An Analysis of Private-Sector Prices for Physician Services

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Agenda

- Describe prices for physicians’ services in Medicare Advantage plans
- Compare Medicare Advantage and commercial prices to what Medicare fee-for-service (FFS) would have paid for that service
- Compare variation in Medicare Advantage prices to variation in commercial prices
Motivation

■ Why do physician prices matter?
  – Higher physician prices → higher premiums, less coverage

■ Why do physician prices in Medicare Advantage matter?
  – Medicare costs the government $595 billion a year; Medicare Advantage plans are a quarter of that spending
  – Physician prices affect Medicare Advantage plans’ participation → hence federal spending
  – Prices could affect plan bids and federal savings in a premium support system

■ Key implications
  – Medicare Advantage prices are informative about how commercial prices are determined
Summary

■ Levels of and variation in prices
  – Medicare Advantage prices are close to Medicare FFS and don’t vary much, relative to FFS
  – Commercial prices are much higher than Medicare FFS and vary substantially across and within areas

■ In- and out-of-network prices
  – Medicare Advantage out-of-network prices are very close to in-network prices
  – Commercial out-of-network prices are much higher than in-network prices

■ Implication: Medicare Advantage prices are constrained by statute and Medicare FFS prices
Prior Literature on Physician Prices

- **Commercial prices**
  
  - Higher than Medicare FFS, other countries (Baker et al., 2013, Laugesen and Glied, 2011, Ginsburg 2010)
  
  - Vary a lot (Newman et al., 2016, Baker et al., 2013)
  
  - Seem to vary based on physician competition, physician-hospital vertical integration (Neprash et al., 2015, Dunn and Shapiro, 2014, Baker et al., 2014)

- **Medicare Advantage prices**
  
  - Older literature finds Medicare Advantage prices fall somewhere between commercial and FFS prices (MedPac 2003)
  
  - Medicare Advantage prices very similar to Medicare FFS (Trish et al., 2016)
Data

- Health Care Cost Institute claims data (2014)
  - Three major insurers (Aetna, Humana, United)
  - 39 million beneficiaries in 50 states + DC
  - 25% of all Americans with employer-sponsored insurance
  - 50% of all Medicare Advantage enrollees

- Data contain:
  - Final prices insurer paid to physician
  - Cost-sharing and deductibles paid by the patient
  - Detailed claim-line level information (CPT codes, modifiers)

- Data exclude:
  - Capitated claims
Data: Sample of Claims and Services

■ Sample of claims
  – Excluded non-physician professionals and certain specialties (e.g., pediatricians)
  – Limited settings of services to offices, hospital inpatient and outpatient departments, ambulatory surgery centers
  – Excluded private fee-for-service, individual market, and indemnity plans
  – Limited to metropolitan statistical areas (MSAs) only

■ Selected 21 frequent and costly services
  – Commercial: Occurred more than 50,000 times and cost an average of $450 or more
  – Medicare Advantage: Occurred more than 20,000 times and cost more an average of $300 or more
  – OR: Service was among the ten most common in both populations
Methods

- Calculated private prices
  - Aggregated adjustments/reimbursements
  - Added patient copays/deductibles and insurer payments
  - Excluded payments ≤ $0

- Constructed Medicare FFS prices for each observation
  - Calculated base Medicare value (RVU)
  - Adjusted for geographic area (GPCI)
  - Adjusted for setting of service, select characteristics (bilateral claims, assistant at surgery, multiple services)
  - Converted to 2014 dollars

- Cleaned and trimmed sample:
  - Excluded outliers, obvious errors, claims where we can’t calculate Medicare FFS price
Why Compare Private Prices to Medicare FFS Prices?

- Compared private prices to what Medicare would have paid for the same service.

- Medicare FFS prices are adjusted for:
  - Service intensity (e.g., visit vs. procedure, multiple procedure payment reductions)
  - Geographic area
  - Setting of service (e.g., hospital vs. doctor’s office)

- Comparing private prices to Medicare FFS minimizes variation from those sources.
## Selected Services

