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

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Disclosures

The authors have no financial disclosures relevant to this study.

Introduction

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

J Am Coll Radiol. 2005 Jan;2(1):39-42.

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

Levin DC[1], Rao VM, Parker L, Bonn J, Maitino AJ, Sunshine JH.

"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."

- 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 1: Non-Radiology Specialties' Medicare Reimbursements and Imaging Contributions

Specialty	Average Total Reimbursement	Total Reimbursement from Imaging Tests	% of Total Reimbursements
Orthopaedics	$1,304,753	$134,659	11.27%
Cardiology	$3,930,718	$558,642	15.64%
ED	$849,267	$27,098	3.73%
OBGYN	$579,326	$11,551	2.00%
Vascular Surgery	$3,138,584	$105,307	3.00%

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:

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J Am Coll Radiol. 2004 Sep;1(9):649-51.

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

Levin DC[1], Rao VM, Orrison WW Jr.

J Am Coll Radiol. 2012 Feb;9(2):141-6. doi: 10.1016/j.jacr.2011.09.008.

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

Sharpe RE[1], 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.

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Thank You!