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Image Interpretation Disruptions During Resident Physician On Call Coverage

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Disclosures

- Harry G. Tsou Jr.
  - Nothing to disclose.
- Pranay Krishnan M.D.
  - Nothing to disclose.
- Ross W. Filice M.D.
  - No relevant disclosure.
- Joseph H. Yacoub M.D.
  - No relevant disclosure.

Introduction

- Background
  - Frequent disruptions in reading room from various sources:
    - In Person Consultations
    - Phone Calls
    - Pages
  - Detrimental to speed and accuracy of image interpretation.
- Significance
  - Possible amplification of disruptions during periods of reduced staffing: overnight and weekends.
- Objective
  - Evaluate quantity and details of disruptions that occur during single radiology resident coverage of reading room.

Materials & Methods

- Study Design
  - Prospective observational quality study.
  - On-Call Radiology Reading Room, MedStar Georgetown University Hospital.
- Population
  - On-call Resident Radiologist Physicians.

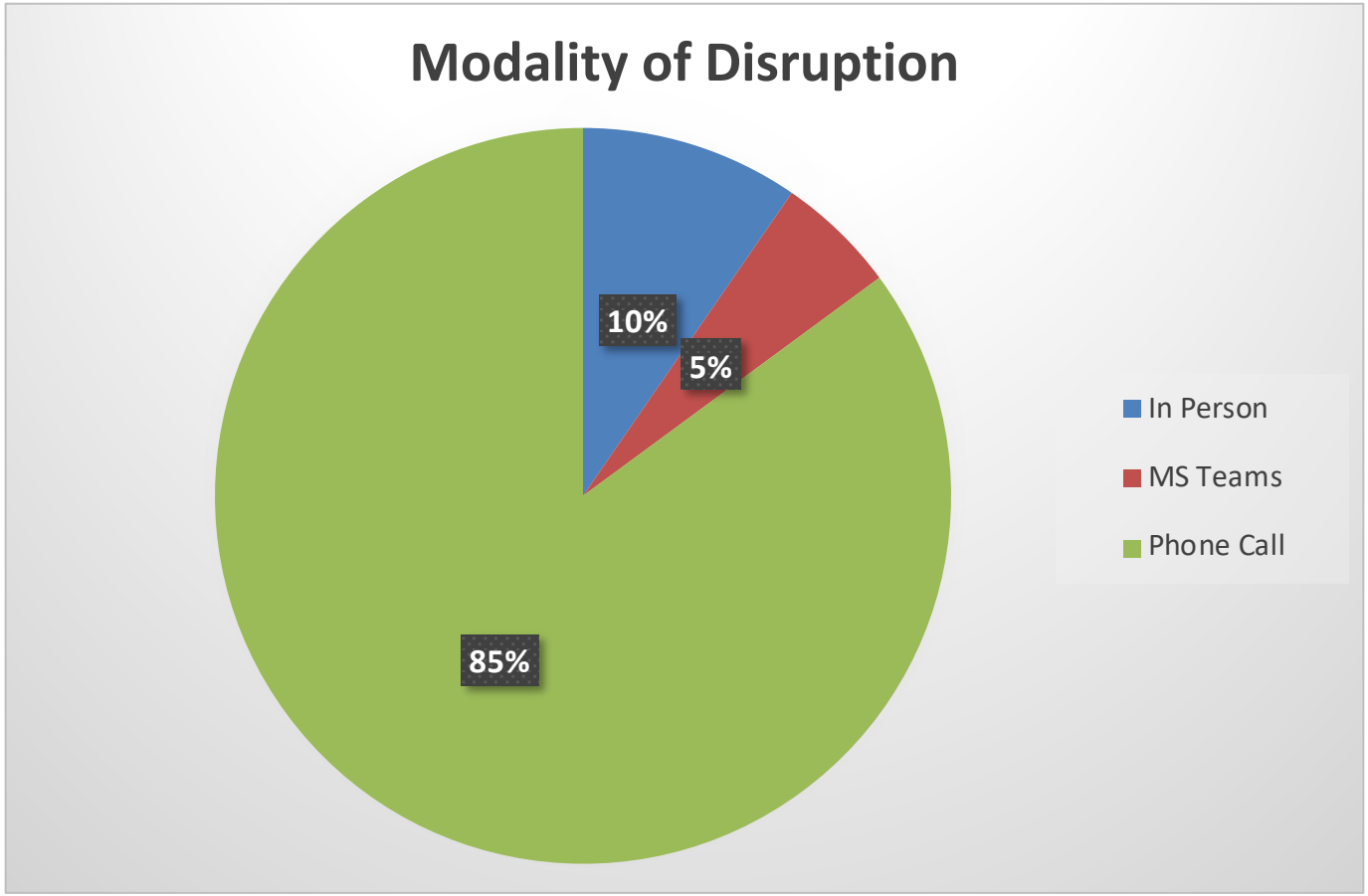
Materials & Methods (cont.)

