Session 3

Risk, Capitation, and Other Financial Issues in Managed Care

Jonathan P. Weiner, Dr. P.H.
Professor or Health Policy & Management
# Health Care Financing and Coverage in the US

<table>
<thead>
<tr>
<th>Private Ins.</th>
<th>Population</th>
<th>Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Ins.</td>
<td>67%</td>
<td>44%</td>
</tr>
<tr>
<td>Medicare</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Medicaid</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Uninsured</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Out-of-Pocket</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>10</td>
</tr>
</tbody>
</table>
Who is “At Risk” For Cost of Care Provision

- 30% Self-insured employers
- 25% For-profit MCOs
  - 5% Gov. contracts
  - 18% Empl. contracts
- 20% Not-for-profit MCOs/IDSs
- 13% For uninsured: safety net providers, government, patient
- 12% Government programs
A type of health care financing where a provider is paid a fixed per-capita fee for a pre-negotiated market basket of services on behalf of an enrolled group of consumers.
Potential Advantages of Capitation

• Strong incentives for efficiency

• Fosters primary care and prevention

• Fosters “population orientation”
Potential Disadvantages of Capitation

• Could offer incentives to skimp

• Incentives to avoid sick consumers

• Individual Patient and provider choices may be limited
Avg % of HMO “Contracts” Reimbursed via Capitation by Provider Type (2005)

Source: Aventis 2006
# Methods of Physician Reimbursement by HMO Type (2005)

<table>
<thead>
<tr>
<th>HMO Type</th>
<th>Salary</th>
<th>Fee-For Service</th>
<th>Bonus Program</th>
<th>Capitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPA</td>
<td>4%</td>
<td>69%</td>
<td>10%</td>
<td>74%</td>
</tr>
<tr>
<td>NETWORK</td>
<td>3</td>
<td>72%</td>
<td>15%</td>
<td>73%</td>
</tr>
<tr>
<td>Group</td>
<td>13</td>
<td>57%</td>
<td>17%</td>
<td>80%</td>
</tr>
<tr>
<td>Staff</td>
<td>89</td>
<td>56%</td>
<td>22%</td>
<td>67%</td>
</tr>
<tr>
<td>Overall</td>
<td>7%</td>
<td>68%</td>
<td>13%</td>
<td>74%</td>
</tr>
</tbody>
</table>

Source: Aventis 2006
How Physicians Will Be Paid
Share of Practice Revenue That Will Come From Different Payment Schemes

## ABC Health Plan (Simplified) Premium Rate Development

### Spreadsheet for 2006

<table>
<thead>
<tr>
<th>INPATIENT</th>
<th>Utilization per 1000</th>
<th>Unit Cost</th>
<th>PMPM Cost</th>
<th>Co-Ins. Adjust</th>
<th>Adjusted Cost</th>
<th>Cum. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical/Surgical</td>
<td>190</td>
<td>$1,200</td>
<td>19.00</td>
<td>0.57</td>
<td>18.43</td>
<td></td>
</tr>
<tr>
<td>ICU/CCU/NNU</td>
<td>30</td>
<td>2,300</td>
<td>5.75</td>
<td>0.17</td>
<td>5.58</td>
<td></td>
</tr>
<tr>
<td>Maternity</td>
<td>45</td>
<td>1,350</td>
<td>5.06</td>
<td>0.15</td>
<td>4.91</td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>15</td>
<td>650</td>
<td>0.81</td>
<td>0.02</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Nursery</td>
<td>20</td>
<td>700</td>
<td>1.17</td>
<td>0.04</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td>30.84</td>
<td></td>
</tr>
</tbody>
</table>

### PRIMARY CARE

<table>
<thead>
<tr>
<th></th>
<th>Utilization per 1000</th>
<th>Unit Cost</th>
<th>PMPM Cost</th>
<th>Co-Ins. Adjust</th>
<th>Adjusted Cost</th>
<th>Cum. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office visits</td>
<td>4200</td>
<td>$35</td>
<td>12.25</td>
<td>1.75</td>
<td>10.50</td>
<td></td>
</tr>
<tr>
<td>Immunizations</td>
<td>440</td>
<td>30</td>
<td>1.10</td>
<td></td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1200</td>
<td>15</td>
<td>1.50</td>
<td></td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>5840</td>
<td></td>
<td></td>
<td></td>
<td>$13.10</td>
<td></td>
</tr>
</tbody>
</table>

### SPECIALTY CARE

<table>
<thead>
<tr>
<th></th>
<th>Utilization per 1000</th>
<th>Unit Cost</th>
<th>PMPM Cost</th>
<th>Co-Ins. Adjust</th>
<th>Adjusted Cost</th>
<th>Cum. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeries</td>
<td>80</td>
<td>$1400</td>
<td>9.33</td>
<td></td>
<td>9.33</td>
<td></td>
</tr>
<tr>
<td>Medical Specialist</td>
<td>650</td>
<td>100</td>
<td>5.42</td>
<td></td>
<td>5.42</td>
<td></td>
</tr>
<tr>
<td>Radiologist</td>
<td>900</td>
<td>60</td>
<td>4.50</td>
<td></td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>2600</td>
<td>19</td>
<td>4.12</td>
<td></td>
<td>4.12</td>
<td></td>
</tr>
<tr>
<td>Obstetrics</td>
<td>35</td>
<td>2200</td>
<td>6.42</td>
<td></td>
<td>6.42</td>
<td></td>
</tr>
<tr>
<td>Psychiatric Care</td>
<td>160</td>
<td>60</td>
<td>0.80</td>
<td></td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>DME</td>
<td>40</td>
<td>150</td>
<td>0.50</td>
<td>0.08</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>Physical Tx</td>
<td>140</td>
<td>60</td>
<td>0.70</td>
<td>0.08</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>4605</td>
<td></td>
<td></td>
<td></td>
<td>$31.70</td>
<td></td>
</tr>
</tbody>
</table>

