**Peer Review and the IHFs of Ontario**

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The release of the Health Quality Ontario *Expert Panel Report on Quality* (http://ontarioassociationofradiologists.cmail2.com/t/r-l-chlnjy-mjyjtttlu-j/) presents the independent health facilities (IHFs) of Ontario with both a mandate to embrace a provincial peer review program with goals common to all providers in the province, while at the same time retaining the opportunity to exercise control over the specifics of implementation. This will allow each facility to reap the potential benefits of peer review (improved quality and public image, reduced legal risk, committed team player image) while at the same time mitigating unnecessary cost through suboptimal “one size fits all” infrastructure.

Additionally, due to the essential digital focus of the solutions being crafted to achieve modern peer review concepts, IHFs are presented with the opportunity to evolve, where required, into more modern digital based orientation.

Goals and the rationale for the upcoming provincial peer review program are well explained in the report, which makes it essential reading for all radiologists as well as IHF owners and managers. In addition, specific elements of the report are critical to IHFs:

* Implementation will be at the facility level and collaboration between facilities is permitted (even encouraged).
* Regulatory change to protect the radiologists participating in IHFs is contemplated. (This addresses the need for protection from medical legal inquiry of data acquired in the pursuit of quality programs such as peer review. Such data is already protected at the institutional level).
* Needs of smaller and remote facilities will be considered (although this point is not elaborated upon and the intent of this statement is not clear).
* Initial modality focus will be on CT and MRI. It is likely however, that US, mammography and CR/DR will follow.
* A “Quality Advisor” and panel will be required for oversight of each individual or grouping of IHFs with respect to the peer review program.

Some issues of interest to IHFs are not specifically addressed in the report:

* Where will the expertise come from to design unique approaches to each IHF? Who will spearhead and coordinate such discussion?
* Who will initiate collaboration between IHFs to achieve economies of scale?
* How will costs of the program be best minimized while still meeting the expectation of the program?
* What kind of solutions can be devised to accommodate the needs of small facilities which may not be fully digitized? To what extent can the IT solutions designed for fully digitized facilities be modified to accommodate partially digitized facilities, and is the right way to go?
* How will such customized solutions be capable of providing the same level of patient safety, and radiologist continuous quality improvement envisioned for the larger institutions?

The answers to these questions will certainly include some key elements:

1. The need for flexible, yet robust software solutions, able to meet all program requirements while retaining the capacity for highly specific customization and short turnaround modification time as needs and problems become better understood.
2. Real time feedback on errors to provide maximal patient safety, usually via prospective or same-day retrospective review.
3. Facility policies concerning how findings are addressed and how best to leverage these new quality opportunities.
4. Maximum benefit/minimal risk to radiologists through key design features: anonymity; emphasis on continuous quality improvement, non-punitive detection; assistance in directing CME activity; acceptability of the review process through the availability of knowledgeable and objective reviewers and adjudicators.
5. Minimal disruption of workflow, radiologists’ attention span and time engagement via seamless integration into existing workflows or modification to even better workflow designs.
6. Acceptability to policy makers and the public by providing granular statistics on the impact of the program on quality improvement and the ability to proactively intervene should a threat to patient safety becomes evident, before such time as significant damage is done.
7. Robust legislation to protect those who are actively engaged in such processes.

Canadian experience in the realm of peer review is relatively limited. The first
Canadian instance of the ACR Rad Peer© was trialed at Hamilton Health Sciences in 2002/2003. More recently this has been instituted in a few scattered sites across the country while trials of more advanced approaches have been successfully undertaken at Hamilton Health Sciences and St. Joseph’s Healthcare Hamilton. These locations use an advanced, cross-system, peer review system that is simultaneously capable of both prospective or pre-report distribution and retrospective peer review with multi-ology applicability.

The need for such programs is stemming from the enhanced awareness of the public and government that formalized attention to quality in medicine is desirable. Retrospective audits in radiology and pathology have been necessitated in at least 6 Canadian provinces (including two audits in Ontario) over the last decade. Undetected errors and potential performance deficiencies of the providers involved has resulted in considerable patient anxiety, extreme service provider disruption and career jeopardy for the radiologists, as well as undesirable cost and embarrassment to governments.

**Lessons Learned**

Many lessons have been learned from these audits.

1. Ongoing prospective peer review processes would have detected and potentially prevented ominous error rates through effective feedback, correction of both the errors themselves and the deficiencies in program design, as well as provider behaviors which provided fertile ground for these errors.

