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Amanda Derylo

Juliana Starcevich

Joanna Fair

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 $Derylo, Amanda; Juliana\ Starcevich; and\ Joanna\ Fair.\ "Quality\ Improvement\ Conference:\ Radiology\ Review\ of\ Missed\ Cases."\ (2016).\ https://digitalrepository.unm.edu/rad_pubs/3$ 

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# Quality Improvement Conference: Radiology Review of Missed Cases

Amanda Derylo, MD; Juliana Starcevich, MD; Joanna Fair, MD PhD University of New Mexico Hospital Department of Radiology

## ABSTRACT

- The Quality Improvement (QI) Conference was created in place of the common "Morbidity and Mortality" conference, which is not easily applicable to radiology.
- The common goal of the QI Conference is to discuss cases that contain radiographic-diagnostic errors that could lead to unexpected morbidity, mortality, or suspected medical error.
- To minimize stigma, cases were presented by the senior resident involved, and attending physicians were not invited to the conference.
- The Quality Improvement Conference has been active for approximately 30 months. The participating residents were surveyed 18 months after QI conference inception to gauge efficacy.
- Based on the survey results, the conference was shown to overall be beneficial for education and future call, along with possible benefits in patient care.

## BACKGROUND

- Practice-Based Learning and Improvement, one of the six Accreditation Council for Graduate Medical Education (ACGME) core competencies, requires residents to be integral and actively participate in quality improvement and patient safety improvement.
- This requirement can be fulfilled by senior residents presenting their missed cases with description of diagnostic error types and preventative measures.

