Peer Review in Radiology: A Fellow and Resident Perspective

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Disclosures

The authors have no conflicts of interest to disclose
Introduction

Peer review programs have become well established in many radiology departments in the United States in response to the Institute of Medicine’s publication “To Err is Human” and maintenance-of-certification and accreditation requirements put forward by the American Board of Specialties and the ABR, respectively\(^1,2,3\).

Despite publication of the CAR Guide to Peer Review Systems in 2011\(^4\), peer review is not yet standard practice in Canada; however, in part as a result of recent medicolegal cases involving Canadian radiologists, an increasing number of departments are instituting peer-review programs. As a result, Canadian fellows and residents are gaining exposure to the peer-review process during the course of their training.
Introduction

Peer review research has predominantly focused on diagnostic accuracy\textsuperscript{5-11}. More recently, the attitudes and perceptions of staff radiologists toward peer review have been published:

**Eisenberg et al\textsuperscript{12}

- Reported almost half of radiologists participating in a RADPEER™ believed that the program was valuable.
- Nearly half believed a program of this type is a “waste of time”.
- A majority believe the peer-review program was intended to meet hospital and regulatory requirements.

**Loreto et al\textsuperscript{13}

- Most staff radiologists shared concerns regarding incorporation of a nonanonymouse peer-review system including medicolegal exposure, the potential for damaging relationships, and potential influence on job security.
Purpose

The attitudes, perceptions, opinions, and preferences held by radiology residents and fellows toward peer review has yet to be explored.

Clarifying views and concerns held by trainees can be used to implement and improve peer-review education and participation.

Objectives:
1. Investigate trainees’ general knowledge, preferences, and concerns regarding peer review by means of an anonymous electronic survey.
2. Determine if attitudes and preferences vary with the level of training of respondents.
Methods

- Anonymous 30-question Internet-based questionnaire (SurveyGizmo, Boulder, Colorado).

- Sent to Canadian resident and fellows by way of the residency and fellowship program administrators.

- Survey distributed at the beginning of March 2015.

- Trainees were given 30 days to respond to the survey.

- Based on reports available through CaRMS as well as communication with fellowship program administrators, we estimate a sample size of 660 trainees.
Results

A total of 136 trainees agreed to participate in the study.

With an estimated sample size of 660 Canadian radiology trainees, the response rate was 20.6%.

92 responses were included after 44 surveys that were incomplete or lacked a specified year of training were excluded.

Trainees stratified by level of training as follows:
- Interns (PGY-1; 10 respondents)
- Junior residents (PGY-2 and PGY-3; 29 respondents)
- Senior residents (PGY-4 and PGY-5; 28 respondents)
- Fellows (PGY-6 and PGY-7; 25 respondents)
### Results

#### Respondent knowledge, participation, and preferences toward peer review

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar with peer review?</td>
<td>49</td>
</tr>
<tr>
<td>*Conduct peer review at your institution?</td>
<td>52</td>
</tr>
<tr>
<td>Involved in the peer review process?</td>
<td>39</td>
</tr>
<tr>
<td>Should peer review be mandatory?</td>
<td>72</td>
</tr>
<tr>
<td>Should peer review be incorporated into evaluations?</td>
<td>36</td>
</tr>
</tbody>
</table>

*Conduct peer review predominantly through discrepancy meetings (67%), workstation-integrated methods (26%), and comparison of reports to a reference standard (e.g. surgery or biopsy; 17%)
## Results