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Service</th>
<th>Number of Commercial Observations</th>
<th>Number of Medicare Advantage Observations</th>
<th>Most Common Provider Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>17311</td>
<td>Mohs Micrographic Surgery</td>
<td>50,177</td>
<td>64,868</td>
<td>Dermatology</td>
</tr>
<tr>
<td>19083</td>
<td>Breast Biopsy</td>
<td>23,694</td>
<td>6,998</td>
<td>Radiology</td>
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<tr>
<td>27130</td>
<td>Hip Replacement</td>
<td>37,948</td>
<td>37,629</td>
<td>Orthopedics</td>
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<tr>
<td>27447</td>
<td>Knee Replacement</td>
<td>25,560</td>
<td>19,311</td>
<td>Orthopedics</td>
</tr>
<tr>
<td>29881</td>
<td>Knee Arthroscopy</td>
<td>55,209</td>
<td>5,838</td>
<td>Orthopedics</td>
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<tr>
<td>45385</td>
<td>Colonoscopy</td>
<td>186,232</td>
<td>92,385</td>
<td>Gastroenterology</td>
</tr>
<tr>
<td>47562</td>
<td>Gall Bladder Surgery</td>
<td>53,142</td>
<td>11,553</td>
<td>General surgery</td>
</tr>
<tr>
<td>50590</td>
<td>Lithotripsy</td>
<td>21,852</td>
<td>5,872</td>
<td>Urology</td>
</tr>
<tr>
<td>58558</td>
<td>Hysteroscopy</td>
<td>48,751</td>
<td>3,906</td>
<td>Obstetrics and gynecology</td>
</tr>
<tr>
<td>66984</td>
<td>Cataract Surgery</td>
<td>76,640</td>
<td>215,429</td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>70553</td>
<td>Brain MRI</td>
<td>208,856</td>
<td>79,796</td>
<td>Radiology</td>
</tr>
<tr>
<td>74183</td>
<td>Abdominal MRI</td>
<td>49,814</td>
<td>18,728</td>
<td>Radiology</td>
</tr>
<tr>
<td>77418</td>
<td>PET/CT scan</td>
<td>127,343</td>
<td>173,335</td>
<td>Therapeutic radiology</td>
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<tr>
<td>78815</td>
<td>IMRT</td>
<td>31,794</td>
<td>31,853</td>
<td>Radiology</td>
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<tr>
<td>92928</td>
<td>Stent Placement with Angioplasty</td>
<td>19,534</td>
<td>24,981</td>
<td>Cardiology</td>
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<tr>
<td>93000</td>
<td>EKG</td>
<td>2,452,997</td>
<td>1,137,342</td>
<td>Internal medicine (commercial), cardiology (MA)</td>
</tr>
<tr>
<td>93458</td>
<td>Cardiac Catheterization</td>
<td>59,733</td>
<td>57,222</td>
<td>Cardiology</td>
</tr>
<tr>
<td>99203</td>
<td>New Patient Visit, Intermediate Complexity</td>
<td>4,212,462</td>
<td>972,554</td>
<td>Family practice (commercial), orthopedics (MA)</td>
</tr>
<tr>
<td>99213</td>
<td>Established Patient Visit, Intermediate Complexity</td>
<td>23,144,834</td>
<td>8,082,554</td>
<td>Family practice</td>
</tr>
<tr>
<td>99214</td>
<td>Established Patient Visit, High Complexity</td>
<td>17,427,878</td>
<td>8,434,108</td>
<td>Family practice</td>
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<tr>
<td>99232</td>
<td>Subsequent Hospital Care</td>
<td>1,940,314</td>
<td>3,319,705</td>
<td>Internal medicine</td>
</tr>
</tbody>
</table>
National Price Comparisons—Commercial

Prices, Relative to Medicare FFS

99213 – Estab. Patient Visit
99214 – Estab. Patient Visit
99203 – New Patient Visit
17311 – Mohs Micrographic Surgery
99232 – Subsequent Hospital Care
92928 – Stent Placement
93458 – Cardiac Catheterization
93000 – EKG
50590 – Lithotripsy
45385 – Colonoscopy
27447 – Knee Replacement
27130 – Hip Replacement
19381 – Breast Biopsy
78815 – PET/CT scan
29881 – Knee Arthroscopy
74183 – Abdominal MRI
77418 – IMRT
70553 – Brain MRI

**Professional component only**
National Price Comparisons—Medicare Advantage

**Prices, Relative to Medicare FFS**

- 9213 – Estab. Patient Visit
- 9214 – Estab. Patient Visit
- 9224 – New Patient Visit
- 66984 – Subsequent Hospital Care
- 9228 – Cataract Surgery
- 92558 – Cardiac Catheterization
- 59300 – EKG
- 50590 – Uroscopy
- 45385 – Colonoscopy
- 27447 – Knee Replacement
- 47562 – Gall Bladder Surgery
- 27130 – Hip Replacement
- 19081 – Breast Biopsy
- 78815 – PET/CT scan
- 29881 – Knee Arthroscopy
- 74183 – Abdominal MRI
- 77418 – IMRT
- 70553 – Brain MRI

**Professional component only**
Private Prices Relative to Medicare FFS

Commercial

Medicare Advantage

Distribution of ratios of commercial to FFS prices for colonoscopy (45385) and hip replacement (27130) procedures.