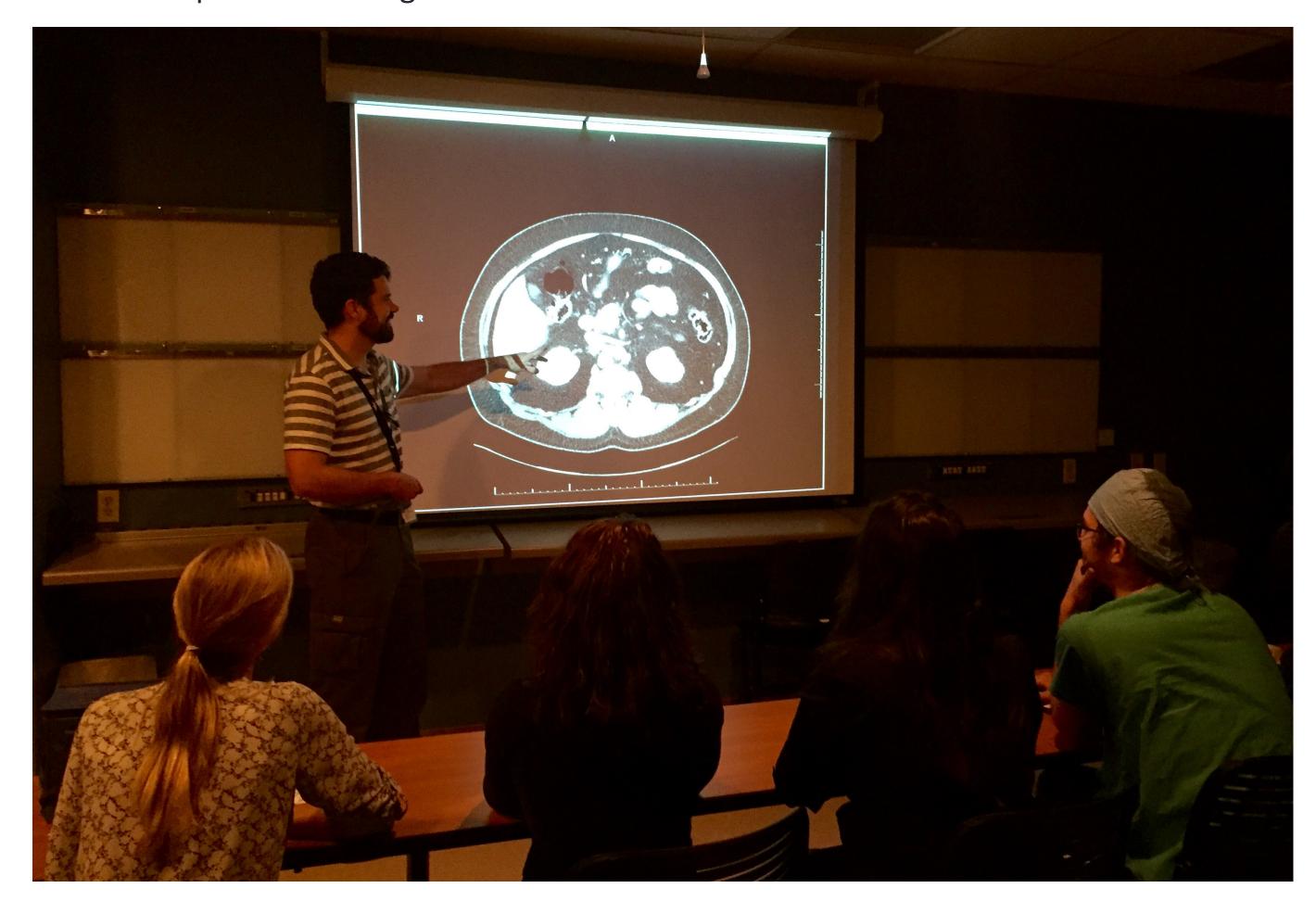
## OBJECTIVES

#### Short-term objectives:

- Supplement lectures and address common pitfalls to prepare first and second year residents for call.
- Improve patient care with increased resident knowledge

#### Long-term objectives:

 Adjust the department culture and remove the stigma of resident misses to create an improved learning environment



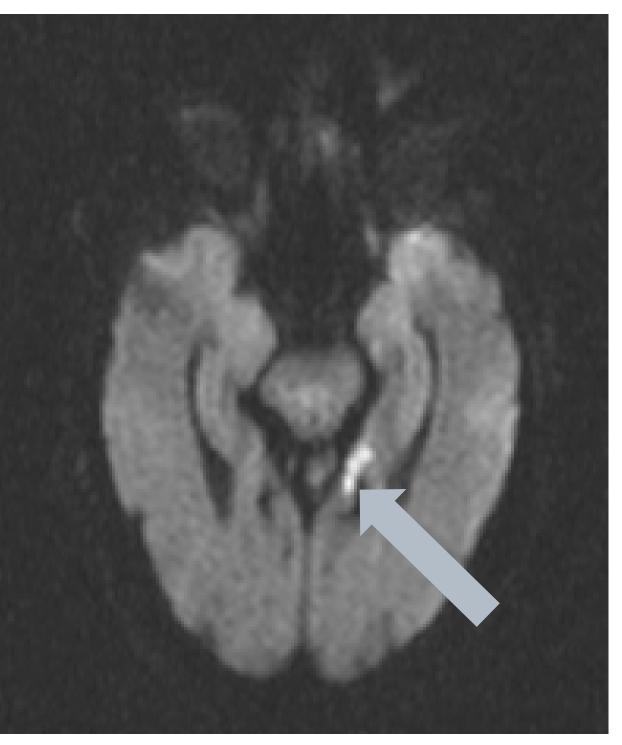
## METHODS

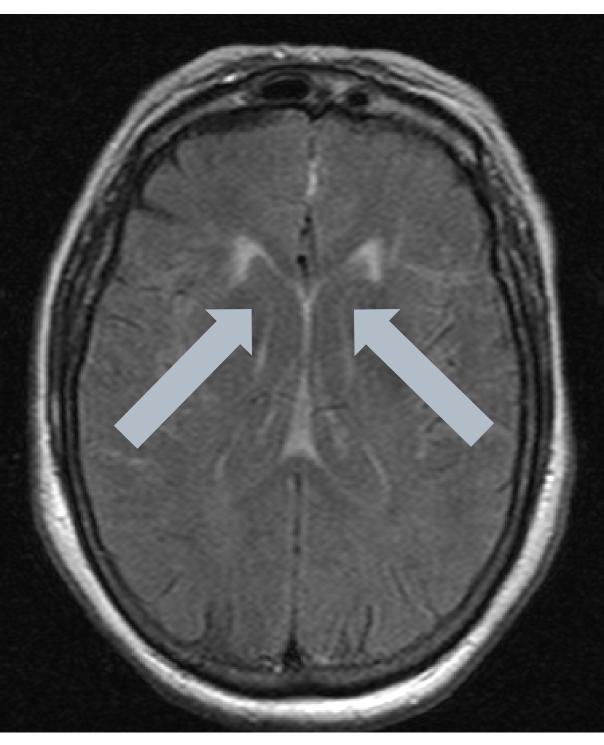
#### QI Conferences:

