Introduction

- Transcatheter aortic valve replacements (TAVRs) are safer and less invasive than traditional surgical aortic valve replacements for aortic stenosis.
- Lack of price transparency is a barrier to informed decision making for patients.
- January 1, 2022, CMS mandated that hospitals post accessible pricing information via a machine-readable file but compliance is low.
- While prior studies have noted high variation in TAVR prices across hospitals, patients, and payers, they have eschewed exploring associations between TAVR prices and hospital financial characteristics.

Objective

To describe the variation in TAVR prices as a factor of hospital financial performance among hospitals ranked by The U.S. News and World Report.

Methods

Overview:
- Cross-sectional retrospective study of non-federal, adult, and non-critical access USNWR-ranked hospital price disclosures.

Data Sources:
- Price reports compiled by Turquoise Health.
- Publicly available financial reporting data to compile facility-specific features including net profit margins, markups, CMS wage index, and patient revenues.

Statistical Analysis:
- Modified two-part model to evaluate the association between observed-to-expected price ratios and financial health characteristics.

Results

Of 640 total USNWR hospitals:
- 389 (60.8%) did not disclose prices.
- 251 (39.2%) disclosed at least one procedure price.

<table>
<thead>
<tr>
<th>No. of USNWR TAVR Ranked Hospitals</th>
<th>Total</th>
<th>Disclosed Prices</th>
<th>Did Not Disclose Price</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed Size</td>
<td>640</td>
<td>251 (39.2%)</td>
<td>389 (60.8%)</td>
<td>0.09</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>197 (304)</td>
<td>403 (270)</td>
<td>396 (117)</td>
<td>0.29</td>
</tr>
<tr>
<td>Net Patient Revenue (USD)</td>
<td>580,220 (607,765,964)</td>
<td>599,054,143 (565,145,924)</td>
<td>600,505,110 (613,704,912)</td>
<td>0.29</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>Yes</td>
<td>490 (76.5%)</td>
<td>208 (32.8%)</td>
<td>0.044</td>
</tr>
<tr>
<td>No</td>
<td>121 (18.9%)</td>
<td>43 (17.1%)</td>
<td>78 (20.6%)</td>
<td>0.033</td>
</tr>
<tr>
<td>Ownership Type</td>
<td>Non-Profit</td>
<td>471 (76.1%)</td>
<td>205 (75.1%)</td>
<td>266 (72.3%)</td>
</tr>
<tr>
<td></td>
<td>Government Owned</td>
<td>61 (9.9%)</td>
<td>27 (9.9%)</td>
<td>40 (10.9%)</td>
</tr>
<tr>
<td></td>
<td>For-Profit</td>
<td>86 (13.9%)</td>
<td>25 (9.2%)</td>
<td>62 (16.8%)</td>
</tr>
</tbody>
</table>

Disclosing and non-disclosing hospitals differed only in ownership type.

Hospitals that higher observed to expected TAVR prices had:
- No change in reported quality.
- No change in profit margins.
- No change in bed days available.

Conclusions

- Hospitals that charge more than expected for TAVRs do not have higher profit margins nor are they not ranked by USNWR than those that charge less than expected.
- With charges observed over expected TAVR prices, the variation in TAVR rates within hospitals is linear.
- Observed to expected TAVR price ratios appear to have no association with publicly reported hospital quality.
- Regulations that stabilize prices for TAVRs could improve transparency while having minimal effects on hospital profits, especially since the highest variation in prices is among the hospitals with the lowest observed over expected prices.
- Future studies should focus on exploring effects of severity of price transparency regulation on variation of shoppable surgical procedures.