Distribution of ratios of Medicare Advantage to FFS prices for colonoscopy (45385) and hip replacement (27130) procedures.
Private Prices Relative to Medicare FFS

**Commercial**

- 92928 - Stent placement
- 99214 - Visit, est. patient, moderate to high severity

**Medicare Advantage**

- 92928 - Stent placement
- 99214 - Visit, est. patient, moderate to high severity
Variation in Average Prices Across MSAs, Relative to Medicare FFS

### Commercial

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>17311</td>
<td>Mohs Micrographic Surgery</td>
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<tr>
<td>19081</td>
<td>Breast Biopsy</td>
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<td>Stent Placement (High Complexity)</td>
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<td>EKG</td>
</tr>
<tr>
<td>93458</td>
<td>Cardiac Catheterization</td>
</tr>
<tr>
<td>99203</td>
<td>New Patient Office Visit</td>
</tr>
<tr>
<td>99213</td>
<td>Established Patient Office Visit</td>
</tr>
<tr>
<td>99214</td>
<td>Established Patient Office Visit (High Complexity)</td>
</tr>
<tr>
<td>Question</td>
<td>Commercial</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
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<tr>
<td>How much more expensive is 90th percentile MSA than the 10th percentile MSA?</td>
<td>1.7 to 2.6 times more</td>
</tr>
<tr>
<td>How many services have more than twofold variation between the 90th and 10th percentiles?</td>
<td>10</td>
</tr>
<tr>
<td>How many services have more than 1.5X variation between 90th and 10th percentiles?</td>
<td>21</td>
</tr>
</tbody>
</table>
Variation in Median Price Ratios Across Providers Within MSAs

Commercial

Medicare Advantage
Variation in Median Price Ratios Across Providers Within MSAs

Commercial

Medicare Advantage

99213 - Visit, est. patient, moderate severity

Median, provider-level price ratios

Chicago (n=1,053)  Cincinnati, OH (n=3089)  Dallas (n=6795)  Houston (n=8300)  Los Angeles (n=6834)  Miami (n=5923)  New York (n=3726)  Tampa (n=3728)  Washington DC (n=6933)

Atlanta (n=5379)
## Summary of Price Variation Across Providers Within MSAs for 21 Services

<table>
<thead>
<tr>
<th></th>
<th>Commercial</th>
<th>Medicare Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much more expensive is 90th percentile provider than the 10th percentile provider?</td>
<td>1.6 to 2.7 times more</td>
<td>1.1 to 1.8 times more</td>
</tr>
<tr>
<td>How many services have more than twofold variation between the 10th and 90th percentile providers, on average?</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>How many services have more than 1.5 X variation between the 10th and 90th percentile providers, on average?</td>
<td>21</td>
<td>1</td>
</tr>
</tbody>
</table>
In- and Out-of-Network Prices: Commercial

Private Prices, Relative to Medicare FFS

Percent of observations in-network

Percent of observations provided in-network

In-network

Out-of-network

Percent of observations in-network

0%

100%

200%

300%

400%

500%

600%

75%

100%

Percent of observations provided in-network

0%

25%

50%

75%

100%
In- and Out-of-Network Prices: Medicare Advantage

Private Prices, Relative to Medicare FFS

Percent of observations in-network

Percent of observations provided in-network

0%
100%
200%
300%
400%
500%
600%
700%
800%
900%
1000%

0%
25%
50%
75%
100%

Percent of observations in-network

In-network

Out-of-network
Conclusion

- Commercial prices are (sometimes substantially) higher than Medicare FFS
- Medicare Advantage prices are very close to Medicare FFS
- Commercial prices vary substantially across areas and within areas; Medicare Advantage prices co-vary with Medicare FFS
- Out-of-network prices are substantially higher for commercial services; Medicare Advantage prices aren’t
Limitations

- Data contain three insurers
- Analysis focused on a limited set of services
- Comparing to Medicare FFS reduces price variation only if FFS adjustments correctly capture that variation
- Capitated payments are excluded but extra payments to providers (e.g., quality bonuses) can’t be observed
Implications

- The Social Security Act constrains the price a physician can charge when a Medicare beneficiary goes out of network.
- Limits on out-of-network pricing may limit in-network prices.