

PRACTICE QUALITY IMPROVEMENT (PQI) PROJECT
RESOURCE MANUAL
FAMILY MEDICINE RESIDENCY PROGRAM

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Practice Quality Improvement Overview

What is practice quality improvement and why is it important?

Family physicians need to monitor and improve the care that they provide to their patients. The College of Family Physicians of Canada has recognized the importance of skill development in this area. Their program guidelines “General Information and Regulations on Program Accreditation and Examinations” states:

“Family physicians must be able to assess their own skills, knowledge, and practices through practice audit and other quality assurance activities. Residents must learn the basic principles of quality assurance, including setting standards, measuring performance against those standards, and follow-up to ensure they were met; residents must participate in practice audit activities during their residency training.”¹

During each year of family medicine residency program, each resident will be required to undertake a project on “Practice Quality Improvement” (PQI) to develop practice audit skills. This project is *mandatory* for all residents.

The PQI project requires active data collection and analysis. It is advisable to contact both your faculty advisor and your community preceptor, to agree on your project, refine the question and collect relevant references.

The purpose of an audit is to evaluate how well an activity is being conducted in practice compared to how well it should be conducted. The audit helps to determine what could be done to improve or maintain quality practice. The PQI cycle involves repeating audits to re-evaluate practice in an ongoing cycle of quality improvement.

PQI definition: *“Quality improvement is defined as an organized process that assesses and evaluates health services to improve practice or quality of care.”*

The project goals are:

To provide family medicine residents the opportunity to develop the skills required to implement the process of quality assessment and improvement in their clinical practices.

To meet the “audit” requirements outlined in the educational requirements of the College of Family Physicians of Canada.

¹ The College of Family Physicians of Canada. Standards for Accreditation of Residency Training Programs. 2006

Learning Objectives

The overall goals of the PQI project are:

1. to develop the skills required to conduct a practice quality improvement project in clinical practice; and
2. to demonstrate skills in critiquing the literature (literature searches, critical appraisal); and
3. to carry out this project in collaboration with a practice; and
4. to improve the quality of patient care

SPECIFIC PQI OBJECTIVES

- Understand the difference between practice quality improvement and research
- Be able to identify and develop practice quality improvement questions
- Be able to set targets based upon the evidence and to determine an acceptable standard of care
- Develop data collection skills
- Develop an understanding of privacy and how to safeguard privacy during a PQI cycle
- Develop skills in measuring performance and assessing if standards are met
- Develop skills in change management – i.e. learn how to suggest improvements that are useful and meaningful to the practice
- Develop presentation and teaching skills
- Develop collaboration through working with resource staff and physicians to assist with your project

Definitions

1. Audit is a “process of asking how well an activity is being conducted in practice, when compared with how well that activity should be conducted.”(Godwin, 2001).
2. Quality assurance involves an audit cycle. It is an investigation of current practice, comparing the findings to an accepted target, and implementing change to meet that target.
3. An element is the important aspect of care or activity being audited.
4. The target is the acceptable frequency with which you expect to find an element.

