign a subclass number, based on dominate secondary diagnoses
• Some modifications for age:
  – Hypertension in children is considered major as a secondary
• Some modifications for APR DRG:
  – Chronic renal failure as a secondary is moderate, except where the APR DRG is diabetes, in which case it is major
APR DRG v20: Relative weights

Following is an example of the relative weights calculated for APR-DRG 194 (Heart Failure):

<table>
<thead>
<tr>
<th>Severity Subclass</th>
<th>Relative Weight</th>
<th>Base Rate</th>
<th>RW</th>
<th>Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Minor)</td>
<td>0.5804</td>
<td>$4,113.00</td>
<td>0.5804</td>
<td>$2,387.19</td>
</tr>
<tr>
<td>2 (Moderate)</td>
<td>0.7930</td>
<td>$4,113.00</td>
<td>0.793</td>
<td>$3,261.61</td>
</tr>
<tr>
<td>3 (Major)</td>
<td>1.2736</td>
<td>$4,113.00</td>
<td>1.2736</td>
<td>$5,238.32</td>
</tr>
<tr>
<td>4 (Extreme)</td>
<td>3.0052</td>
<td>$4,113.00</td>
<td>3.0052</td>
<td>$12,360.39</td>
</tr>
</tbody>
</table>

In this example, the heart failure patients with assigned a severity subclass of extreme is expected to have total charges that are three times as high as the average total charge of all patients in national database.

Cautions

- APR DRG subclasses (Severity of Illness and Risk of Mortality) are ranked categories unique to each APR DRG and cannot be averaged (they are not really numbers):
  - But in version 20.0 you can average the relative weights
- Beware of choosing a population by CMS-DRG or MS-DRG and running reports/analyses by APR DRG Severity of Illness or Risk of Mortality
The search for the perfect metric

- The “perfect” metric may require:
  - Chart review
  - Direct data entry
  - Phone call follow up
- Don’t wait for perfection, rather
  - Design a profile with what you have, and
  - Build more advanced metrics in key hospital areas

The search for the perfect metric: Example

- UGI Endoscopy
  - Utilization
    - Percentage of cases without ASGE indication
      - Build Focus, record stated indication for each procedure
  - Quality/Safety
    - Duration of procedure
      - Objectively measured and recorded for every procedure
    - Complaints/complications post procedure
      - Requires definitions of complications, and telephone follow up call.
        (Are these correlated with skill or diligence?)
Review

- Volume
- Attribution
- Acceptance
  - Severity adjustment
- Looking for the perfect metric

Example

<table>
<thead>
<tr>
<th>Provider</th>
<th># Cases</th>
<th>Observed ALOS</th>
<th>Expected ALOS</th>
<th>Obs - Exp</th>
<th>Total excess days</th>
<th>ALOS Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL Inpatient Cases</td>
<td>420</td>
<td>3.8</td>
<td>3.67</td>
<td>0.13</td>
<td>54.6</td>
<td>1</td>
</tr>
<tr>
<td>Rice, Frances</td>
<td>115</td>
<td>4.1</td>
<td>3.5</td>
<td>0.6</td>
<td>69</td>
<td>1.2</td>
</tr>
<tr>
<td>Daniels, Kenneth</td>
<td>105</td>
<td>3.3</td>
<td>3.7</td>
<td>-0.4</td>
<td>-42</td>
<td>0.9</td>
</tr>
<tr>
<td>Rose, Margaret</td>
<td>75</td>
<td>3.7</td>
<td>3.6</td>
<td>0.1</td>
<td>7.5</td>
<td>1</td>
</tr>
<tr>
<td>Durazo, Erick</td>
<td>57</td>
<td>3.6</td>
<td>4</td>
<td>-0.4</td>
<td>-22.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Rodriguez, Anna</td>
<td>37</td>
<td>4.6</td>
<td>3.9</td>
<td>0.7</td>
<td>25.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Villa, Kim</td>
<td>14</td>
<td>3.3</td>
<td>3.6</td>
<td>-0.3</td>
<td>-4.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Sharp, Guadalupe</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>-1</td>
<td>-6</td>
<td>0.7</td>
</tr>
<tr>
<td>Inocencio, Pauline</td>
<td>3</td>
<td>4.3</td>
<td>3.5</td>
<td>0.8</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Peters, Allen</td>
<td>3</td>
<td>3.7</td>
<td>3.4</td>
<td>0.3</td>
<td>0.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Heredia, Tiffany</td>
<td>1</td>
<td>10</td>
<td>5.6</td>
<td>4.4</td>
<td>4.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Douglass, Tracy</td>
<td>1</td>
<td>8</td>
<td>5.6</td>
<td>2.4</td>
<td>2.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Hernandez, Gerald</td>
<td>1</td>
<td>4</td>
<td>3.2</td>
<td>0.8</td>
<td>0.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Rubin, Yolanda</td>
<td>1</td>
<td>4</td>
<td>3.2</td>
<td>0.8</td>
<td>0.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Dibella, Carrie</td>
<td>1</td>
<td>3</td>
<td>3.2</td>
<td>-0.2</td>
<td>-0.2</td>
<td>0.9</td>
</tr>
</tbody>
</table>
5 How to roll this out?

• Begin with a small group of physicians
  – High volume
  – Leadership role
    • Understand that their leadership role gives them responsibility for performance of other physicians
      – Therefore the profile is important
  – Willing to participate in review/improvement of profile

How to deliver it?

• Probably every 6 months
  – Depending on volume and how quickly the measures change
• Keep it simple, start with paper
  – Support one-on-one sessions with physicians to allow drill down to patient level
• Move toward on-demand, secure, physician specific electronic review (secure internet)
But don’t wait for perfect data

• “No data is perfect, but all data is useful”
• Work to understand the limitations of the data you have
• Work on improving your data, perhaps your most important PI project:
  – Partner with health information

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Henry Johnson MD MPH
Medical Director
ACS MIDAS+
Tucson, Arizona