### Perceived benefits, concerns, and perspectives toward peer review

<table>
<thead>
<tr>
<th>Perceptions/Perspectives</th>
<th>Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived benefits and concerns</strong></td>
<td></td>
</tr>
<tr>
<td>Improved patient care</td>
<td>80</td>
</tr>
<tr>
<td>Benefit my professional and educational development</td>
<td>89</td>
</tr>
<tr>
<td>Participating in peer review will reduce errors rates</td>
<td>70</td>
</tr>
<tr>
<td>Add time to my workday and negatively affect workflow</td>
<td>58</td>
</tr>
<tr>
<td>Risk of exposure to malpractice liability</td>
<td>32</td>
</tr>
<tr>
<td><strong>Perspectives regarding professional relationships</strong></td>
<td></td>
</tr>
<tr>
<td>Strain or damage relationships</td>
<td>35</td>
</tr>
<tr>
<td>Comfortable advising residents and fellows about their errors</td>
<td>80</td>
</tr>
<tr>
<td>Comfortable advising staff about their errors</td>
<td>21</td>
</tr>
<tr>
<td>The peer-review process should be anonymous</td>
<td>84</td>
</tr>
</tbody>
</table>
Results

Motivating Factors for Participation in Peer Review
- Improved patient care (84%)
- Professional development and educational value (88%)
- Better public perception (51%)

Perceived Barriers Regarding Peer Review
- Time constraints (70%)
- Medicolegal consequences (26%)
- Fear of judgment by peers (54%)
- Possibility of biasing staff opinions or influencing evaluations (48%)
Results

Methods trainees prefer/feel most comfortable using:
• Workstation-integrated peer review (51%)
• Discrepancy meetings (48%)
• Comparison with a reference standard (e.g. surgery, biopsy, arthroscopy; 37%)

• Lack the necessary information needed to express a preference for retrospective or prospective peer-review process (42%)

• Active participation will increase odds of later participation (91%)

• Interested in learning more about peer review (92%)

• Teaching how to conduct peer review should be incorporated into formal curriculum (86%)
Discussion

- Senior residents and fellows are more familiar with peer review. The fact that 38% of junior residents and 30% of interns are familiar with peer review suggests a need for further education and participation.

- Trainees expressed an interest in learning more about peer review and believe it should be incorporated into the training curriculum. Given that trainees believe current participation will foster future participation, training programs may want to encourage participation at the trainee level.

- Trainees prefer the results of a peer-review process not be included in formal evaluations.

- A majority of trainees feel peer review should be anonymous, possibly related to the fear that it could strain or damage relationships.
Discussion

• Trainees share concerns of staff radiologists regarding time constraints and negative effect on workflow; however, trainees do not feel as strong regarding the potential to increase medicolegal exposure (32% trainees vs. 72% staff radiologists as observed by Loreto et al) perhaps related to increased knowledge and experience of staff with regard to medicolegal exposure.

• Most trainees believe the benefits of learning through peer review is worthwhile, and that participation should be mandatory.
Discussion

• Trainees feel more comfortable with workstation-integrated peer review, discrepancy meetings, and comparison with a reference standard, perhaps explained by exposure to these methods of peer review.

• Most trainees could benefit from greater information regarding differences between peer-review systems (e.g. retrospective vs. prospective).
Limitations

- Response bias
- Institutions attended by trainees unknown
- Respondents familiar with peer review may have been more likely to complete survey
Conclusion

- To our knowledge, this is the first survey regarding the attitudes, perceptions, and concerns of trainees regarding peer review.
- Results can help improve teaching strategies and promote participation of radiology trainees in the peer review process.
- Information may be valuable to program directors and faculty regarding the perceptions, attitudes, perceived benefits and concerns regarding peer review.
- Familiarizing trainees with peer review is important as peer-review programs become more wide-spread to meet quality assurance requirements.
- Educating and involving trainees in peer review may foster future involvement and motivate leadership roles in quality assurance.
Take Home Points

1) Approximately half of trainees are familiar with peer review, suggesting a need for further education and involvement.
2) Most trainees believe that peer review should be mandatory, but not incorporated into evaluations.
3) Most trainees expressed interest in learning more about peer review and believe teaching peer review should be incorporated into the curriculum.
4) The two primary motivating factors behind participating in peer review are patient care and educational value. Most respondents believe that participating in peer review will benefit their professional and educational development.
5) Most trainees are comfortable advising other trainees about errors, but are not similarly comfortable advising staff.
References