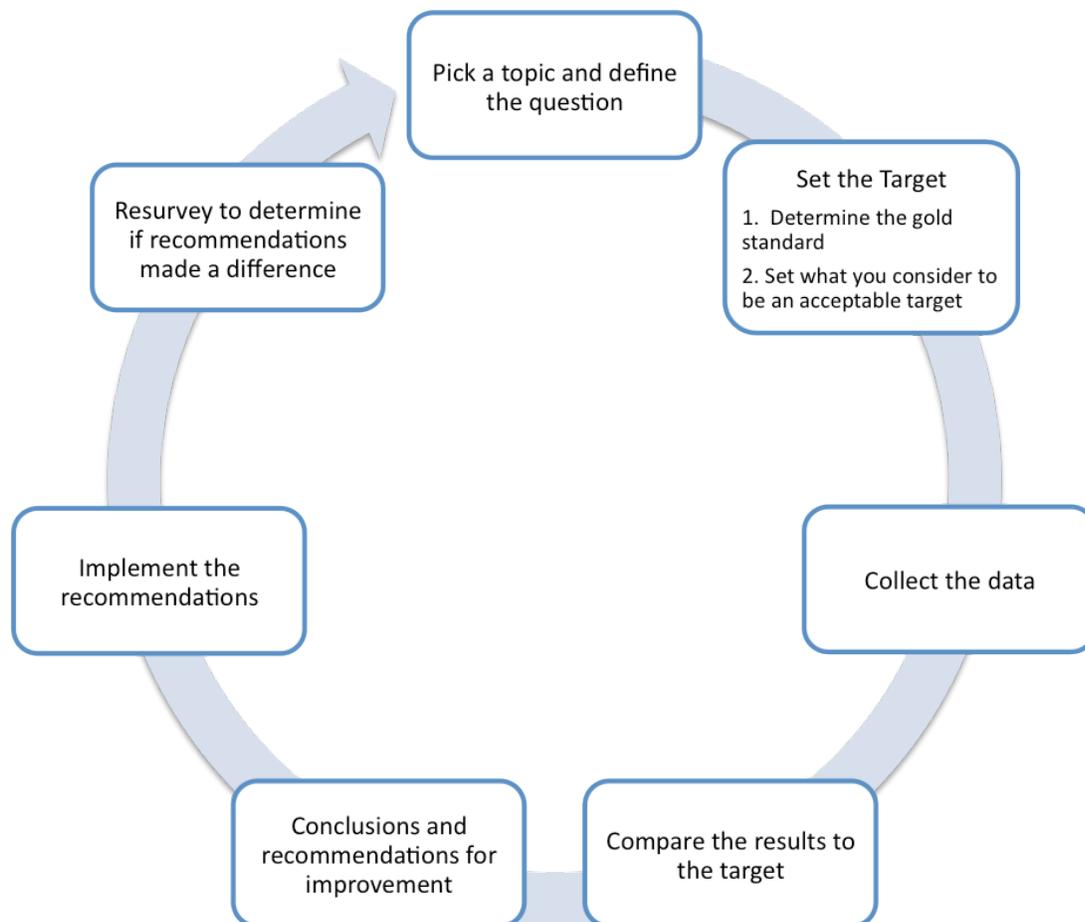
How To Do PQI

In the PGY2 year, all residents must complete a community based PQI during a major Family Medicine rotation. This PQI must be done individually and must be presented to the clinic before the completion of the rotation. A copy of the project must be submitted to the Program. All urban residents must complete and present a “Practice” PQI during PGY1 Family Medicine Blocktime.

A quality improvement project can be done on any activity. There are two main types of audits.

1. Process audits are done to evaluate activities or a process such as how long it takes for a patient to see an urologist.
2. Outcome audits assess results such blood pressure control in diabetics.

PQI Cycle Diagram



1. **Problem Definition:** Pick a topic and define the question. This part requires the most thought and refinement. There must be agreement between you and your faculty advisor or community preceptor as to the focus of the problem.
2. **Setting the Target (Defining Quality):** In order to determine the target or standard to which you are going to compare your data, a review and critical appraisal of the relevant literature must be done. For example, if you are studying whether your annual lab evaluation of diabetics is appropriate you must determine what is considered appropriate according to the consensus of Canadian diabetic experts. In some projects, there may be very little literature and you may have to canvass personal opinions of experts. Occasionally, an arbitrary standard will be used.

The literature will help inform the standard; however, you and your faculty advisor or community preceptor must be in agreement as to what standard or target you will use. This may or may not be the “gold standard” as determined from the literature depending upon the situation and/ setting, in many cases you may not find a gold standard. For example, the standard for the time it takes for a patient to complete an appointment for a practice with a high prevalence of chronic disease and elderly patients is different than that of a younger, less complex practice.

