Improving the Impact and Outcomes of the Peer Learning and Improvement Meeting

RSNA 2022 Quality Improvement Report

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Perceived Problem and Improvement Opportunities Statement

- More and more practices are transitioning from Peer Review to Peer Learning and Improvement (PLI).
- It is clear that many variations exist in the understanding and the specific practices and processes of PLI.
- As with most cultural change, engaging radiologists in the process will require a sustained and strategic effort.
- The PLI meeting is an important component both of the process of PLI, and for fostering the necessary change.
- An "effective" PLI meeting is essential for the practice of PLI to be of value and to lead to improvements.
- Nationally, we heard a call for help and advice as to how to run Peer Learning and Improvement meetings.
- We undertook a survey of our Faculty, Quality Officers and section QA leaders to identify hurdles to implementing a PLI program, and more specifically to running effective PLI meetings.
- Below we share the common questions, concerns and responses, along with associated mitigation strategies.
- The goal of this exhibit is to share our experience in the hope that our colleagues will learn from our experience.

Beth Israel Lahey Health
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HARVARD MEDICAL SCHOOL

The Simon Radiology Center for Outcomes Research and Improvement

Category of Hurdle	Specific Feedback Questions	Improvement/mitigation Strategy
Knowledge and education about peer learning	"What exactly is the difference between Peer review and Peer learning?" " Seems like a major lack of education, knowledge and familiarity with what peer learning is and how it differs from peer review"	The challenge is that PLI leaders are also learning with experience, and there is no one size fits all here. People struggle to understand the subtle differences between PR and PL, and still see both as onerous tasks that don't lead to noticeable improvement. We have found that frequent educational programs, lectures, Q and A sessions, providing case review and analysis templates, reducing case number requirements and focusing on improvement opportunities has helped to engage more of our Faculty. We also found that providing links to what we thought were helpful resources didn't help.
	"How do we train PLI leaders to lead meetings and lead case reviews and analyses"	This is an enormous opportunity, hence this exhibit. This is not a simple transition for section quality officers and requires a sustained learning process with focus groups, mentored PLI meetings, provided templated website for case reviews and recording of outcomes.
	"Our current PLI meeting discussions seem to be as unhelpful as those from peer review"	Share some illustrative cases and how their review leads to actual improved outcomes, to educational content, to learning material, or to identification of improvement opportunities.
	"How can we improve the quality and value of the PLI meeting presentations?"	A big opportunity exists for training PLI meeting leaders. This cannot be done via websites or manuscripts. We urge our national quality improvement groups to embrace this opportunity now.
	"Can we have a template to help fellows with these case presentations?"	The meetings should be hosted by trained PLUI meeting leaders – it is very difficult to delegate this to trainees, and given that every case is different, designing a template will be fraught with challenges.
	"As a trainee, why should I know about this process, or participate in case submission and reviews?"	When trainees go into practice they will need to participate in a peer review/learning program in order for their practice site to achieve ACR site accreditation.

While the majority of radiologists have heard the phrase "peer learning", few in our practice fully understand the structural components, what the specific criteria are for meeting accreditation requirements, and what the actual differences are between PLI and retrospective peer review practices. Data from our surveys suggested that few of the small number of published manuscripts on the topic describe the actual practice of peer learning, and instead focus on participation and physician satisfaction with the process, rather than specific practices and outcomes. It is clear that the more that peer learning practices can be shared, including challenges to implementation, along with a sharing of efforts that work or do not, the more we will all learn and improve our own practices. It is also clear that "*one size does not fit all*" when it comes to the way that peer learning is currently practiced. And this iterative process is an important component that contributes to defining a learning and improvement organization.

