

Reading Room Coordinators Increase Radiologist Productivity

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Authors - Disclosures

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Background

The purpose of this study is to determine whether a Reading Room Coordinator (RRC) has any impact on radiologist productivity.

- It has been previously described how interruptions in the reading room decrease radiologist productivity (Balint, 2014; Williams, 2017).
- Phone calls often require the radiologist to close the current study and open another, which increases time needed to read studies.
- Reading room coordinators may absorb many time-consuming non-physician tasks.



Use any QR reader on your mobile device to access the referenced articles.



Methods

Retrospective analysis comparing the productivity of abdominal imaging (body) radiologists before and after the implementation of an RRC.

- Academic practice setting
- 5 attending Body radiologists
 - 2 excluded due to vacation or maternity leave (confounds productivity)
 - 3 attendings studied
- Productivity data compared over two 1-month periods
 - Oct 2017 (before RRC hire)
 - Oct 2018 (after RRC hire)
- Productivity measured as: number of cross-sectional (CT and MRI) studies read between 8am-5pm M-F



Methods: How to implement a Reading Room Coordinator

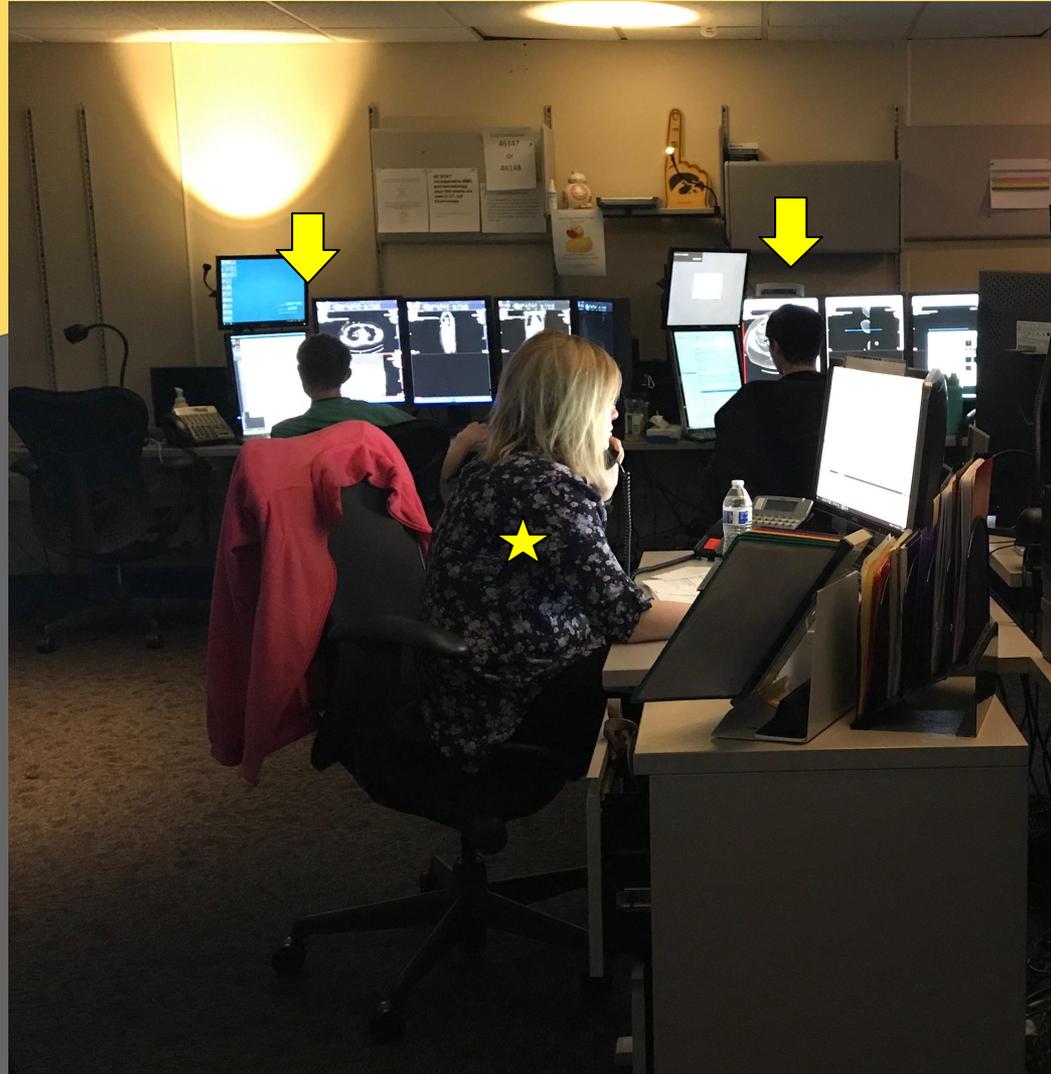
At our institution, we offered part-time shifts as a reading room coordinator to current radiology tech students, who already understand workflow in the Radiology department