3. **Collecting Data:** Decide what data you want to collect. Data can be collected retrospectively or prospectively. Depending on the project, collection may involve chart audits, surveys, data sheets, check lists, interviews, etc. Always consider privacy policies and protect identities.
 - a. **Decide on an appropriate number and select the sample:** This depends on a number of factors such as time and the number of patients with the condition you are assessing. With an uncommon condition such as congestive heart failure, you may want to assess the entire population. With hypertension, you may decide to review 50 or 100 charts. In these cases you should randomly select a portion of the sample.
 - b. **Create an audit form (or electronic spreadsheet) to collect the data:** Code the data to protect identities by assigning a PQI identification number. Remove any identifiable information from the data collected on the spreadsheet to de-identify the data (i.e. health care number, names, etc).

You may create a key that links a code/identification number to the patient. If a key is created, keep the key in a secure place at the practice site and destroy the key once the PQI has been completed and presented. At no time should identifying information leave the practice site.
4. **Comparing results to the target:** The data collected can be stored and/or presented in many different ways depending on the data. However it exists, the data must be analyzed and compared to what has been agreed earlier as the target.

5. **Conclusions and recommendations:** Analysis of the data should lead you to conclusions and proposals for change. If the defined target has not been achieved, what corrective processes need to be done? If the target has been surpassed, is it the right target? Recommendations should follow from the analysis of data and conclusions reached.
6. **Future/Re-survey:** After the recommendations have been agreed to and put in place, a resurvey should be carried out after appropriate time has passed to see if the solutions agreed to have achieved the desired results. Any follow-up re-survey will probably not be carried out by you, but rather one of your future colleagues due to time limitations and duration of the residency-training period.

Can I do a research project instead of my PQI?

The answer to this question is **No** (unless the research project is a PQI).

While we encourage residents to undertake research activities, the PQI has learning objectives that need to be met and not all research activities will meet these objectives.

OUTLINE OF THE WRITTEN PQI REPORT

A written report of your project is to be presented to your faculty advisor and the community preceptor (an additional copy to the Department of Family Medicine is also requested). Your faculty advisor and/or community preceptor may also request an oral presentation of your project.

The PQI report should be in publishable format with the following headings:

- **Title page** – Include the title of the project, your name, the name of your primary community preceptor, faculty advisor’s name, and date.
- **Introduction and problem statement** – Include a clear definition of the problem or question and the aim of the PQI (i.e. what is the question the PQI will answer?).
- **Background, including information on the “target” (definition of quality)** – The target chosen must be supported by a literature review or other data source used to find that standard and discussed with your faculty advisor/community preceptor.
- **Methodology** – Explain how you developed the audit form, i.e. what outcome measures were identified, how you selected your sample, and how you collected the data.
- **Results** – Present/summarize your findings with comparison to the target.
- **Discussion** – Possible explanations for your findings, and reasons for variance from your target. Include areas that are being done well and recommendations for improvement.
- **Acknowledgements** - Acknowledge the supports you received to complete your project.
- **References** - Check references for accuracy, completeness, and proper format (according to the Uniform Requirements for Manuscripts Submitted to Biomedical Journals; <http://www.icmje.org/>). References should be numbered in the order they appear in the text. List all authors when there are 6 or fewer; when there are 7 or more, list the first 6, then et al.

e.g. Godwin M. Conducting a clinical audit. Fourteen steps to better patient care. Can Fam Physician. 2001;47:2331-3.

DISSEMINATION

Disseminate findings by:

- Written Report – disseminate report to the preceptor and practice site.
- Presentations – oral presentations can be made to the preceptor and practice site. Presentation at Academic Half Day and the Annual Family Medicine Research Day is encouraged. Poster presentations can also be made conferences.