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Case numbers, submission, selection and learning examples	"Is there statistical evidence to support how many cases we should submit?"	None to our knowledge. What a superb idea for a project!
	"We now have far too many cases to manage"	Even though submission number requirements have dropped significantly (from 120 to 15 per year), previously the majority of the 120 cases were category 1 agreements not requiring any review. What a new treasure trove of excellent learning opportunities.
	"How many cases must or should I submit? Is there a specific requirement?"	Ideally, every case that has a learning opportunity should be submitted, yet we realize that that is impractical. There are NO specific requirements for the number of cases an individual must submit. Unlike PR, we expect each radiologist to submit 15 cases per year and show their submission numbers on a dashboard. Radiologists receive quarterly auto-e-mail reminders when falling behind the stated requirements, and submission compliance is built into our incentive program. The majority of radiologists submit far more cases that the mandated 15. Radiologists receive "submission credit" if a resident submits a case along with a radiologist.
	Can I delegate case submission?	Our platform allows trainees to submit cases with an attending's name attached. The attending can then get credit for case submission.
	"What about getting credit for group submission?"	The spirit of peer learning is to submit cases that all can earn from. Given this, group submissions are allowed and encouraged, and we see two good clinical scenario's where these occur. The first is in post-procedure IR rounds, where the group together reviews cases and might identify cases to submit for further review, analysis or to implement improvement strategies. The second is the multidisciplinary meeting, where suitable cases are frequently identified during group review.
	"What are good examples of cases to submit?"	We have developed a template of submission categories and examples that are shared at department quality forums, and with our section Quality Officers at a monthly Quality Oversight Meeting.
	"I don't agree with a report recommendation. Can I submit this?	Very much so. Consider the learning opportunity by having the section review how the finding should be followed up, and coming up with a standardized recommendation or better still, an improvement project. That's an improved clinical outcome, a value-add!.
	"I think that a study was ordered that does not meet criteria for appropriateness. Is this something I should consider submitting?"	Any case where you feel a review might lead to clinical improvement, be it on the side of radiology or on the part of the provider, is appropriate for review. The outcome might be a communication and learning opportunity for the provider, or clarification of the reason for the study. Effective peer learning programs should be able to interact with different clinical services in an Institution.
	"How can I encourage my colleagues to submit cases?"	1) Many educational forums were required in efforts to educate Faculty about the principles and practice of peer learning. Much misinformation and a lack of information exists. Ultimately what worked best was one-on-one discussions with section quality officers, open forms at section PLI meetings, faculty meetings, a decision to include participation (peer learning case submissions) as a component of our OPPE and incentive compensation program, and demonstrating evidence for ensuring data security, secure access and data protection and lack of discovery. 2) Terminating a pre-existent peer review requirement was also a helpful driver, as was clear demonstration that personal performance data would not be used in any punitive manner. The FPPE process is a tool for evaluating performance when triggered. 3) Using submitted data and showing how PQI projects were identified and undertaken seemed to foster participation. This will need to be a longitudinal process.

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Feedback and follow up after case submission	"How do I provide trainees with feedback when an improvement opportunity is identified during case review?"	We are beta testing a Trainee Feedback Dashboard that provides trainees with secure confidential feedback specifically relating to cases they interpret, and reports they generate. This anonymous searchable dashboard allows for data to be trended for analysis.
	"As a section PLI meeting leader, we identified and documented an improvement opportunity after a case review and nothing seems to have happened – how should we expect to get feedback about this?"	Our online Peer Learning platform includes a specific section for section PLI leaders to address following case review. All are well aware that they need to focus on identifying and documenting improvement opportunities, per ACR site accreditation requirements.
	"Sometimes I submit cases and never hear back about what happened"	Not all submitted cases are suitable for presentation at a PLI meeting. Well-functioning and designed systems will automatically let readers know when a case they interpreted has been submitted, along with the reason for submission. Peer learning should also encompass individual learning and improvement opportunities.
	"What happens to the cases that are submitted?"	Depending on practice size and case and submission volume, some or perhaps even all cases are selected for review at a PLI meeting. Once reviewed, depending on the learning environment, cases might be used for teaching purposes, for pictorial essays, and even for research projects. Illustrative cases should ideally be incorporated into an enduring case collection so that others can benefit from the lessons identified.

Sharing and communicating outcomes. Feedback from current and prior surveys of Faculty clearly indicated that to sustain participation, it is important to be able to show effectiveness of the process. Why participate if this is not going to lead to an improvement in clinical care and/or outcomes? We are not the first group to be challenged by this need. On response, our steering committee chose to transform recorded case review outcomes into a novel dashboard depicting data according to the value equation, utilizing categories of appropriateness (of study, communication, recommendation), stakeholder experience (patient and provider), quality of care metrics, outcomes metrics and potential cost savings to patient, practice and/or system.