- Monthly one-hour conferences led by senior residents.
- Attending physicians were not present at the conference.
- The target audience was first- and second-year radiology residents, given the obvious additional benefit for call preparation.
- Senior residents used Primordial software to compile and present their missed cases.
- Presenting one's own misses created a non punitive environment.
- Emphasis placed on cases demonstrating common pitfalls in search pattern, diagnostic mimics, and diagnoses commonly encountered during call hours.
- Pertinent information including history, images/sequences, description of error type, follow-up of care, and learning points were presented with each case.
- Cases were presented in varying styles including "show-and-tell" and "hot seat."

#### Data collection:

- After 18 months, participants were polled to assess perceived QI conference utility using both open ended and dichotomous questions. Using Survey Monkey ensured anonymity.
- Question 1: Are the QI conferences beneficial?
- Question 2: Do you think they improved patient care?
- Question 3: How could the conferences be improved?
- Question 4: What types of presentations worked the best?
- Question 5: Do you think the time and frequency needs to be changed?
- Question 6: Do you have comments or suggestions for next year?





"Satisfaction of Search" error presented at QI conference. Once a stroke is identified (left), the search for additional abnormalities is suboptimal. Thus, the incomplete suppression of intraventricular CSF signal on T2 FLAIR (right), indicating concomitant ventriculitis, was missed.

## RESULTS

- 8 of the 11 regular attendees responded to the survey, of whom 100% felt the QI conference was beneficial AND improved patient care.
- Junior residents felt the conferences enhanced their comprehensive educational experience and helped them identify their own areas of weakness.
- Further evaluation would be needed to objectively demonstrate a possible decrease in resident on-call misses.

## RESULTS

#### Question 1 Comments:

- I feel like I learned a lot from seeing the cases.
- I really enjoyed them!
- I think this is one of the most useful forms of teaching we get in prep for 2<sup>nd</sup> year call, and I think it will be a great teaching opportunity to impart our misses to the incoming call crew. Also, the concept of sharing and learning from each other's mistakes helps take away some of the "shame" of a miss by making the shared learning from their occurrence a part of our resident culture.

#### Question 2 Comments:

- If you can spot badness earlier, I think it will help.
- If there was a middle choice I'd say neutral. Certainly didn't harm patient care, but I wouldn't say it improved patient care above any other lecture.
- Helped improve my search pattern.

#### Other comments:

- Conference should be "more frequent"
- I think these should be done at least every other week, if not every week.
- If there was to be a change, I would say more can only help.
- I appreciate it the most when the person who missed the finding shows us their search pattern and where it went wrong.
- For sure keep this going. It's helpful
- Not only are they educational, but helpful to see that everyone misses things and how to turn them into learning opportunities.
- My honest opinion is that the QI lectures are underemphasized and underutilized. I feel it would be immensely beneficial to hold these more than once a month. I think that the presenting resident should be granted a half day of "academic time" to prepare for the conference. It is very good for all of us to see that not only do we all miss things, but the reasons why certain things were missed and the thought process behind them. I think these resident led discussions/conferences bring about a level of camaraderie. Sharing and discussing misses with our peers is invaluable, in my opinion; it helps everyone.

## CONCLUSIONS

- Residents think the case conferences are beneficial for learning.
- Residents think the case conferences helped identify potential causes of misses, and therefore benefit patient care.
- More objective data collection is needed to see if the addition of the QI conference objectively lowered resident misses on-call.
- Longer term evaluation is needed to see if department culture and attitude toward resident misses have improved.

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