Prospective, anonymized real-time reviews could potentially have the greatest impact on patient safety. This is a significant and important departure from the more traditional approach of retrospective reviews at the core of the original RadPeer© programs. A review of only historical cases leaves no opportunity for the prevention of present day significant errors, emphasizing only the role of detection of providers’ shortcomings in the interpretations of past cases, sometimes many years old.

Additionally, a vast number of cases are never subjected to retrospective review because follow-up exams of past cases were never ordered, therefore, these cases will never surface again , unless harm has occurred. This is a major deficiency in the penetration of sampling. A program which utilizes prospective reviews can still employ any number of retrospective reviews should the need arise.

1. Robust software can be designed which allows minimal intrusiveness of the peer review process into day-to-day workflow, while providing very rapid real-time turnaround time for the correction of errors.
2. Requirements and snags in a peer review process are always changing/arising. Software solutions have to be capable of site-specific design and short-term modification to meet expectations.
3. These solutions need to be capable of enterprise-wide scalability and ideally cross-system/cross-site scalability, to look at acquired statistics on a large scale. This will provideg the insights necessary to affect province-wide improvements in quality and accountability.
4. Reviewers need to be trained. Experience in conducting five radiology quality audits has shown that case review cannot be approached as merely a simple “second read” if it is to achieve maximal benefit. Reviewer skills can be maximized by an IT interface that operationalizes both the required feedback in the shortest time, as well as the consistency in the applied review criteria. Reviewers can be geographically situated far from the reviewed radiologist, to optimize the anonymity of the reviewed radiologist. Likewise, disputed discrepancies uncovered through the feedback process, can be adjudicated by anonymous experts of the facilities’ choosing, well removed from the site in question.
5. The ACR RadPeer© scoring system is well established, but can be made even better with some critical modifications that have been uncovered which contribute to important additional quality issues.
6. The absolute best mission of peer review is to improve provider abilities and behavior. This would include CME, and/or an awareness of deficiencies in a specific area or modality. Anonymized feedback allows providers to participate in the process of Continuous Quality Improvement without the anxiety and embarrassment of identification by peers or administrators. Only when sufficient improvement is not seen, or when a real danger to patients is detected, should the anonymization be broken and program intervention occur.
7. A robust Continuous Quality Improvement (CQI) program will satisfy all the oversight and transparency needs of government and the public.
8. The solutions devised for a radiology peer review program can, and should, incorporate other disciplines such as pathology and echocardiography. Systems do exist that are capable of addressing multiple medical disciplines simultaneously. Patient safety and peer review principles should not be limited only to radiology diagnoses.
9. The UK Royal College has developed guidelines for peer review systems calling for systems capable of workload-balanced peer review along with a number of other characteristics for a best practice approach to such solutions.
10. A peer review solution that meets both the Ontario and UK Royal College guidelines would afford the opportunity for incorporation of all best practices. This could enable the participation of all IHF facilities in a shared solution, as well as collaboration between IHFs, and between IHFs and institutions with the relevant expertise.

The advent of mandated peer review will be disruptive. It forces us to rethink the role of the physician and the facility relative to the quality goals of the entire enterprise and the healthcare continuum, at large. The discomfort of this disruption includes the fear of embarrassment and risks to providers, as well as unbearable costs to IHFs. These can all be mitigated.

This is our opportunity to take control of this important initiative, and use our expertise and sense of professional responsibility to design a system that delivers more than the minimum, creating a climate of commitment to maximal quality, safety and professionalism for patients and ourselves. Radiologists can be protected by design elements that emphasize demonstrable quality improvement, not simple detection for retribution.

Effective peer review should be seen as a way of improving skills and reducing risk of causing harm. IHFs can mitigate cost by collaboration on larger scales, with the deployment of cost-effective and customizable software solutions. This affords the opportunity to rethink existing infrastructure, moving towards more digitization where feasible, and exploitation of innovative approaches when it is not.

Additionally, the adoption of intelligent solutions to peer review workflow integration (such as dynamic workflow balancing to improve timeliness and reduce radiologist fatigue as described in new guidelines from the Royal College of Radiology in the UK), can be used generally to result in significant overall improvement in workflow efficiencies. This will potentially offset the time and material costs of peer review by an overall improvement in productivity. Peer review can, therefore, result in a win for patients, the healthcare system at large, providers, and the facilities themselves.

REFERENCES

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