PQI -initial Check-list and Sign Off Form

Complete BEFORE doing the PQI

1. Question adequate and doable?

A meaningful and doable question that both resident and practice agree on

2. Project does not require ethical approval?

- No comparisons are being made and this is not a research project hence consent is not required
 - There are no risks or burdens beyond routine care
 - The resident would normally have access to the information being collected
 - The information does not go beyond that routinely collected in clinical care
 - There are no risks of breaching confidentiality of any individual's information (i.e. could you identify a physician or patient from the results)
 - The project does not infringe on the rights, privacy or professional reputation of participants (patients, providers, clinics)
 - The project is sensitive to privacy and has no ethical issues
- (If unsure check with the Research Program or Research Ethics Board)**

3. Decide on standards and discuss with advisor?

Based upon a critical review of the literature adapted to the practice setting

Name of Resident (print) _____

Signature of Resident _____ Date _____

Name of Faculty Advisor _____

Signature of Faculty Advisor _____ Date _____

Name of Preceptor (print) _____

Signature of Preceptor _____ Date _____

PQI - final Check-list and sign off Form

Complete AFTER completing PQI

4. Measured performance?

How did findings compare with the chosen target?
(i.e. The target was 85% however only 50% of patients with hypertension had a FBS done in the last 3 years)

5. Sought out explanation for outliers?

Reviewed with the practice or physician possible explanations for variance from the target. (i.e. the physician was on maternity leave so 30% of the patients left the practice)

6. Made suggestions for change?

Interpret the findings appropriately to determine what is done well and what could be improved on.
(i.e. after correcting for patients that left the practice only 80% of hypertensive patients had a FBS, it was decided to mail a requisition to those patients with hypertension who did not have a FBS in the last three years on their birthdays)

7. Presented findings?

Presentation made and written report completed

Name of Resident (print) _____

Signature of Resident _____ Date _____

Name of Faculty Advisor _____

Signature of Faculty Advisor _____ Date _____

Name of Preceptor (print) _____

Signature of Preceptor _____ Date _____

When a PQI is research – when in doubt check it out

Quality improvement projects are usually exempt from Research Ethics Board (REB) review and approval. On occasion, it can be difficult to determine when practice quality improvement is actually research that requires ethical approval to protect participants. If there is any doubt it is best to check with the Research Program or the REB.

In general, research is defined as a systematic investigation to establish facts, principles or generalizable knowledge. Practice evaluation could be considered to be the systematic collection of information about the activities, characteristics and outcomes of practices/programs to make judgments about the practice, improve clinic effectiveness, and or inform decisions about future programming/initiatives for the practice. The following question may help frame how you think about your project. This is not an exhaustive list and varying scenarios present new challenges every day. If in doubt, check it out.

Is my project PQI?

1. Are the activities or findings surrounding my project restricted to a specific program/practice/clinic?
2. Is my project designed to detect deficiencies, errors, cost control measures, service delivery times or satisfaction with service delivery?

Is my project research?

1. Can the findings from my project be expanded beyond the practice population?
2. Does my project activity involve a clinical departure from routine care provided to patients?
3. Does my project involve randomization or the use of a control group or a placebo?
4. Am I collecting information about a patient beyond that routinely collected in clinical care?
5. Is there an explicit requirement for review of this project by an REB as part of its funding arrangements?
6. Is the project designed to test a specific hypothesis or answer a specific qualitative or quantitative question?
7. Does my project involve the use of personally identifiable health information?

Receiving a determination that your project is PQI and not requiring ethics approval, does not mean that the conduct of the project should discount the use of ethical principles and privacy legislation.

RESOURCES

An article on how to conduct a clinical practice audit <http://www.jamaevidence.com/>

Users' guide to evidence based practice as templates for your critical appraisal

<http://www.jamaevidence.com/>

Examples of a research clinical audits:

Trustin D, Szafran O, Bilous C, Olson O, Spooner R. Acute myocardial infarction. Quality of care in rural Alberta. 2006;52:68-9. <http://www.cfp.ca/cgi/content/abstract/52/1/68>
