EVOLVING RADIOLOGY RESIDENT WORKLOADS IN THORACIC AND ABDOMINOPELVIC IMAGING: A NATIONAL MEDICARE CLAIMS-BASED ANALYSIS

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THE AUTHORS HAVE NO RELEVANT DISCLOSURES

Hernan R. Bello, MD
Richard Duszak, MD
Eric Rubin, MD
Patricia Balthazar, MD
Elizabeth Rula, PhD
Danny R. Hughes, PhD
Jennifer Hemingway, MS
Courtney Moreno, MD

1 Emory University, Department of Radiology and Imaging Sciences
2 American College of Radiology, Commission on Human Resources
3 Harvey L. Neiman Health Policy Institute
4 Georgia Institute of Technology
WHAT IS THE CORRECT BALANCE BETWEEN CLINICAL SERVICE AND EDUCATION?

Should residents’ work be a reflection of the training institution, follow national trends, or predetermined curricula?

Radiology trainee workloads may not align with national workforce needs.
RESIDENCY PROGRAMS AIM TO PREPARE RESIDENTS FOR REAL-LIFE CLINICAL PRACTICE

With a few exceptions, there are no guidelines for how much time residents should spend in a subspecialty.

We aim to assess changing national radiologist and radiology resident workloads in thoracic and abdominopelvic imaging to inform curricula design.
**2010**
Studies reported by trainees increased 100% in 12 years throughout all modalities and subspecialties, three times that of practicing radiologists.

**2012**
Abdominopelvic fluoroscopy (-44.95) and radiography (-39.6%) decreased, while US (+38%), CT (+197%), and MRI (+1037.5%) all increased in 8 years.

**2022**
Neuroimaging studies reported by trainees increased 163% over a 16-year period, nearly twice that of practicing radiologists.

BACKGROUND

- Access to PACS
- 24-hour emergency department
- Increasing Trainee Volumes
- Less trainee scanning
- Faster image acquisition
- Dictation Software
- Electronic Medical Records
METHODOLOGY

Aggregate Medicare fee-for-service claims files from 2002 through 2018
All radiography, ultrasonography, computed tomography (CT), and magnetic resonance (MR) examinations of the chest, abdomen, and pelvis

Population utilization rates and work relative value unit (wRVU) weights of all services were calculated
Services rendered by radiology trainees identified via the “GC” modifier
Mean annual per trainee wRVUs were calculated using national enrollment files
Annual utilization of XR, US, CT and MRI in the Medicare fee-for-service population per 10,000 beneficiaries by body part.
Annual percentage of national Medicare work effort (in wRVUs) rendered by radiology trainees by body part.
Mean annual per trainee neuroimaging workload (in wRVUs) by body part
Practicing radiologist vs. resident volumes and work RVU in thoracic imaging
Practicing radiologist vs. resident volumes and work RVU in abdominopelvic imaging.
DISCUSSION

Is the disproportionate growth in resident volumes a response to institutional, population, or educational needs?
Can it be explained by improvements in the reporting workflow efficiency?
What is the correct balance between clinical service and didactic education?
What is the impact of increasing imaging volumes on the teaching environment?
How do changing trends in imaging utilization impact the future workforce?
CONCLUSION

As national radiologist workloads in thoracic and abdominopelvic imaging have increased over time, radiology resident workloads have increased disproportionately. Whether this increase reflects trainee or patient population needs or individual academic institution priorities merits further consideration. Workload trend information may be useful to optimize program curricula.
LIMITATIONS

Medicare data excludes other payers such as private insurance

The overwhelming majority of abdominal and thoracic imaging fellowships are non-ACGME and therefore not captured under the GC modifier

Pelvic imaging performed for MSK indication cannot be excluded

In 2011, CT abdomen and CT pelvis studies were bundled into a single code (CT abdomen/pelvis)
REFERENCES


THANK YOU