- Coordinators sit near the reading room entrance, where they can direct in-person visits from healthcare providers
- Coordinators field all incoming phone calls
 - Answer questions that do not require radiologist input (eg, wrong numbers, scheduling questions)
 - Estimated that ~20% of incoming calls are “re-directions” to a different reading room alone!
 - Triage calls to residents, attendings, rad techs, or imaging control rooms
 - Write down questions from clinicians with callback information for studies that are not ASAP or STAT



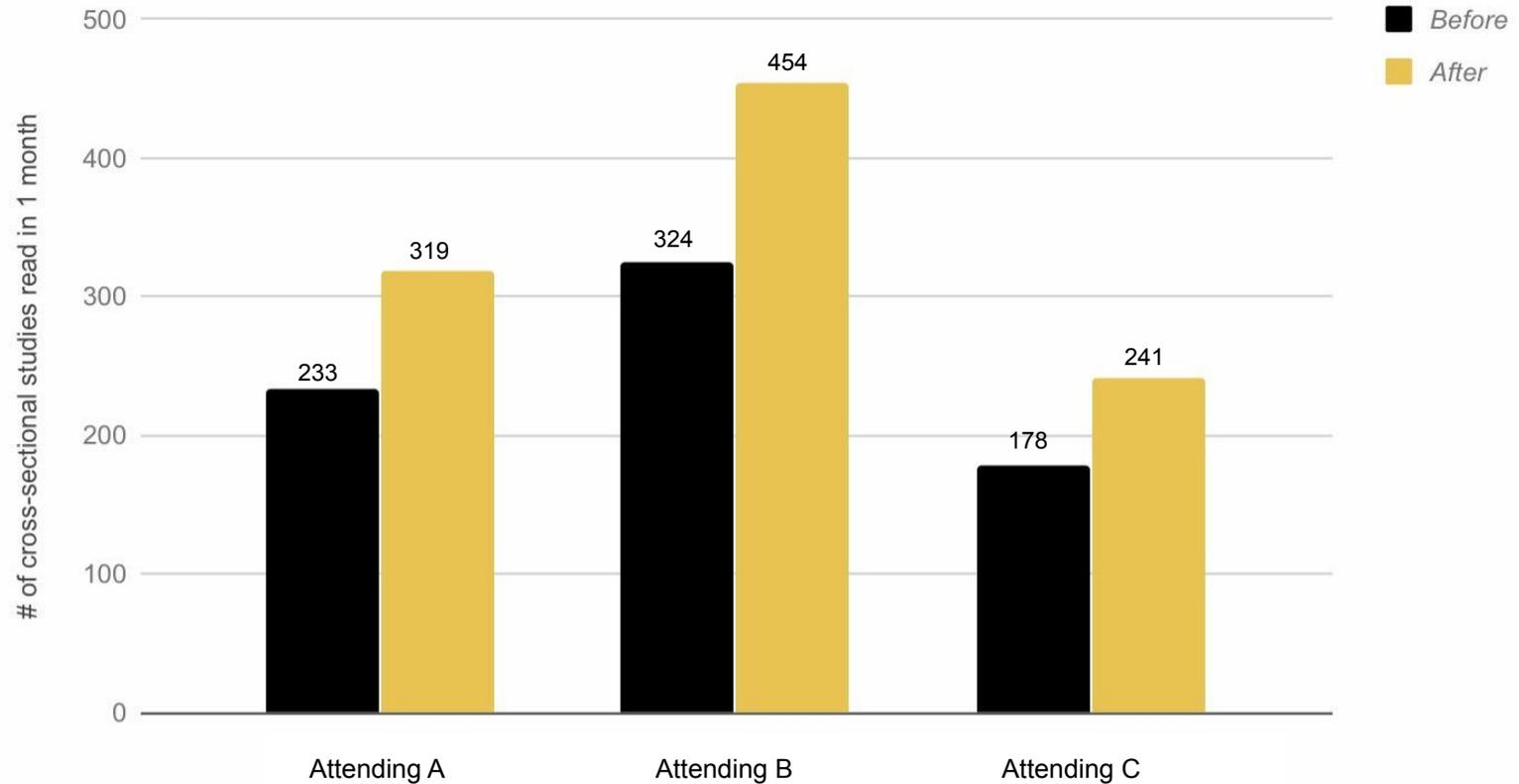
The Reading Room Coordinator

- The RRC (star) sits in a location near the entrance to the reading room, with proximity to the radiologists (arrows).
- RRC has his/her own dedicated workspace with computer, hospital phone, and any additional resources such as directories, policy manuals, etc.



