Comparing Medicaid Hospital Payment Across States and to Medicare

Medicaid and CHIP Payment and Access Commission
Chris Park
Overview

• Create a payment index for fee-for-service inpatient hospital payments to compare payments across states
• Compare Medicaid payments to Medicare
• Analysis can serve as a foundation for work on:
  – Payment adequacy across states
  – Relationship between payment and access, value, and quality
  – Impact of supplemental payments and provider contributions
Payment index data

• 2010 Medicaid Analytic Extract (MAX) claims data
• Focused on acute care hospital stays for non-dually eligible, non-elderly enrollees
• Excluded:
  – dually eligible for Medicare and Medicaid
  – eligible on the basis of age
  – rehabilitation, long-term, psychiatric hospitals
  – managed care stays
Methods

- Identify the service provided during a stay using a comparable methodology across all states
  - Classified all claims using all patient refined diagnosis related groups (APR-DRGs)
- Control for input wage levels, casemix, and enrollee characteristics
Wage index adjustment

• Wage adjustment to account for differences in local prices across states
• Based on Medicare methodology
  – Local wage index data from CMS Medicare acute inpatient prospective payment system
  – Used Medicare’s hospital labor share (estimated amount of payment and costs related to wages)
Casemix adjustment

- Casemix adjustment to account for differences in acuity and severity of admissions across states
- Regression model to relate the APR-DRG and demographic variables such as age and eligibility to cost
- Calculated expected cost for each stay and then computed relative cost by dividing by overall average cost
- Calculated overall casemix adjustment factor for each state as the average of relative weights of all its stays
Payment index

- Calculate wage and casemix-adjusted average payment per stay for each state
- Divide each state amount by average payment per stay for all states
- Index value provides a relative value compared to national average (e.g., index value of 1.10 is 10 percent higher than national average)
Payment index ranges from 0.49 to 1.69

Source: MACPAC/Urban Institute analysis of CY 2010 MAX data. Kansas, Maine, and Nebraska were not included in our data.
In-state variation

• States not consistently high or low payer across all conditions
  – Some states use policy adjusters to increase payments for specific services
• State payment for a particular condition may vary across hospitals
  – Different hospital base rates or payment methodology (e.g., cost-basis)
Analysis on selected conditions

• 20 high-volume, high-dollar APR-DRG/severity group combinations
  – Two severity subclasses each for vaginal delivery, cesarean delivery, and newborn
  – Others chosen to span a wide range of medical/surgical care

• Calculated a wage-adjusted payment index for each of the 20 APR-DRGs
## 20 APR-DRG indices compare to overall base payment index

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>Conditions (APR-DRG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75 or greater</td>
<td>Other pneumonia (139-2); chronic obstructive pulmonary disease (140-2); cellulitis and other bacterial skin infections (383-1); diabetes (420-2); kidney and urinary tract infections (463-2)</td>
</tr>
<tr>
<td>0.50–0.75</td>
<td>Seizure (053-2); asthma (141-1); heart failure (194-2); appendectomy (225-1); cesarean delivery (540-1, 540-2), vaginal delivery (560-1, 560-2); other antepartum diagnoses (566-2); chemotherapy (693-2)</td>
</tr>
<tr>
<td>0.25–0.50</td>
<td>Renal failure (460-3); neonate birthweight &gt;2499 g, normal newborn or neonate w/ other problem (640-1, 640-2); schizophrenia (750-2)</td>
</tr>
<tr>
<td>0–0.25</td>
<td>Bipolar disorders (753-2)</td>
</tr>
</tbody>
</table>

Source: MACPAC/Urban Institute analysis of CY 2010 MAX data
### Example of base payment indices in four states

<table>
<thead>
<tr>
<th>State</th>
<th>Overall Index</th>
<th>225-1: Appendectomy</th>
<th>420-2: Diabetes</th>
<th>540-1: Cesarean Section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index Value</td>
<td>State Rank</td>
<td>Index Value</td>
<td>State Rank</td>
</tr>
<tr>
<td>State A</td>
<td>1.28</td>
<td>7</td>
<td>0.70</td>
<td>34</td>
</tr>
<tr>
<td>State B</td>
<td>0.89</td>
<td>33</td>
<td>0.47</td>
<td>42</td>
</tr>
<tr>
<td>State C</td>
<td>0.94</td>
<td>26</td>
<td>1.29</td>
<td>13</td>
</tr>
<tr>
<td>State D</td>
<td>0.61</td>
<td>46</td>
<td>0.90</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: MACPAC/Urban Institute analysis of 2010 MAX data.

