Radiologists' preferences in peer-learning and peer -review

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Introduction/Purpose

- Traditional score-based (SB) peer-review systems in radiology involve studies chosen at random and are often anxiety-inducing and associated with punitive learning
- Radiology departments are increasingly transitioning from an environment of retrospective peer-review to one that promotes active, nonpunitive peer-learning
- Learning opportunities frequently encountered during the daily workflow will become missed opportunities for learning and improvement unless collected and shared
- Active identification allows section leaders to review areas that need the most attention and include cases with the most educational benefit in peer-learning initiatives
- These voluntary case submissions encourage continuous practice improvements among radiologists and improved service to patients and referring providers

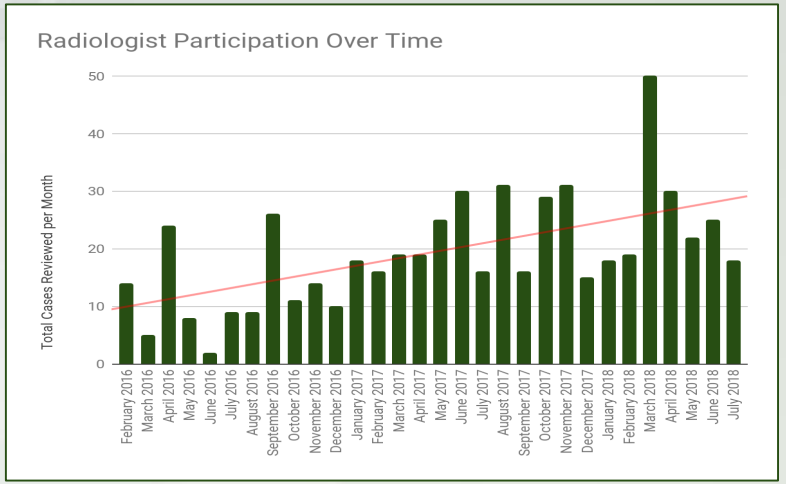
Methods

- We developed a voluntary peer-learning (PL) case submission module called Peer-to-Peer Education (P2PE) for interesting cases encountered during daily workflow
- PL case submissions provide opportunities for improvement in interpretation and reporting, patient care, and results communication and include “great call” cases to be shared in PL conferences organized by section chiefs
- A 22-question survey was distributed 3 years after implementation of P2PE to score-based peer-review system

Results

PL case submissions and P2PE participation by radiologists increased over time.

- 588 actively identified peer-learning cases during the first 30 months of P2PE from January 2016 to June 2018
  - Peer-learning opportunities: 522 (89%)
  - Great calls: 65 (11%)
  - Receiving radiologists: 123
    - Average per radiologist: 4.7
    - Range: 1 to 30
  - Submitting radiologists: 63
    - Average per radiologist: 9.3
    - Range: 1 to 70