### OUTPATIENT OTHER

<table>
<thead>
<tr>
<th></th>
<th>Utilization per 1000</th>
<th>Unit Cost</th>
<th>PMPM Cost</th>
<th>Co-Ins. Adjust</th>
<th>Adjusted Cost</th>
<th>Cum. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amb Surgery</td>
<td>70</td>
<td>$1800</td>
<td>10.50</td>
<td></td>
<td>10.50</td>
<td></td>
</tr>
<tr>
<td>ER</td>
<td>200</td>
<td>280</td>
<td>4.67</td>
<td></td>
<td>4.67</td>
<td></td>
</tr>
<tr>
<td>Ambulance</td>
<td>50</td>
<td>120</td>
<td>0.50</td>
<td></td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>320</td>
<td></td>
<td></td>
<td></td>
<td>$15.67</td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL MEDICAL EXPENSE

- Administrative / Care Management | 24.00
- Targeted Profit/Reserve | 8.00
---

**Total Required Revenue** | $123.31
Employer
Consumer
Government

Pharmacies
or PBM

HMO

Reserve Fund

Institutional - Referral Fund

Hospital

Specialists

Primary Care Group Practice

20%
Withhold Fund

Primary Care Fund

Typical Network HMO
Financial Arrangement

* only if IRF surplus
** If expenses > stop loss
*** if fund is overexpended
Financial Management

Definitions

• **PMPM** - Per member per month. Specifically applies to a revenue or cost for each enrolled member each month.

• **Medical loss ratio** =
  
  \[
  \text{(Medical Expenses/Premium)}
  \]

• **IBNR** - Incurred but not reported. Medical expenses about which the plan does not yet know.
Definitions – Cont.

Stop Loss: a form of reinsurance that provides protection for medical expenses above a certain limit, generally on a year-by-year basis. It may apply to an entire health plan or to a single component.
Risk adjusters redistribute dollars among health plans based upon the expected health status of the enrolled population in each health plan.
Why Risk Adjustment is Needed

<table>
<thead>
<tr>
<th>% US Population</th>
<th>% of Health Care $</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>97%</td>
</tr>
</tbody>
</table>
Why Risk Adjusted Payment is Necessary

• To deter plans from selecting or marketing to healthier enrollees

• To protect plans from being selected by a costlier than average group of enrollees

• To facilitate plan’s attempts to specialize in treating people with certain illnesses or conditions
Methods of Risk Adjusted Payment

- Reinsurance thresholds
- Prospective capitation adjuster
- High cost carve-outs
“Johns Hopkins ACG” Risk Adjustment/ Case-Mix Methodology

“Adjusted Clinical Groups”, formerly Ambulatory Care Groups

See: www.acg.jhsph.edu
Figure 1: ACG Decision Tree

Entire Population

Age < 1
with diagnosis
MAC-26
To MAC-26 tree

MAC-1
MAC-3
MAC-5 ACG 0800
MAC-7 ACG 1000
MAC-9 ACG 1200
MAC-11 ACG 1600
MAC-13 ACG 1800
MAC-15 ACG 2300
MAC-17
MAC-19
MAC-21 ACG 3500
MAC-23 ACG 3700
MAC-25

MAC-2 ACG 0400
MAC-4 ACG 0700
MAC-6 ACG 0900
MAC-8 ACG 1100
MAC-10
MAC-12
MAC-14
MAC-16 ACG 2400
MAC-18 ACG 2800
MAC-20 ACG 3400
MAC-22 ACG 3600
MAC-24

Age
ADG 05?
Yes
ACG 1300
No
ACG 1300

Age
ADG 25?
Yes
ACG 1900
No
ACG 1900

Age
ADG 25?
Yes
ACG 2400
No
ACG 2400

Age
ADG 05?
Yes
ACG 1100
No
ACG 1100

1 or 2 input files?
No
ACG 0500
Yes
ACG 1100

ACG 0700
ACG 0900
ACG 0500
ACG 0500
ACG 0500
ACG 0500
ACG 0500
ACG 0500

Key
CADG Collapsed ADG
ADG Adjusted Clinical Group

Reference Manual
The Johns Hopkins ACG System, Version 8.0
ACGs Lead to Fairer Payments

A comparison of demographic-based and ACG-based capitation payments to actual expenditures for healthier-than-average and sicker-than-average enrollee groups showed that ACG-based payments are much closer to actual expenditures:

<table>
<thead>
<tr>
<th>Group Type</th>
<th>Payment system</th>
<th>Difference from “perfect payment”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sicker than average</td>
<td>Demographic</td>
<td>5.2% underpayment</td>
</tr>
<tr>
<td></td>
<td>ACG</td>
<td>0.7% overpayment</td>
</tr>
<tr>
<td>Healthier than Average</td>
<td>Demographic</td>
<td>7.9% overpayment</td>
</tr>
<tr>
<td></td>
<td>ACG</td>
<td>0.6% underpayment</td>
</tr>
</tbody>
</table>

Source: JAMA, 10/23/96
Other Non-Payment Applications of Risk Adjustment

• Adjusting Performance (quality and efficiency) “Profiles”

• “Predictive Modeling” to identify high risk cases for Care / Disease Management

• Control and Stratification for Analysis, Evaluation, & Research