Don’t Step On My Turf: Highly Reimbursed Non-Radiologists’ Utilization Of Imaging Studies and Imaging-Guided Interventions

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Disclosures

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**Introduction**

- Non-radiologists are increasingly performing imaging studies and imaging-guided interventions traditionally performed by radiologists.

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**The changing roles of radiologists, cardiologists, and vascular surgeons in percutaneous peripheral arterial interventions during a recent five-year interval.**

Levin DC¹, Rao VM, Parker L, Bonn J, Maitino AJ, Sunshine JH.

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“Between 1997 and 2002, procedure volume in percutaneous peripheral arterial interventions grew at faster rates among cardiologists, vascular surgeons, and other physicians than it did among radiologists.”

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- This trend has raised concerns about turf wars and appropriate use of imaging and the performance of imaging-guided procedures.
Goals & Objectives

• The purpose of this study was to determine the contribution of imaging and imaging-assisted procedures to Medicare reimbursements made to non-radiologists.

*In other words…*

To what extent are non-radiologists “stepping” on radiologists’ turf?
Methods

- The Medicare Provider Utilization and Payment Database is a publicly available database provided by the Centers for Medicare & Medicaid services (US Government organization) that discloses all Medicare payments by dollar amount to physicians from 2012 to the present.
- This database was queried for the 50 physicians who received the most Medicare reimbursements in 2014 in the following specialties:
  - 1. Cardiology
  - 2. Vascular Surgery
  - 3. Emergency Medicine (EM)
  - 4. Orthopaedics
  - 5. Obstetrics & Gynecology (OB/GYN).
Methods

- The following data were tabulated for each physician:
  - Total reimbursements
  - Relative contributions from imaging studies
  - The most frequently performed imaging-guided procedures

- ANOVA was used to compare reimbursements between specialties.
  - Significance was set at p<0.05.
Results

The *average total Medicare reimbursement* for the highest-reimbursed physicians in each specialty ranged from $579,326 in OB/GYN to $3,930,718 in Cardiology (p<0.0001):

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Average Total Reimbursement</th>
<th>Total Reimbursement from Imaging Tests</th>
<th>% of Total Reimbursements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopaedics</td>
<td>$1,304,753</td>
<td>$134,659</td>
<td>11.27%</td>
</tr>
<tr>
<td>Cardiology</td>
<td>$3,930,718</td>
<td>$558,642</td>
<td>15.64%</td>
</tr>
<tr>
<td>ED</td>
<td>$849,267</td>
<td>$27,098</td>
<td>3.73%</td>
</tr>
<tr>
<td>OBGYN</td>
<td>$579,326</td>
<td>$11,551</td>
<td>2.00%</td>
</tr>
<tr>
<td>Vascular Surgery</td>
<td>$3,138,584</td>
<td>$105,307</td>
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</table>
Results

• The contribution of imaging studies to the total reimbursement ranged from 2% in OB/GYN (average total $11,551) to 11% in Orthopaedics (average total $134,659) and 16% in Cardiology (average total $558,642):

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This difference was statistically significant! (p<0.0001)
Results

• The most frequent imaging studies or imaging-guided interventions included:
  • Fluoroscopic guidance for injections of joints or the spine
  • Diagnostic ultrasound of blood vessels
  • Endovascular procedures

• Notable outliers included:
  • 2 EM physicians who were reimbursed $282,055 and $460,335 for spine injections
  • 2 OB/GYN providers who were reimbursed >$300,000 each for injections for knee radiographs.
Is there a Turf War?

• Our results suggest “yes.”
  • Across multiple fields there is substantial performance of imaging studies and performance of imaging-guided interventions.
• This trend is consistent with multiple prior studies:

  "The changing roles of radiologists, cardiologists, and vascular surgeons in percutaneous peripheral arterial interventions during a recent five-year interval.

  Levin DC¹, Rao VM, Parker L, Bonn J, Maitino AJ, Sunshine JH.

  "Turf wars in radiology: the quality of imaging facilities operated by nonradiologist physicians and of the images they produce.

  Levin DC¹, Rao VM, Orrison WW Jr.

  "Dramatically increased musculoskeletal ultrasound utilization from 2000 to 2009, especially by podiatrists in private offices.

  Sharpe RE¹, Nazarian LN, Parker L, Rao VM, Levin DC."
Show Me The Money

• Perhaps more concerning, these non-radiologists are reimbursed for these imaging studies and procedures in large amounts!
  • These amounts exceed the reimbursements made to the average physician, in general, and the average radiologist, specifically!

Lost potential reimbursements to radiologists?
Is this safe?

- There were some surprising practices:
  - ED physician doing spine injections
  - OB/GYN physician providing knee injections for *radiographs*?

Do ED and OB/GYN have proper training or indications for these procedures?

- Further inter-specialty dialogue is needed to ensure that appropriate and safe use of imaging studies and imaging-guided procedures!
Conclusion

• A variety of fields utilize imaging studies and perform imaging-guided interventions.
• Equally importantly, they are reimbursed for them in large amounts that exceed the reimbursements made to the average physician, in general, and the average radiologist, specifically.
• Further inter-specialty dialogue should be encouraged to ensure that non-radiologists are appropriately using imaging and performing imaging-guided procedures safely.
Thank You!