CalPERS Reference Pricing Program for Hip or Knee Replacement

David Cowling, PhD
Chief, Center for Innovation
CalPERS

Background

• Health plan benefits for 1.38 million members
  – Active and retired state of California and more than 1,200 public agencies and schools

• Spends $7.5 billion annually
  – About 1/3rd of Basic Health Plan members in one of three self-funded Preferred Provider Organizations

• Various in-house studies conducted
  – Osteoarthritis is a cost driver for CalPERS
  – Wide treatment cost variations within regions

• In-house studies and literature suggest hospital cost and utilization are not linked to quality or evidence-based outcomes
Description of program

- Reference based purchasing program for total knee replacement or total hip replacement
  - CalPERS and Anthem Blue Cross of California
  - Started January 1, 2011
  - 46 facilities met quality, cost and geographic requirements
    * Threshold facility payment of $30,000 for routine single knee and hip joint replacement hospital stays

- Implementation
  - Providers and orthopedists outreach
  - Member outreach & pre-notification
  - Travel benefit
  - Medical exceptions for non-routine

EVALUATION RESULTS OF PROGRAM
Volume of knee or hip replacement surgery by insurance and facility type, 2008-2012

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CalPERS Anthem Enrollees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of patients</td>
<td>402</td>
<td>428</td>
<td>485</td>
<td>447</td>
<td>278</td>
</tr>
<tr>
<td>Percentage of patients in RBP facilities</td>
<td>53.2</td>
<td>50.0</td>
<td>47.6</td>
<td>62.6</td>
<td>64.0</td>
</tr>
<tr>
<td>Percentage of patients in non-RBP facilities</td>
<td>46.8</td>
<td>50.0</td>
<td>52.4</td>
<td>37.4</td>
<td>36.0</td>
</tr>
<tr>
<td><strong>Non-CalPERS Anthem Enrollees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of patients</td>
<td>815</td>
<td>751</td>
<td>802</td>
<td>882</td>
<td>512</td>
</tr>
<tr>
<td>Percentage of Patients in RBP facilities</td>
<td>55.3</td>
<td>55.4</td>
<td>55.1</td>
<td>51.0</td>
<td>53.8</td>
</tr>
<tr>
<td>Percentage of Patients in non-RBP facilities</td>
<td>44.7</td>
<td>44.6</td>
<td>44.9</td>
<td>49.0</td>
<td>46.2</td>
</tr>
</tbody>
</table>

*Through September 2012 only. RBP: Reference based pricing

Source: University of California, Berkeley analysis, June 2013.

Percentage of patients choosing a reference based pricing facility for knee or hip replacement surgery, 2008-2012

*Through September 2012 only. RBP: Reference based pricing

Source: University of California, Berkeley analysis, June 2013.
### Prices charged for knee or hip replacement surgery by insurance and facility type, 2008-2012

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CalPERS Anthem Enrollees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All facilities</td>
<td>28,636</td>
<td>34,260</td>
<td>34,742</td>
<td>25,611</td>
<td>25,471</td>
</tr>
<tr>
<td>RBP facilities</td>
<td>22,640</td>
<td>26,449</td>
<td>25,324</td>
<td>23,910</td>
<td>24,528</td>
</tr>
<tr>
<td>Non-RBP facilities</td>
<td>35,461</td>
<td>42,072</td>
<td>43,308</td>
<td>28,465</td>
<td>27,149</td>
</tr>
<tr>
<td><strong>Non-CalPERS Anthem Enrollees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All facilities</td>
<td>25,295</td>
<td>29,280</td>
<td>31,072</td>
<td>30,739</td>
<td>30,783</td>
</tr>
<tr>
<td>RBP facilities</td>
<td>20,102</td>
<td>21,984</td>
<td>23,858</td>
<td>24,897</td>
<td>26,192</td>
</tr>
<tr>
<td>Non-RBP facilities</td>
<td>31,724</td>
<td>38,354</td>
<td>39,923</td>
<td>36,826</td>
<td>36,127</td>
</tr>
</tbody>
</table>

*Through September 2012 only. RBP: Reference based pricing
Source: University of California, Berkeley analysis, June 2013.

### Average prices charged for knee or hip replacement surgery by facility type, 2008-2012

![Average prices chart](chart.png)

*Through September 2012 only. RBP: Reference based pricing
Source: University of California, Berkeley analysis, June 2013.
RESULTS, CONCLUSION AND CONSIDERATIONS
Quality and cost savings

• Program credited with cumulative savings of $5.5M over first two years
  – Average hip/knee replacement price charged declined 26% or over $9,000 per procedure

• Value based purchasing design facilities had:
  – A significantly lower general complication rate in 30 days
  – A significantly lower 30-day general infection rate
  – Similar follow-up admission rates

• Patient experience study being conducted

Conclusions and implications

• A hospital market story and a consumer enrollee story
  • Reference pricing induced enrollees to use lower-priced facilities but bigger effect occurred on hospital prices
  • 14% of savings due to market share growth and 86% due to reduction in prices

• Expansion of participating hospitals from 46 to 61

• Clinical quality improved for members overall
Reference pricing expansion

• CalPERS and Anthem have expanded reference to inpatient procedures for cataract surgery, colonoscopy, arthroscopy in 2012

• Key consideration checklist to consider a reference-based pricing services
  ✓ Cost variation within region
  ✓ Volume and focus may increase quality
  ✓ Can be scheduled
  ✓ Substantial cost

• Improve consumer education/engagement
  – Targeted information

⚠️ CalPERS