September 15, 2016
Example of in-state variation in payment for cesarean delivery

Source: MACPAC/Urban Institute analysis of CY 2010 MAX data

September 15, 2016
Supplemental payment adjustment
Supplemental payments to hospitals

• Supplemental payments are substantial
  – 44 percent of total hospital payments in 2014
• Frequently made on aggregate, lump-sum basis
  – Claims data do not contain supplemental payments
• Do not have good information on the amount paid to individual hospitals
• Frequently used with non-federal financing options such as provider taxes, certified public expenditures (CPEs), and intergovernmental transfers (IGTs)
  – Need to net out contributions to get to net payment
Supplemental payment adjustment

• gross up base payments from MAX to CMS-64 total to account for supplemental payments
  – Makes adjustment even if state doesn’t report supplemental payment separately
  – Potentially gross up base payments as well
  – Treats all hospitals equally

• gross up base payments in MAX using ratio of total inpatient payments to regular inpatient payments in CMS-64
  – Keeps claims payment the same
  – Doesn’t work if state does not report supplemental payment separately
  – Treats all hospitals equally
Index scenarios

• Scenario 1: unadjusted base payments
• Scenario 2: gross up base payments in scenario 1 to CMS-64 total to account for supplemental payments
• Scenario 3: gross up base payments in scenario 1 using ratio of total inpatient payments to regular inpatient payments in CMS-64
• Scenario 4: calculate net provider payment level using scenario 3 and backing out provider contributions using data from GAO study
## Payment index values for six states under different scenarios

<table>
<thead>
<tr>
<th>State</th>
<th>Scenario 1: base payment</th>
<th>Scenario 2: supplemental adjustment 1</th>
<th>Scenario 3: supplemental adjustment 2</th>
<th>Scenario 4: net payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index Value</td>
<td>State Rank</td>
<td>Index Value</td>
<td>State Rank</td>
</tr>
<tr>
<td>State A</td>
<td>1.69</td>
<td>1</td>
<td>1.22</td>
<td>14</td>
</tr>
<tr>
<td>State B</td>
<td>0.99</td>
<td>23</td>
<td>1.81</td>
<td>3</td>
</tr>
<tr>
<td>State C</td>
<td>1.04</td>
<td>20</td>
<td>1.13</td>
<td>17</td>
</tr>
<tr>
<td>State D</td>
<td>0.49</td>
<td>48</td>
<td>0.47</td>
<td>44</td>
</tr>
<tr>
<td>State E</td>
<td>0.75</td>
<td>41</td>
<td>0.54</td>
<td>43</td>
</tr>
<tr>
<td>State F</td>
<td>0.69</td>
<td>43</td>
<td>1.34</td>
<td>9</td>
</tr>
</tbody>
</table>

**Source:** MACPAC/Urban Institute analysis of 2010 MAX data, CY 2011 CMS-64 financial management report data, and GAO survey data.

September 15, 2016
Comparison to Medicare
**Methods**

- Used FFS Medicaid stays for non-elderly adults eligible for Medicaid on the basis of disability
- Grouped Medicaid stays using CMS’s MS-DRGs
- Medicare payment from CMS’s Medicare provider utilization and payment data: Inpatient charge data FY 2011
  - Average total payment for top 100 most frequently billed Medicare MS-DRGs by provider
- Focused on 18 high-volume MS-DRGs for both Medicaid and Medicare
- Include hospitals that are in both datasets
Medicaid base payment compared to Medicare total payment

- Medicaid payments were weighted by Medicare volume at the hospital and MS-DRG level
- Medicaid base payments on average were 78 percent of Medicare
  - Medicare contains all payments
  - Medicaid base payments only (no non-DSH or DSH supplemental payments)
Medicaid base payment was lower than Medicare for all 18 MS-DRGs.

Source: MACPAC/Urban Institute analysis of 2010 MAX data.

September 15, 2016
Medicaid net payment compared to Medicare total payment

- Applied supplemental payment and provider contribution adjustments from the payment index scenarios
- Medicaid net payments on average were 6 percent higher than Medicare
  - American Hospital Association survey results have shown that Medicaid has had a higher payment to cost ratio than Medicare since 2010
Medicaid net payment was higher than Medicare for all but two MS-DRGs

Source: MACPAC/Urban Institute analysis of 2010 MAX data.
Takeaways

• Medicaid inpatient hospital payment varies widely both across states and within a state
• Overall Medicaid net payment is comparable or higher than Medicare
• Supplemental payment and financing challenges our ability to analyze the link between payment and access, quality, and value
• Confirms the Commission’s prior statements on the need for additional payment and financing information at the provider level
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