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Facilitating faculty member participation	"What if I'd prefer to continue doing random retrospective peer reviews when I look at prior studies?"	This should not be a problem; however, consider instead submitting any great pickups or cases where you may not concur into peer learning system where the group is more likely to benefit from your submission.
	"This process if yet another burdensome administration demand, a regulatory moral insult"	Whereas peer learning is certainly a recognized contributor to the many moral insults we are exposed to, peer learning focuses instead on
	"Submitting cases will surely slow my work down"	Build secure submission page into RIS screen linked to PACS system so no additional logins are required, and case demographics are automatically uploaded, and data entry fields are mostly drop-down menus.
Case scoring	"It's difficult when there's no scoring system to choose from"	Not really, with RadPeer, the majority of reviewers scored the majority of cases as number 1 (concur with read)! Peer learning has no scoring system and focuses less on agreement with a prior report and more on identification of improvement opportunities that the group can all benefit from. Not much can be learned from agreements, unless a colleague deserves to be recognized for a great pickup!
	"How do I score a case now?"	Unlike peer review, PLI has no scoring system (unless local programs choose to score, for example, severity of harm).
	"I don't want somebody else deciding how this case should be classified"	We have built a case classification and contributor drop down menu resides on the submission page for the submitter to select their choices for classification and likely contributors.
	"As a section PLI leader, how do I encourage my colleagues to submit interesting cases?"	It's not unusual for the PLI meeting leader to dominate case submissions until other team members over time see that there are no punitive consequences of cases being reviewed. Many of us have traveled this path by showing our own "learning and improvement opportunities".
	"I'm worried my colleagues will think I'm starting to lose it". (Concern for reputation when cognitive issues are raised)	Every diagnostic (perceptual or interpretive) case undergoes consideration of potential cognitive biases, specifically to familiarize section radiologists of potential contributors. Recognized biases are added to a compendium of enduring learning cases used for teaching purposes.

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Retaliation, blame and consequences	"This all seems so negative and punitive".	An effective peer improvement program requires that a Just culture exists where people can speak up safely, where errors are reported for learning and improvement purposes. Absent such a culture, the PLI program will struggle to be effective. This requires a sustained focused deliberate effort on the part of practice leaders.
	"I don't want to submit a case that might get a colleague into trouble or initiate an FPPE"	Peer learning focuses on education and identifying improvement opportunities rather than apportioning blame. As part of the review process, harm should be determined along with exploration of root causes that might have contributed to an adverse outcome, including accountability. If the case is an SRE (serious adverse events), these are managed separately outside of the PLI process.
	"How does peer learning tie in with our mandated OPPE and FPPE process?"	All serious adverse events should undergo an RCA. If the outcomes of the RCA is to recommend that an FPPE be initiated, that will be considered. This is entirely separate from the PLI process.
	"How do we facilitate Faculty participation in our PLI program?"	With patience, time, a driver (such as making case submission a component of an incentive bonus program) and by convening interesting PLI meetings where participants feel they are learning from the case reviews.
	"Why should our trainees be expected to participate in peer learning?"	Once trainees graduate and enter a practice, both local organizations (hospital credentials committees well as the Joint Commission) expect that they will participate in some form of peer review. As part of our educational mission we believe it is in the best interests of our trainees to teach then the basic principles of peer learning and to show them the positive benefits and impacts on patient care and practice operations.

Compliance with regulatory requirements	"What are the specific ACR requirements for participation in peer learning?"	For meeting the ACR requirements, no specific case submission numbers are specified. The ACR does expect that 1) a written description of the program exists, that 2) submission numbers are kept and are readily available, and 3) that a process exists for documenting improvement opportunities that are identified.
	Where can I find these ACR requirements?	The specific minimal requirements are published on the ACR website at https://www.acr.org/-/media/ACR/Files/Peer-Learning-Summit/Requirements-for-PL-program-accreditation.pdf. Peer learning resources are available at https://www.acr.org/Practice-Management-Quality-Informatics/Peer-Learning-Resources
	"What if I'd prefer to continue participating in peer review?	Not a problem, this is your choice. Ultimately we believe that peer review and learning are the same thing and that the focus on review of review discrepancies will shift to identifying learning and improvement opportunities.