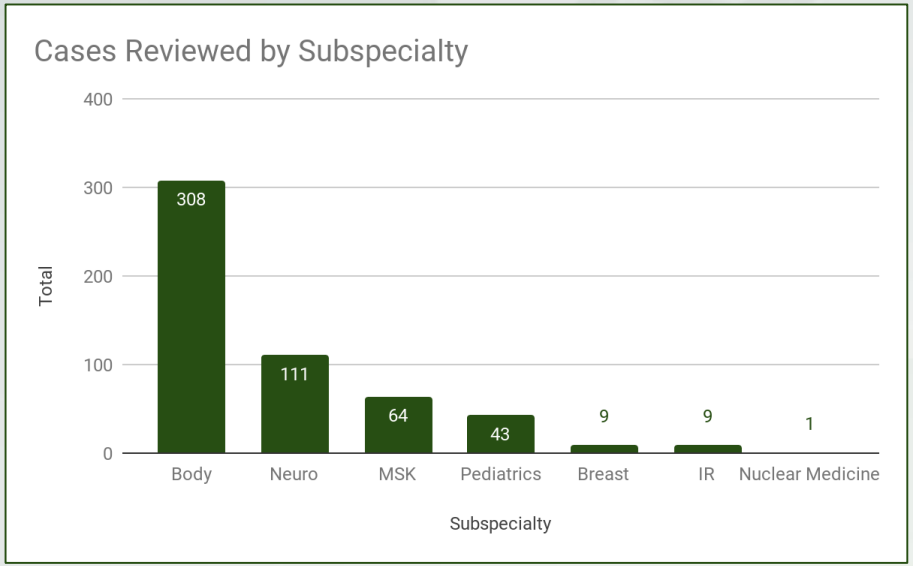


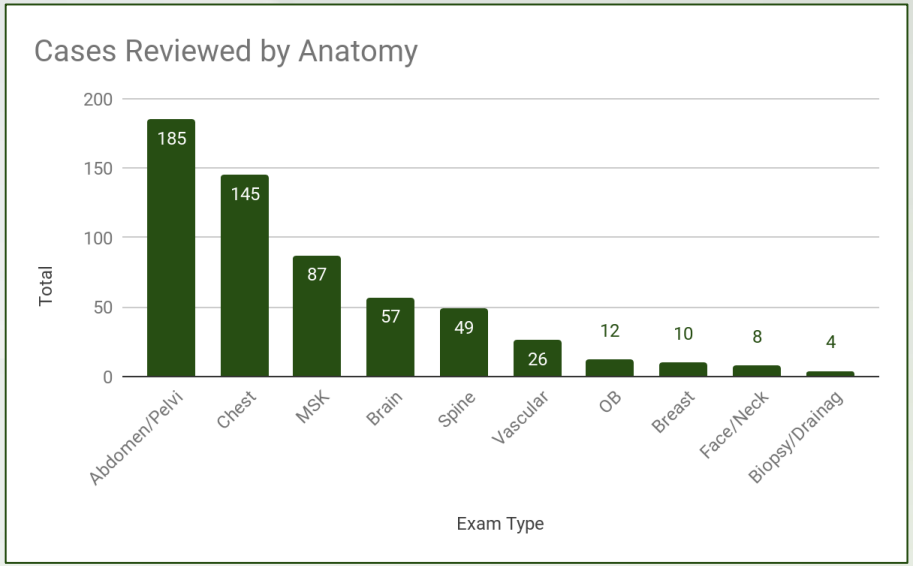
- Increased participation by radiologists:
  - 401 cases in the first 2 years after system implementation for an average of 17 cases per month
  - 182 cases in the most recent 6 months for an average of 30 cases per month

Results

PL identified common areas for targeted improvement by subspecialty and anatomy.

- 77% of cases were Body and Neuro
- Breast, Interventional Radiology, and Nuclear Medicine were the least received
- Abdomen/Pelvis (31.7%), Chest (24.9%), and Musculoskeletal (14.9%) had the most identified cases for peer learning





Results

Survey results were collected from 66 radiologists of various backgrounds.

Primary Section	Percent	Number
Body	15%	10
CVT	1.5%	1
General	15%	10
MSK	7.5%	5
Nuclear/PET	3%	2
Ultrasound	6%	4
Breast	10.5%	7
Emergency	16.5%	11
Interventional	10.5%	7
Neuro	9%	6
Pediatric	4.5%	3

- Survey distributed after 3 years of experience
- Surveyed radiologists' opinions on the value of randomized SB peer-review compared to PL

Years in Practice		
Less than 5 years	17%	11
5 – 10 years	15%	10
10 – 20 years	21%	14
More than 20 years	47%	31

Survey Results

Most radiologists regarded PL more favorably than the traditional SB peer -review.

Primary Section	Randomized Peer Review	Peer Learning
Time spent per month on required randomized SB peer-review versus sending optional peer-learning cases	• <30 minutes – 6 *(9%)* • 30 minutes to 1 hour – 45 *(68%)* • 1 to 2 hours – 15 *(23%)*	• **<30 minutes – 62 *(94%)*** • 30 minutes to 1 hour – 4 *(6%)* • 1 to 2 hours – 0 *(0%)*
Improves knowledge sharing and learning among radiologists	• Yes – 21 *(32%)* • No – 23 *(35%)* • Unsure – 22 *(33%)*	• **Yes – 41 *(62%)*** • No – 5 *(8%)* • Unsure – 20 *(30%)*
Improves provisions of patient care	• Yes – 24 *(36%)* • No – 24 *(36%)* • Unsure – 18 *(27%)*	• **Yes – 44 *(67%)*** • No – 4 *(6%)* • Unsure – 18 *(27%)*
Focuses on improving my practice rather than on placing blame	• Yes – 30 *(45.5%)* • No – 16 *(24%)* • Unsure – 20 *(30%)*	• **Yes – 42 *(63.5%)*** • No – 5 *(7.5%)* • Unsure – 19 *(29%)*

Peer-Learning Survey Results

Most radiologists regarded PL more favorably than traditional SB peer -review.

- 63.5% believe the addition of PL to traditional SB peer-review is an improvement
- 56% agreed additional time needed for PL is worthwhile
- 32% believe addition of PL to traditional SB peer-review increased the number of cases reported
  - 41% responded “No”
  - 27% responded the “Same”
- 67% believe PL contributes more important learning material than the random auditing of cases
- 29% felt more comfortable pointing out errors via PL compared to traditional SB peer-review
  - 15% responded “No more comfortable”
  - 56% responded the “Same comfort level”
- 48% prefer PL be anonymized

Discussion

- The new Peer-to-Peer Education (P2PE) system for peer-learning has been widely used since implementation and resulted in increased motivation and participation by radiologists evidenced by increased number of PL case reviews as the program progressed
- P2PE identified areas of needed improvement and provided section leaders with cases of the most educational benefit for our corporation
- P2PE may help eliminate punitive peer-evaluation by creating an environment of peer-learning with the end goal of improving patient care and service
- Most participating radiologists believe that PL is worthwhile and promoted education and patient safety more so than traditional SB peer-review

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