Results

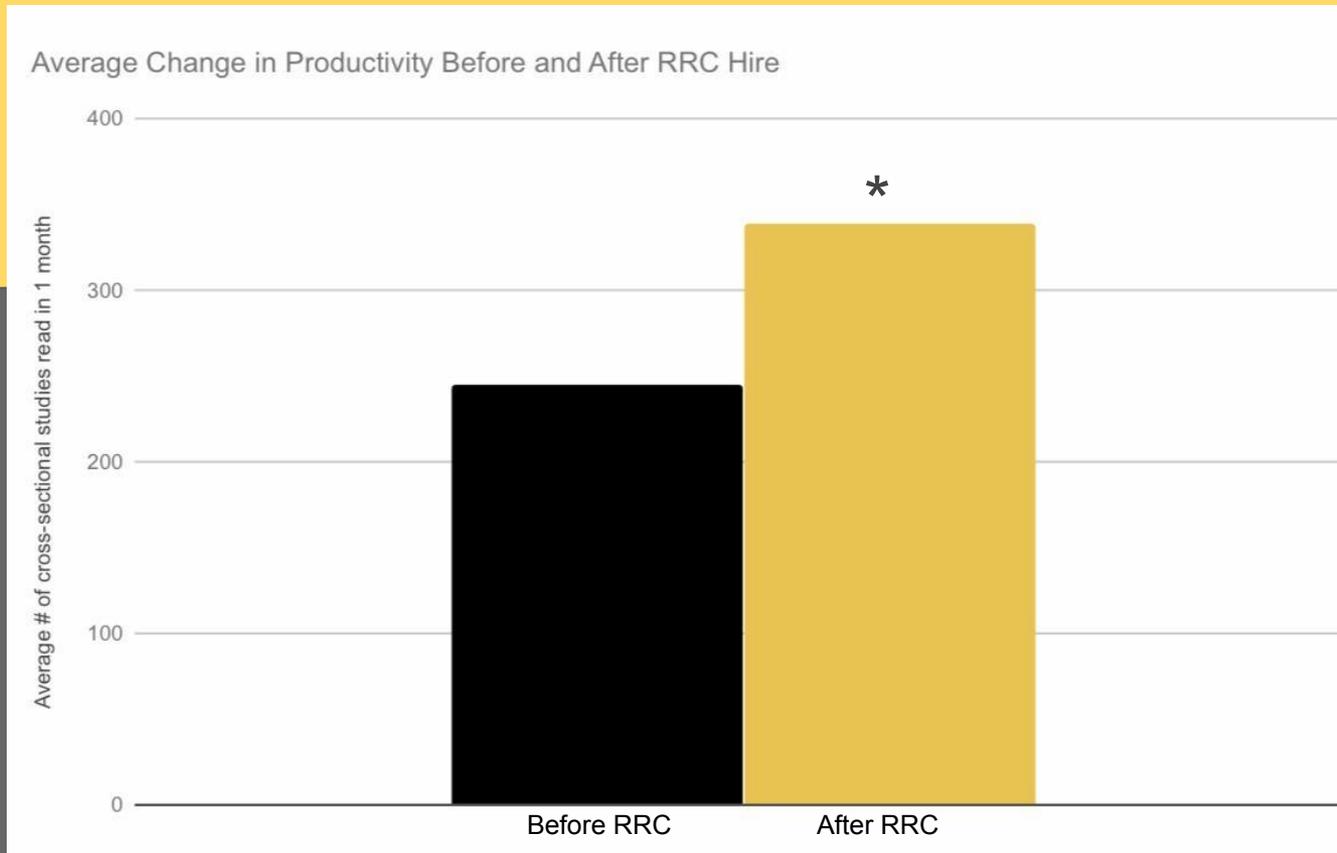
Productivity Before and After RRC Hire



The above figure shows the productivity of three body radiology attendings before (black) and after (gold) implementation of an RRC.



Results



*paired t-test showing that the increase in radiologist productivity is statistically significant ($p < 0.05$) with an average of 93 additional studies read monthly by the radiologists after RRC hire



Discussion - Productivity

Our data show that the productivity of attending radiologists in an academic abdominal imaging section is significantly increased by hiring a Reading Room Coordinator (RRC).

- Because the CT and MRI volumes did not vary significantly between the pre- and post-RRC months, we conclude that increased radiologist productivity reflects greater reading efficiency.
- Prior to implementing the RRC program, radiologists often stayed well past 5pm to finish the case load. With the addition of the RRC program, our radiologists now have a shorter and more manageable workday with less “unpaid overtime.”



Discussion - Cost Efficiency

Our study found that the average body radiologist read 93 more cross-sectional studies per month after the RRC hire.

- This case volume corresponds to 0.4 full-time equivalent (FTE) attending body radiologists.
- Taken together, the greater productivity of all 3 radiologists is equivalent to hiring an additional 1.2 FTE body radiologists
- We conclude that RRCs are cost effective.



Future Directions

Many questions remain: (1) RRCs increase productivity, but do they also improve the quality of image interpretation?
(2) Can RRCs be used to combat radiologist burnout?

- A survey on physician burnout is currently being conducted at our institution.
- Plan to survey our ordering clinicians to learn if RRCs have changed their perception of the quality of radiology services.
- Opportunities to explore the added value of RRCs in other radiology subspecialty reading rooms.



Resources

1. Williams LH and Drew T. Distraction in diagnostic radiology: How is search through volumetric medical images affected by interruptions? *Cognitive Research: Principles and Implications*, 2017; 2(1): 12.
2. Balint BJ et al. Do telephone call interruptions have an impact on radiology resident diagnostic accuracy? *Academic Radiology*, 2014 Dec; 21(12):1623–8



Thank you.

Please direct questions/comments to tara-sorg@uiowa.edu

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