Improving the Clinical Performance of Radiologists:
Multisource Expansion of a Peer Review Program beyond Comparisons of Diagnostic Errors and Discrepancies

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PURPOSE

Peer review of radiologist performance is being widely adapted in response to regulatory requirements and hospital credentialing policies. **The vast majority of currently used peer review programs are uni-dimensional**, focus mainly on diagnostic discrepancies and are limited by bias and underreporting. Other metrics of radiologist performance, including technical and teaching skills, procedural skills, outcomes and complications, and communication errors, are not routinely incorporated into the peer review process.

In order to establish a more comprehensive and clinically applicable peer review process with the goal of benchmarking clinical skills and identifying opportunities for performance improvement, we designed and implemented a system that is web-based, anonymous and permits a spectrum of useful clinical metrics to be collected and managed.

Uni-dimensional Process

Uni-dimensional Peer Review implies that a single process is used to evaluate radiologist performance. The commonest methodology in use is peer review of diagnostic cases, such as the ACR's RADPEER system. Many similar systems are available. Our system (RadReview) parallels the ACR process but also integrates errors detected outside of the peer review process. Below we illustrate this system.

INTERPRETIVE SKILLS (RADPEER)

Data is compared within clinical sections (a). All category 3 and 4 cases are peer reviewed by the section (b) for consensus. Each radiologist can access his or her own case profile (c).

Simply providing radiologists with retrospective performance review data from a uni-dimensional diagnostic discrepancy perspective does not readily allow for data to be benchmarked and analyzed, and used in a constructive manner for purposes of improving performance.

Multi-dimensional Peer Review Process

Multi-dimensional Peer Review provides a more comprehensive evaluation of a radiologist's performance by including the following components:

360° EVALUATION

Evaluation of Clinical Skills

Evaluation of Interpersonal Skills

Evaluation of Leadership Skills

Evaluation by Referring Clinician(s)

Multisource or 360° feedback solicits *confidential responses* from a spectrum of peers and coworkers, including:

- referring physicians
- residents and fellows
- technologists
- administrative staff

Such feedback is used for leadership training, improving competence and skills, and for guiding career advancement.

The referring physician survey meets criteria for participating in an ABR PQI project.

QUALITY IMPROVEMENT

An **Online QA and Error Reporting System** allows for all technical and clinical errors, discrepancies, near misses and procedural complications to be reported, analyzed and managed.

After root cause analysis, all data pertaining to individual radiologists is linked to their performance profile. Discrepancies are also added to the diagnostic peer review statistics.

ACADEMIC PERFORMANCE

Trainee feedback is routinely collected per ACGME requirements, and once anonymised, is also linked to each individual radiologist. Such data is used to establish baselines and to provide annual targets for improvement.

A Multi-dimensional Radiologist Peer Review Process such as we have developed, that has minimal impact on workflow and collects anonymous practice- and radiologist-specific data from multiple sources, provides a comprehensive, fair and balanced peer evaluation that enhances radiologist participation and can be used to guide continuous performance improvement.

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