When the Reading Room Meets the Team Room:

Resident Perspectives from Radiology and Internal Medicine on the Impact of Personal Communication after Implementing a Resident-led Radiology Rounds
Authors

Andrew Klobuka, MD
- University of Pittsburgh Medical Center, Department of Radiology
- andrew.klobuka@upmc.edu

John Lee, PhD
- Drexel University College of Medicine

Matthew Heller, MD
- University of Pittsburgh Medical Center, Department of Radiology

The authors have no disclosures.
Purpose

Our goal for this study was to explore resident perspectives on the desire for personal contact between radiologists and internists.

We also wanted to know how improved communication is perceived to impact patient care by these two groups of residents.
Introduction

The general internal medicine teaching service at our institution is made up of 5 inpatient teams, each comprised of 2 medical students, 2 interns, 1 senior resident, and 1 attending.

Each team was asked to submit 3-4 patients with recent imaging studies or diagnostic dilemmas to a group of radiology resident volunteers (R2-R4s) for review. This process was coordinated by the respective chief residents. No formal “radiology rounds” had been in place prior to this.

The radiology volunteers would then travel to individual medicine team rooms and review each case with the medicine residents. Radiology residents were asked to emphasize key images, discuss the utility of various imaging studies in answering the given clinical questions, and to review basics such as when to order intravenous contrast. Medicine residents were asked to share how the imaging findings and report verbiage impacted their decision making and ultimately describe what happened during the patients’ episodes of care.
Methods

Our Radiology-Medicine rounds was instituted on a biweekly basis starting in July of 2015.

After obtaining IRB approval and informed consent from all participants, separate but related surveys were given to all radiology and internal medicine (including preliminary medicine and transitional year) residents for the 2015-2016 academic year.

The survey was administered in April of 2016 after 9 months of program participation. The surveys were administered on paper during noon conference for both groups with an additional online version distributed via email to those unable to attend in person.

23/49 Diagnostic Radiology (DR) and 72/197 Internal Medicine (IM) residents responded.
Results

DR & IM: Radiologists should have regular face-to-face meetings with referring clinicians to discuss cases

![Survey Results Chart]

- **DR, n=24**
  - Strongly Disagree 1: 0
  - 2: 0
  - 3: 3
  - 4: 25
  - Strongly Agree 5: 31

- **IM, n=71**
  - Strongly Disagree 1: 1
  - 2: 1
  - 3: 13
  - 4: 5
  - Strongly Agree 5: 17
**DR:** Contact with referring clinicians (either via phone or in-person) changes my approach for reading a study.

**IM:** Personal contact (either via phone or in-person) with a radiologist has on ANY occasion changed my management for a patient in a way that I otherwise would NOT have done had I simply read their report.

![Bar chart showing responses](chart.png)
DR: Generally speaking, would you like to have more personal contact with referring clinicians in your day-to-day practice then you do currently?

Yes: 19
No: 4

IM: Generally speaking, would you like to have more personal contact with radiologists in your day-to-day practice than you do currently?

Yes: 68
No: 3

DR: Spending more time than I currently do speaking with and answering questions from referring clinicians (either via phone or in person) will... (select all that apply), n=23

- Improve proper ordering of imaging studies by referring clinicians
- Negatively impact my workflow
- Improve the quality of patient care
- Improve appropriate resource utilization
- Improve my sense of satisfaction with my role as a consultant
IM: Having increased access to a radiologist (either via phone or in-person) would make it easier to... (select all that apply), n=72

- Obtain a preliminary read on a study: 66
- Order the specific study that I have in mind using the EMR: 56
- Avoid ordering unnecessary studies or multiple studies that provide similar information: 57
- Ask questions related to selecting the most appropriate imaging study: 71
- Ask questions about individual radiology reports: 71
IM: Select the style(s) of radiology reports that you would find most helpful in your clinical practice... (select all that apply), n=72

- A short report that describes abnormal findings and pertinent negatives only
  - 59

- A report that provides recommendations for appropriate next steps in imaging diagnosis or follow-up
  - 56

- A detailed report that enumerates both normal and abnormal findings
  - 38

- A report with a findings section that is structured by organ system
  - 34

- A report that directly answers my clinical question
  - 27

- A report that includes arrows or a key image series
  - 26
Meaningfully withhold clinical history so as to not bias the radiologist's search pattern

Provide a detailed clinical history in order to have a specific question addressed

Often provide only minimal history or a symptom

Usually provide more history for CT and MRI exams than for plain films

Always read just the impression

Always read the body of the report AND the impression

Read the impression first and USUALLY refer to the body for more details

Read the impression first and ONLY refer to the body if I'm unsure of any details
DR: Generally speaking, I prefer what amount of time during a typical diagnostic work day to be spent speaking directly with referring clinicians (either via phone or in-person)..., n=22

- 30-60 min: 45%
- 1 hr or more: 14%
- 5-15 min: 5%
- 15-30 min: 36%

DR: Participation in interdisciplinary conferences is an important part of my role as a radiologist. n=23
**DR:** Do you feel your interaction with the Internal Medicine residents will better enable them to order the most appropriate imaging studies (roughly keeping in mind ACR appropriateness criteria) in common clinical scenarios?

**IM:** Participation in Radiology Rounds has increased my knowledge of ACR appropriateness criteria for choosing the most appropriate imaging study in any given clinical scenario.

---

![Bar chart showing responses to the question.](chart.png)

- **DR, n=6**
- **IM, n=42**, both groups including only those having participated in radiology rounds
Discussion

96% of IM residents report that personal contact with a radiologist has changed their management for a patient in a way that they would otherwise not have done having simply read the radiology report.

An overwhelming majority of DR and IM residents desire increased communication between their respective groups and recognize that personal contact can directly impact care quality and resource utilization.

When stratifying DR respondents by fellowship preference, residents interested in IR viewed interdisciplinary conference participation as significantly more important than non-IR colleagues (Mann-Whitney U, p < 0.03).

A majority of IM respondents prefer enhanced radiology reports that provide specific next-step recommendations and that include arrows and key-image series.
Conclusion

The newest generation of physicians is already attuned to the value of an Imaging 3.0 radiologist.

Direct contact with clinicians has an impact on management above and beyond that of written reports alone.

We hope this data can support leaders in protecting time for radiologists to regularly engage clinicians in discussion and play an in-person role in the clinical decision making process.