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.
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>


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.

September 15, 2016
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
Comparing Medicaid Hospital Payment Across States and to Medicare

Medicaid and CHIP Payment and Access Commission
Chris Park