Reference Pricing and Consumer Use of Low-Priced Providers and Services

Christopher Whaley
RAND Corporation
Acknowledgements

Research on reference pricing has been funded by AHRQ (5R01HS022098), the California Public Employees Retirement System, the Laura and John Arnold Foundation, and the Robert Wood Johnson Foundation.

The research referenced in this slide is joint with James Robinson and Timothy Brown from the University of California, Berkeley.
Motivation for Reference Pricing

• For common “shoppable” services and procedures, prices vary widely

• 10x difference in prices within the same market are not uncommon

• Often there is no quality component, or price and quality are not related

• Reference pricing is one potential response to price variation
History of Reference Pricing

• Originally developed in European pharmaceutical markets

• In the U.S., self-funded employers have applied it to a variety of services
  – Knee and hip replacement (CalPERS)
  – Outpatient surgery (CalPERS)
  – Lab and imaging tests (Safeway)
  – Pharmaceuticals (RETA Trust)
Variation in Colonoscopy Prices

Range in Colonoscopy Prices Across California Ambulatory Surgical Centers (ASCs) and Hospital Outpatient Departments (HOPDs)

# Price Variation and Market Shares in 2012, According to Therapeutic Class

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Prescriptions Filled</th>
<th>Price of Drug in Class</th>
<th>Difference between Highest and Lowest Price</th>
<th>Share of Drug in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no.</td>
<td>dollars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statins</td>
<td>11,701</td>
<td>12.3</td>
<td>447.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Thyroid hormones</td>
<td>8,386</td>
<td>5.3</td>
<td>33.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Selective serotonin-reuptake inhibitors</td>
<td>7,287</td>
<td>10.3</td>
<td>201.0</td>
<td>10.2</td>
</tr>
<tr>
<td>ACE inhibitors</td>
<td>6,601</td>
<td>5.9</td>
<td>50.4</td>
<td>2.0</td>
</tr>
<tr>
<td>Beta-blockers</td>
<td>5,490</td>
<td>6.1</td>
<td>78.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Proton-pump inhibitors</td>
<td>5,345</td>
<td>25.7</td>
<td>296.1</td>
<td>28.7</td>
</tr>
<tr>
<td>Biguanides</td>
<td>4,185</td>
<td>11.8</td>
<td>525.2</td>
<td>41.0</td>
</tr>
<tr>
<td>Hydrocodone combinations</td>
<td>4,073</td>
<td>27.8</td>
<td>297.4</td>
<td>7.7</td>
</tr>
<tr>
<td>Nonsteroidal antiinflammatory drugs</td>
<td>4,021</td>
<td>9.9</td>
<td>521.0</td>
<td>12.3</td>
</tr>
<tr>
<td>Calcium-channel blockers</td>
<td>3,864</td>
<td>14.6</td>
<td>221.8</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Table 1. Price Variation and Market Shares in 2012, According to Therapeutic Class.*
How Reference Pricing Works

• For pre-defined and “shoppable” services, the payer (insurer or employer) sets a maximum reimbursable amount (the reference price)

• Patients whose care costs less than this amount pay normal cost-sharing (e.g. copays, coinsurance, and deductibles)

• Patients whose care exceeds this amount pay normal cost-sharing up to the reference price PLUS the difference between the provider’s price and the reference price

• Many programs offer an alternative provider that is not subject to reference pricing
  • E.g. CalPERS exempted ambulatory surgical centers because price is much less than hospitals
Impact of Reference Pricing for Colonoscopy

Payment per Procedure for Colonoscopy Before and After Implementation of Reference-Based Payments by CalPERS

Robinson JC et al. JAMA Internal Medicine. 2015.
Impact of Reference Pricing for Pharmaceuticals

Percentage of Prescriptions Written for Lowest-Priced Drugs within Therapeutic Classes

Impact of Reference Pricing for Pharmaceuticals

Monthly Drug Prices and Co-Payments per Prescription
(2010–2014)

Average Price Paid and Patient Copayment per Prescription ($)

Reference-pricing implementation

Average price, Union Trust
Average price, RETA Trust

Patient copayment, RETA Trust
Patient copayment, Union Trust


## Impact of Reference Pricing on Consumer Choices, Prices Paid, and Potential Spending Reductions

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Percentage point increase in use of low-price facilities (%)</th>
<th>Percent reduction in price paid per procedure or test (%)</th>
<th>Total spending by commercially insured individuals in the US ($Billion)</th>
<th>Potential spending reduction from reference pricing ($Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint replacement</td>
<td>14.2</td>
<td>19.8%</td>
<td>17.09</td>
<td>3.38</td>
</tr>
<tr>
<td>Knee arthroscopy</td>
<td>14.3</td>
<td>17.6%</td>
<td>5.70</td>
<td>1.00</td>
</tr>
<tr>
<td>Shoulder arthroscopy</td>
<td>9.9</td>
<td>17.0%</td>
<td>3.80</td>
<td>0.65</td>
</tr>
<tr>
<td>Cataract surgery</td>
<td>8.6</td>
<td>17.9%</td>
<td>1.90</td>
<td>0.34</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>17.6</td>
<td>21.0%</td>
<td>11.39</td>
<td>2.39</td>
</tr>
<tr>
<td>Laboratory tests</td>
<td>18.6</td>
<td>32.0%</td>
<td>23.73</td>
<td>7.59</td>
</tr>
<tr>
<td>Imaging: CT scans</td>
<td>9.0</td>
<td>12.5%</td>
<td>17.09</td>
<td>2.14</td>
</tr>
<tr>
<td>Imaging: MRI</td>
<td>16.0</td>
<td>10.5%</td>
<td>19.93</td>
<td>2.09</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>7.0</td>
<td>13.9%</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>NA</strong></td>
<td><strong>NA</strong></td>
<td><strong>100.62</strong></td>
<td><strong>19.59</strong></td>
</tr>
</tbody>
</table>

Potential Impacts of Reference Pricing Expansions

• If reference pricing was expanded to the services that we have previously evaluated, and achieved the same effects, medical spending would decrease by $19.6 billion
  – 2.2% of total medical spending

• If reference pricing was applied more broadly, spending could fall by $76.2 billion
  – 8.6% of total medical spending

• Expanded reference pricing programs are likely to exert pricing pressure on high-priced providers
Conditions for Successful Implementation of Reference Pricing

• Services should be “shoppable”
• Quality should be measurable
• Patients must have price and quality information
• Patients must have access to a sufficient number of low-price, high-quality providers
• Patients with special needs should be exempted
• Reference pricing should simplify the choice process
  – CalPERS, Safeway, and RETA Trust direct patients to specific providers or treatments
Limitations of Reference Pricing

• Not all procedures are “shoppable”

• Consumers exposed to potentially high out-of-pocket payments

• Reference pricing places the burden of responding to price variation entirely on the consumer, rather than on the health plans for negotiating better prices, and regulators for addressing provider market power
References


http://bcht-stories.berkeley.edu/
Contact Information

Christopher Whaley

cwhaley@rand.org