- Data Collection/Intervention
  - Direct observation of on-call resident physician during single coverage hours: 5PM-10PM.
  - Data organized in Microsoft Excel.
- Outcomes
  - Disruption modality, source of disruption, status during disruption, and duration.
- Basic statistical analysis was performed.

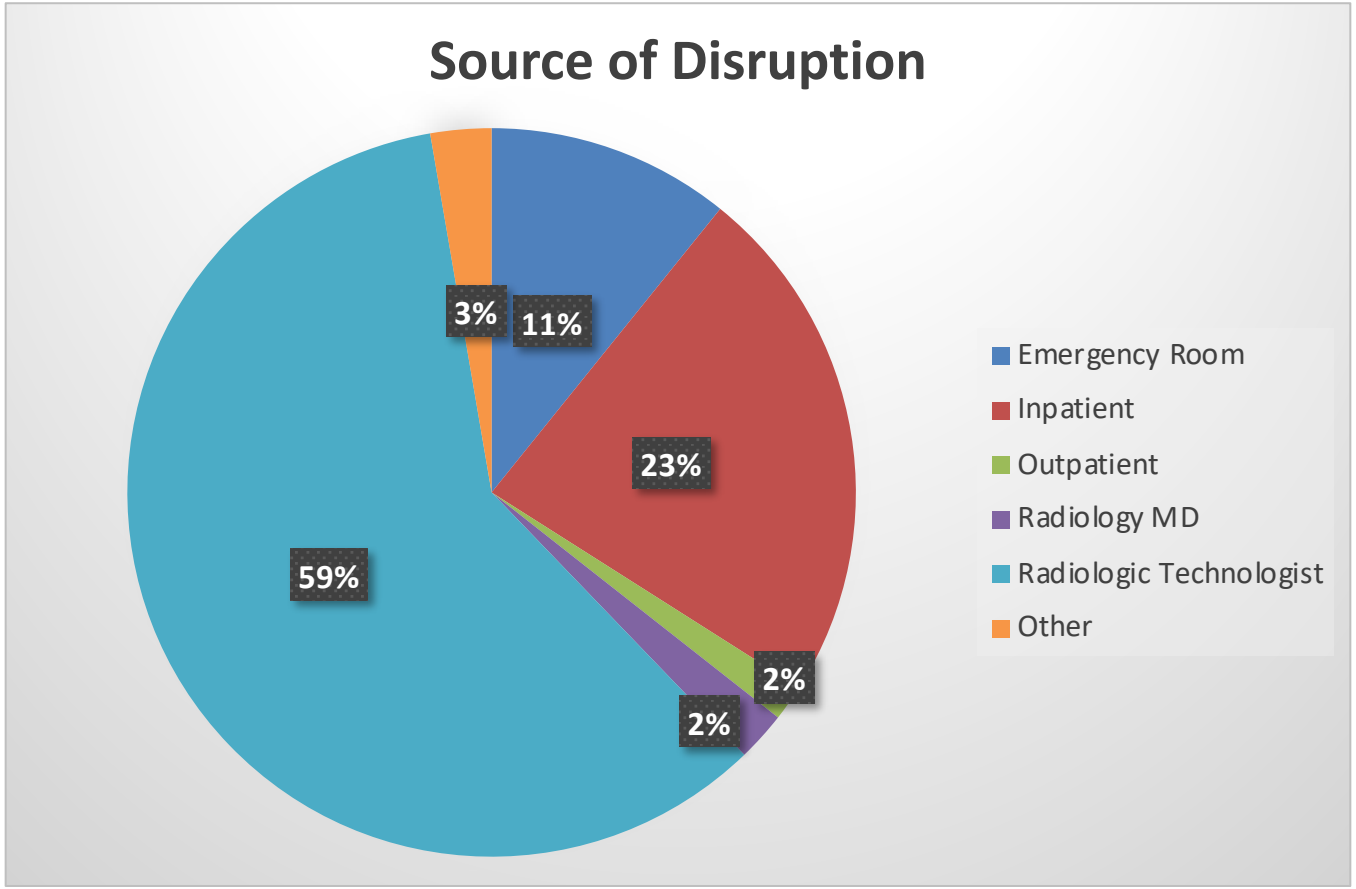
Results

- 187 disruption events in 40 hours.
- 167 (89%) occurred when a physician was actively interpreting a study.
- 52 (31%) of disruptions during study interpretation required the physician to stop interpretation and open a new study.

