PQI and Individual Projects: The Diagnostic Imaging Physicist

Michael Yester, Ph.D.
The University of Alabama at Birmingham

Outline

- Introduction
- PQI Review
- ABR Guidelines
- Project Types
- Individual Project Ideas
- Societal Based Project
- Conclusion

Introduction

- Practice Quality Improvement (PQI) is Part IV of the ABR MOC program
- Although the goal is obvious, the specifics are less obvious for physicists.
- For Physicians a primary ingredient would relate to Peer Review

Introduction

- For Physicists Peer Review can be an ingredient, but from a different point of view.
- One question relates to the term "Practice."
- Quality is one of the mainstays of a physicists duties, but there are always room for improvement
- PQI is a process

PQI Process

- Year 1 of Cycle:
  - Education in PQI
  - AAPM has sponsored such sessions and will repeat these on a rotating basis.
  - Such sessions will be captured in The Virtual Library
  - There are other courses that will fulfill the requirements

PQI Process

- Year 2 of Cycle:
  - Select Project and metrics, start data collection
- Year 3 of Cycle
  - Analyze data and create improvement plan

PQI Process

- Year 4 of Cycle

  Implement Improvement Plan, data collection as needed

- Year 5 of Cycle

  Collect data, compare to initial, summarize, draw conclusions

- Start new Project

PQI Process

- Basic idea is a continuous process of improvement
- If first project ends sooner, start another
- In actuality, physicists are performing PQI related duties continuously.
- Main difference is formalization of project and quantification with a metric

PQI Process

- What if no Improvement is Demonstrated?
- Perhaps the Project demonstrates that the aspect of the practice investigated is good.
- No penalty for this, assuming that the project is meaningful, main idea is documentation with metrics

  Most important is to be involved in a PQI program
- Then start another project as noted

  PQI is a continuous program

Project Basics

ABR Guidelines

- Project relevant to patient care
- Project relevant to diplomate's practice
- Project must have identifiable metrics and/or measurable endpoints
- Project must include an action plan to address plans for improvement and perform new measurements to assess progress and/or improvement

Areas for Projects

- Five General Areas for Projects have been established

1. Safety for patients, employees, and the public
2. Accuracy of analyses and calculations
3. Report Turnaround times and communication issues
4. Practice Guidelines and Standards
5. Surveys

General Competencies

- There are core competencies that have been defined by ACGME/ABMS/ABR that would be part of the project
  1. Practice knowledge
  2. Patient Care
  3. Interpersonal and communication skills
  4. Professionalism
  5. Practice-based learning and improvement
  6. Systems-based practice

Broad categories, but any project would easily embody one or more of these

Projects

- Type I
  - Individuals, practice groups, departments, institutions, or health care systems
- Do not require qualification by The ABR
- Documented by Diplomate as to participation with an Annual Update and attestation through on-line Personal Data Base
- Subject to audit

"Individual" Projects

- A project may be within the Department, so that this is a group effort. This is acceptable, have to show participation as an individual
- A project may involve a Practice Group which is similar to a Department
- So individual can be part of a group project

Projects

- Type II
  - Generated by Societies
- Formal reassessment to document improvement
- Assessment of adherence for an individual participating
- Includes development of central data-bases for future benchmarking
- Advanced qualification of such projects by The ABR
- Completion attested by the Society to The ABR.

References

The American Board of Radiology perspective on maintenance of certification: Part IV: Practice Quality improvement in radiologic physics.

G. Donald Frey, Geoffrey S. Ibbott, Richard L. Morin, Bhudatt R. Paliwal, Stephen R. Thomas, and Jennifer Bosma.

Med. Phys. 34, 4158 (2007)

This reference has a comprehensive reference list including reading material on PQI itself

It has ideas of Projects that cover the different areas.

References

- Very Pertinent reference is The ABR web site.
- Although things are quite stable now, it is good to check the Web Site periodically
- http://www.theabr.org/moc/moc_rp_landing.html

Practices

- For Imaging Physicists somewhat complicated
- Academic or Community Hospital Staff
  - May be part of a group or may be an individual
- Consultant
  - Practice will cover many different institutions
  - More individualized
- Different Modalities
  - Nuclear, Diagnostic Radiology, MRI
  - Each has unique concerns

Project Attributes

- Project is relevant to the practice
- Achievable in the individual's practice setting
- Produces results that are measurable and suitable for repeat measurements
- Possible to affect quality improvement
- Practice Quality Improvement

Summary

- Many possibilities
- Material presented are personal thoughts
- Work is being performed already
- Need to formalize process and follow up
- Benefits to field of imaging and personal satisfaction
- Most important -- start a project and follow up