The Price is Right?

Educating Residents on the Costs of Radiology Exams
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INTRODUCTION

• Radiology residents are often not well educated about the costs of the imaging exams they interpret and perform

• While billing expertise is unnecessary at the resident level, a working knowledge of these costs is important for:

  1. Addressing patient concerns
  2. Reducing healthcare expenditures
  3. Optimizing reimbursement for equivalent work performed
OBJECTIVES

In this presentation, we will focus on...

1. Identifying the costs of exams:
   • Costs vary widely by geography, institution and insurance coverage
   • Where and how can residents learn the cost of an exam for a specific patient at a specific facility?
   • How much of the cost is the patient responsible for?

2. Approximate costs of common exams:
   • What do the most commonly performed exams cost?
   • How is the resultant income distributed between facilities and providers?
3. The effect of orders and reports on exam costs:
   • Examples of how exams that are nearly identical from a clinical perspective can vary significantly in cost based on order codes and dictated reports

4. Opportunities to increase savings:
   • Examples of situations when exams with similar ACR Appropriateness Criteria differ in cost, demonstrating how savings can be realized without sacrificing patient care
1) Identifying Costs

- Every exam order corresponds to a CPT* code
- When a patient has insurance, each CPT code is assigned a numerical value in relative value units (RVUs)
  - The amount of RVUs for each CPT is determined by the insurance provider’s fee schedule
  - Higher complexity exams requiring more expertise and resources are worth more RVUs
- RVUs are translated into dollars by a conversion factor

* Current Procedural Terminology. This code set is maintained by the American Medical Association.
1) Identifying Costs

- For CMS (Medicare/Medicaid) patients, the Medicare Physician Fee Schedule (MPFS) is searchable online*
  - The 2018 conversion factor is $35.9996 (for 1 RVU)
  - MPFS adjusts for geography
  - Charges are broken down into professional (interpretation) and technical (performing exam) components

1) Identifying Costs

- Private insurance plans reach fee schedule and conversion factor agreements independently with each hospital and practice
  - These fee schedules tend to be similar to MPFS, but conversion factors tend to be higher
  - The portion of a charge paid by the patient depends on his/her plan and deductible
  - Hospitals and facilities have their own schedules of fees for each CPT code to charge patients without insurance
- Typically, these institution-specific schedules are not public
  - Your billing office may provide information on a case-by-case basis
## 2) Costs of Common Exams

CMS costs of common radiology exams in our geographic region:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Total Facility Price ($)</th>
<th>Professional Component</th>
<th>Technical Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR Chest 2 views</td>
<td>36.69</td>
<td>12.49</td>
<td>24.20</td>
</tr>
<tr>
<td>XR Ankle 2 views</td>
<td>38.28</td>
<td>10.18</td>
<td>28.10</td>
</tr>
<tr>
<td>CT Head w/o contrast</td>
<td>139.31</td>
<td>49.17</td>
<td>90.14</td>
</tr>
<tr>
<td>CT Abdomen &amp; Pelvis w/ contrast</td>
<td>375.60</td>
<td>105.44</td>
<td>270.16</td>
</tr>
<tr>
<td>CT Chest w/o contrast</td>
<td>195.85</td>
<td>67.54</td>
<td>128.31</td>
</tr>
<tr>
<td>US Pelvic Complete</td>
<td>133.84</td>
<td>39.80</td>
<td>94.04</td>
</tr>
<tr>
<td>US Abdomen Limited</td>
<td>111.10</td>
<td>33.97</td>
<td>77.12</td>
</tr>
<tr>
<td>Annual Screening Mammogram</td>
<td>166.39</td>
<td>43.72</td>
<td>122.67</td>
</tr>
<tr>
<td>MRI Brain w/ &amp; w/o contrast</td>
<td>456.17</td>
<td>131.88</td>
<td>324.29</td>
</tr>
</tbody>
</table>
3) Effect of Orders and Reports on Costs

ORDERS

• The CPT code for an ordered exam must correspond to an appropriate International Statistical Classification of Diseases and Related Health Problems (ICD) code in order for CMS to approve reimbursement.

Diagram:
- EXAM → Coding → CPT → No Matching ICD / Matching ICD → Approval / Rejection → RVU → Conversion Factor → $$$
3) Effect of Orders and Reports on Costs

REPORTS

• All performed components of an examination must be included in the final report
• In cases of audit, CMS evaluates reports (not images) in determining whether the billed examination was fully performed
• Therefore, full reporting including an accurate “Technique” section is essential

Example: US Abdomen, Complete vs. Limited
Complete: $148.31
Limited: $111.10

“Complete” must document liver, gallbladder, CBD, pancreas, spleen, kidneys, abdominal aorta and IVC. If any of these are not visualized, a reason must be documented.
4) Opportunities to Increase Savings

- In situations when multiple exams are equally appropriate (based on ACR Appropriateness Criteria), costs can factor into decision-making—for example:

<table>
<thead>
<tr>
<th>Cerebrovascular Disease</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant 1: Asymptomatic. Structural lesion on physical examination (cervical bruit) and/or risk factors.</td>
<td></td>
</tr>
<tr>
<td>Radiologic Procedure</td>
<td>Rating</td>
</tr>
<tr>
<td>US duplex Doppler exam</td>
<td>O</td>
</tr>
<tr>
<td>MRA neck without IV contrast</td>
<td>O</td>
</tr>
<tr>
<td>MRA neck without and with IV contrast</td>
<td>O</td>
</tr>
<tr>
<td>CTA neck with IV contrast</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Condition: Cerebrovascular Disease</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant 2: Adult. Nonacute or indolent initial presentation. Mild to moderate abdominal pain or cramping. Suspected Crohn disease.</td>
<td></td>
</tr>
<tr>
<td>Radiologic Procedure</td>
<td>Rating</td>
</tr>
<tr>
<td>CT enterography</td>
<td>O</td>
</tr>
<tr>
<td>MR enterography</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Condition: Jaundice</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant 2: Painless; one or more of the following: weight loss, fatigue, anorexia, duration of symptoms greater than 3 months. Patient otherwise healthy.</td>
<td></td>
</tr>
<tr>
<td>Radiologic Procedure</td>
<td>Rating</td>
</tr>
<tr>
<td>CT abdomen with IV contrast</td>
<td>O</td>
</tr>
<tr>
<td>US abdomen</td>
<td>O</td>
</tr>
<tr>
<td>MR abdomen without and with IV contrast with MRCP</td>
<td>O</td>
</tr>
</tbody>
</table>

* MR abdomen w/ & w/o contrast + MR pelvis w/ & w/o contrast (There is no separate MR enterography CPT code)
CONCLUSION

• Radiology residents should strive to attain:
  1. A basic working knowledge of exam costs and cost structure
  2. The ability to confidently and accurately address patient questions and concerns about exam costs
  3. The ability to use knowledge of exam costs to reduce healthcare expenditures and optimize reimbursement

• These tools can aid radiologists both during residency and throughout their subsequent careers, and provide a competitive advantage in both the academic and private job markets
REFERENCES


• ACR Appropriateness Criteria: https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria
CORRESPONDENCE

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