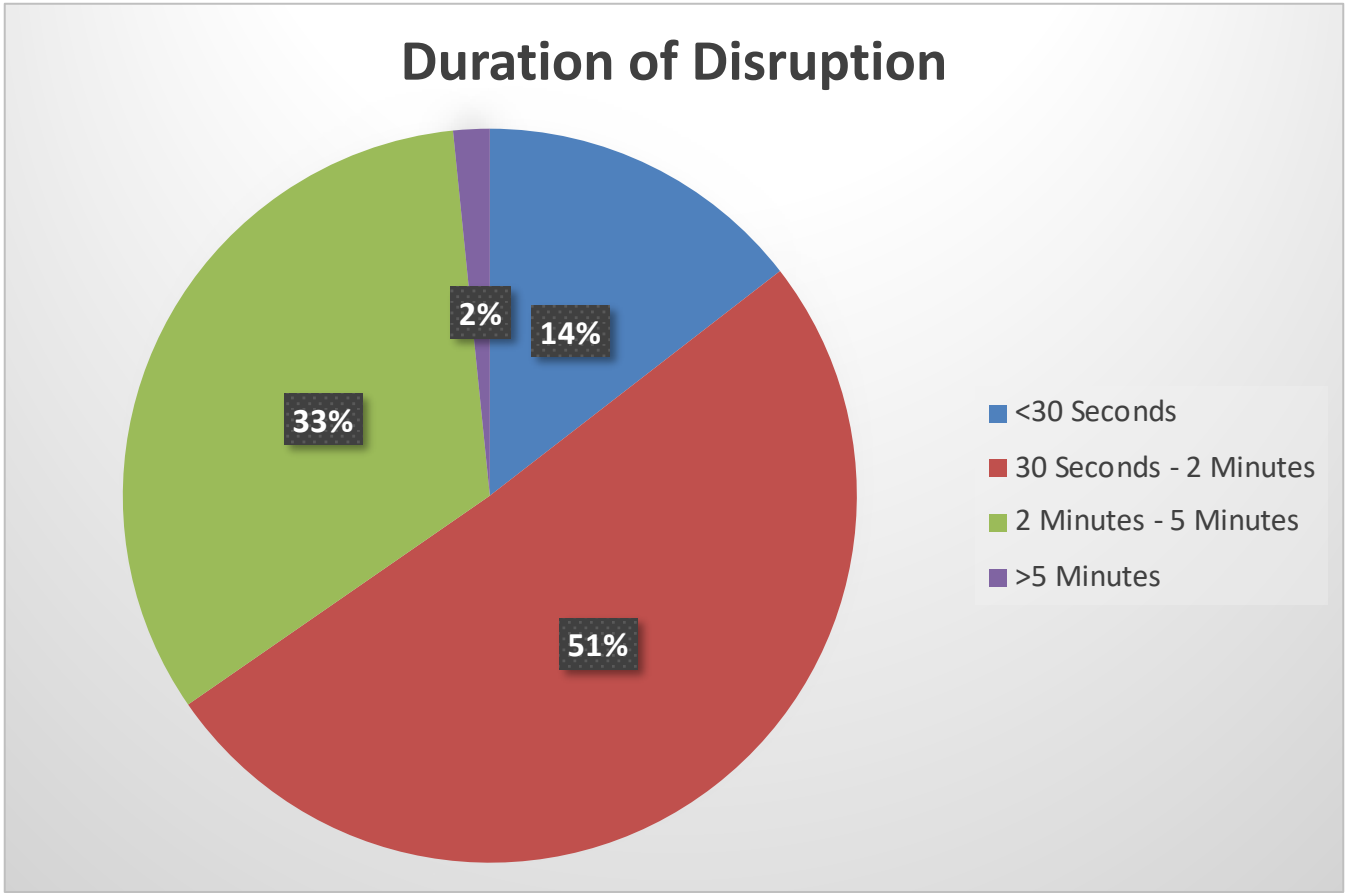
Results



Results


Source of Disruption
3%
11%
23%
59%
2%
2%
Emergency Room
Inpatient
Outpatient
Radiology MD
Radiologic Technologist
Other

Results


Duration of Disruption
2%
14%
33%
51%
<30 Seconds
30 Seconds - 2 Minutes
2 Minutes - 5 Minutes
>5 Minutes

Discussion/Limitations

- Vast majority of disruptions occurred during active image interpretation.
  - Significant proportion required opening a new study and may introduce increased risk of image interpretation errors.
- Technologists identified as source of majority of disruptions.
- Implementation of virtual reading room software considered as solution.
  - Asynchronous software reduces intra-interpretation disruptions.
  - Extension of virtual reading room software to technologists may reduce disruption rate.
- Study was limited by single location of data collection and limited hours of data.

Conclusions

- There is a high prevalence of disruption during periods of single resident on-call coverage occurring during the interpretation of examinations.
- Future studies should evaluate the effects of semi-synchronous communication tools on disruption rate.