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PLI meetings format and reviews	"Can you suggest a format for presenting cases at the PLI meeting?"	We suggest that practices develop their own case review template. Our template includes the following: 1. Categorization of case – including reason for submission (to include great catches, near missed good pickups) 2. Consideration of degree of harm (AHRQ scorecard) and if necessary, use of the accountability tree 3. Root cause analysis of contributors. 4. If diagnostic error, application of a cognitive bias template. 5. Identification of improvement opportunities, including educational ones. 6. Consideration of potential for practice quality improvement projects. If YES, case tracks to a PQI dashboard. 7. Consideration of the value add: appropriateness, quality, experience and outcomes.
	"How can we teach fellows how to present the cases?"	By using the template described above.
	"I am a newly appointed PLI meeting leader. Where can I learn the necessary skills?"	By observing the different PLI meetings, we noted wide variation is skills and approaches used by section quality officers when moderating their PLI meetings. Skilled and experienced leaders were capable of shifting the focus to identifying strategies for reducing error occurrence, for celebrating great pickups or catches (near misses), and for identifying practice quality improvement (PQI) ideas or projects, and followed through with these. The most experienced leaders were able to engage faculty and trainees in these PQI opportunities, and also ensured that teaching points were added to enduring shareable resources. There is a definite need to train PLI meeting leaders and we have communicated this up to leaders of national organizations who are in positions to embrace this necessary opportunity. Options might include the RSNA Quality Course, the ACR Quality Course, or courses run by the AUR or ARRS, or all of them. In the meanwhile, we have designed a curriculum of content for our own PLI leaders and will continue to iterate the content as we continue to seek feedback and observe.
Harm and Impact	"I'm not sure what the impact of the error is. How do I reflect this?"	We use a standard nationally-recognized approach to determining the extent of harm, as developed by the AHRQ (link). We include the harm template in the review process to help the PLI meeting leader determine whether any harm may have occurred. Harm dashboard

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Outcomes of case reviews	"Can we use the cases for lectures or even for research projects?"	Consider the following opportunities: educational exhibits, content for lectures, clinical innovations, health services delivery projects, and recognition for clinical expertise and innovation through scholarship.
	"Can we build learning repositories, or are cases protected and secure?"	Through direct observation It became apparent that the majority of cases has interesting teaching points, yet would not necessarily end up in traditional "teaching files". We convened a small advisory committee which made the following 4 recommendations: Build thematic section- and organ-based teaching repositories based on (1) strategies for minimizing perceptual and interpretive biases, (2) enduring and ever-expanding collections of recognized pearls and pitfalls, (3) explore then implement ways to engage trainees in these PLI opportunities, and (4) assign project ownership to faculty in the teaching promotion pathway.
	"Are there any academic advancement opportunities for leaders and other participants?"	Most certainly. The PLI process provides abundant scholarly material to support advancement in the teaching and educational leadership track, as well as in the4 clinical innovation track if PQI projects are embraced, completed and the outcomes and impacts published.
	"How do I know this is making any difference at all? Is this really worth all the effort?"	With more experienced and skilled PLI meeting leaders, the case review also considers how improvement opportunities, once implemented, might improve outcome. That then might become a prospective practice quality improvement (PQI) project. It is difficult to measure and show individual diagnostic improvement, so identifying processes that can be improved is where the improved outcome is likely to be seen.
	"Why show perceptual misses and embarrass somebody?"	Showing misses, which can certainly be anonymous, allows for cognitive biases to be considered, that all might benefit from being aware of. Its' also helpful to illustrate the impact of some misses, and to consider any issues of supervision, the learning and work environment, recognized pitfalls or other detractors (such as reading too many cases too quickly!). Consider contributing cognitive biases!
	"I don't want to get blamed for making a mistake"	Case review includes an automated harm consideration, and if harm is identified, an automatic consideration of accountability using standard and widely recognized testing trees. Fairness is demonstrated through transparency and consensus decisions. No blame should ever exist in a Just culture.

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Structuring the case review process	"As a PLI meeting leader, there is a long learning curve for analyzing cases and identifying improvement opportunities"	Many cases, most commonly perceptual misses, tended to be presented as show-and-tell cases with little ability to identify contributors or lessons to share. Most ended up being categorized as "for educational consideration", a true black box unlikely to result in any effective sharable lessons or improved outcomes. Many addressed likely impacts of the errors and controversial topics such as disclosures, yet seemed to struggle finding solutions to mitigate their future occurrence. Based on this we introduced an educational program on bias awareness, in parallel with personal reflection and development of personal interpretive bias profiles.
Academic advancement opportunities	Surely I can take advantage of the interesting work being done to advance my academic career?	Perhaps unique to our medical school, Faculty seemed reluctant to devote precious protected academic time to academic quality improvement efforts given the absence of a promotion track in this domain. In discussions with our promotions committee leaders, it became apparent that implementing clinical improvement strategies based on quality improvement processes and data does in fact fall within a clinical excellence and innovation track, as well as within the education track, depending on personal scholarship pathways. In this way we were able to engage several additional faculty members in advancing their careers through the clinical innovation or educational pathways through their peer learning leadership roles.

PQI project management program	"X was identified as an action item, yet this has not been implemented"	Just because a section identifies something as an action item doesn't imply that it will be implemented especially if resources will be required…….. PQI prioritization list. The PLI meeting might identify an improvement opportunity, yet managing and operationalizing and implementing that process should be entirely separate from the PLI meeting. This is why one requirement for a PLIU process is to document improvement opportunities. How these are prioritized, resourced and managed is very practice dependent.
	Identification of PQI opportunities	One oft stated goal of case review is to identify, undertake and implement the changes brought about by a PQI project. By observing PLI meetings it became apparent that opportunities were being missed, that this was not happening as often as it could have, and that when potential projects were identified, more often than not, these did not end up on a managed list of PQI project options. To optimize this opportunity, we used a two-pronged approach. *First,* we assigned a task to our operations director to train a group of radiologists in systems thinking (our Operations Council), so that at every PLI meeting somebody would be present to consider cases from a systems and process approach, specifically tasked with identifying improvement opportunities. This is a work in progress. *Second,* the meeting agenda for our Operations Council was modified to include both a brief sharing of 1-2 recent successful illustrative PQI projects, shared in an A3 format, and the list of submitted PQI projects was reviewed, prioritized, and when necessary resourced and updated.
	"Many cases we review are straight misses, and not much that we can do from a PQI perspective"	Please consider the many improvement opportunities and lessons that can be learned from reviewing perceptual misses. Did you consider cognitive biases that may have contributed, did you consider an educational focus on the spectrum of biases? How did you perform a root cause analysis? What similar misses have occurred/ How did you determine the impact of the miss? There are so many ways to consider the treasures inherent in misses and I'd hope that you can open your mind to these opportunities.

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Personal performance improvement	"How can I review cases submitted where I may have been involved in the interpretation?"	Share examples of suitable cases and their analyses, including great catches, good pickups and near misses. Implement ways for recognition.
	"Please show me the real regulatory benefits of peer learning"	Participating in PLI is an acceptable clinical review process for the Joint Commission, for CMS, for meeting hospital privileging and licensing requirements, for ACR modality/site accreditation, and for ABR MOC program. Build dashboards so that participation can easily be documented for both ACR and ABR purposes.
Discovery and medico-legal concerns	Privacy concerns, data anonymity and discovery	All data is secure and anonymous. Front page reminds Faculty that data is not discoverable since it is protected through our Institutional peer review requirement.
	"I'm concerned that my missed cases will be used against me by my boss or Institution".	We sincerely hope not.
	"I'm concerned about the personal consequences of submitting cases, including retaliation".	Submissions process is anonymous, a Just culture in practice, speak up safely program, policies against retaliation, section quality officers serve as PLI change agents
Moral insult	Why do we have to do this? This is just another impediment to work flow and an onerous regulatory demand.	Mandating participating in the peer review process has long been included in the list of organizational contributors to so-called moral insults. As a component of our overall personal and practice wellbeing initiatives, the wellbeing committee were assigned the topic of communicating the benefits of PLI processes to our faculty, including the advantages compared to peer review, lower case submission requirements, and the greater likelihood of the process resulting in personal and practice improvements.
Impediment to Workflow	"Submitting cases is time consuming and slows me down"	Submission of cases must have as little impact on workflow as possible, and we built the submission and categorization platform into our RIS system for direct, secure access during readouts without requiring passwords. The system was further designed to automatically direct cases to the appropriate quality officer and a management dashboard was engineered to oversee and ensure timely management of submitted cases. Specific enhancements included feedback loops to submitters, confidential feedback to faculty involved in cases, submission and case trend analysis charts, …..

Conclusion: To improve the impact and outcomes of the PLI meeting, the responses we collected above represent suitable targets for improvement. The specific action items will depend on the local practice culture. The PLI journey requires sharing of different experiences and we hope that by sharing our own experience in this Quality Report that others will be able to implement the necessary change. **Let's please keep this conversation going…..**