



REQUIREMENTS FOR THE CONDUCT OF A QUALITY IMPROVEMENT PROJECT IN LIEU OF A CONVENTIONAL RESEARCH PROJECT

Residency and Fellowship Programs – Medical Imaging Department of the University of Toronto

Quality Improvement (QI) is an important part of operations of an organization. It is the expectation of the Department of Medical Imaging that our workforce interest in the topic grows over the next years with the final goals of improving patient care and developing essential professional skills to solve problems related to radiological clinical practice on a daily basis.

Effective QI projects require collaborative efforts with colleagues, trainees, allied professionals, administrators and patients, and the utilization of a structured methodology.

For a QI project to fulfil the requirements under the “research component of the residency or fellowship training” it should follow the same academic guidelines as those of a conventional research project concerning having an aim statement, describing methods, reporting and discussing results, assessing limitations of the project and writing up a conclusion for the project. The manuscript draft of a QI project containing the aforementioned sections should be submitted to the Department of Medical Imaging Post-Graduate Office or appropriate office as described in the training program prior to the completion of the program in order to enable clearance of the trainee’s requirements for obtaining the training certificate.

Details of the methods for conducting a QI project are available on a separate document that outlines all parts of this type of project (e.g. establishing a quality gap, measures of outcome, process and balancing, describing the problem with process tools, applying “Plan-Do-Study-Act (PDSA)”, describing results, assessing barriers and lessons learned).

Definition

Quality Improvement is defined as “systematic, data-guided activities designed to bring about immediate improvements in health delivery in particular settings” [1].

Considering the overlap between QI and research methods it becomes crucial to try to delineate boundaries between the two types of projects and ensure that local and national guidelines for conduct of the projects applies [2, 3]. Similarly to a research project, a QI project should be conducted respecting ethical, privacy and welfare of human participants, as applicable [4].

The following table outlines key considerations when determining if your project requires approval as Quality Improvement or Research [2].

	Research	Quality Improvement
Purpose	To develop or contribute to generalizable knowledge or seek to explore or understand a phenomenon.	To implement knowledge, assess a process or program as judged by established or accepted standards.
Rationale	Knowledge-seeking independent of routine care and intended to answer a question or test a hypothesis.	To provide information for decisions to improve some aspect of care or service delivery in a particular location.
Design	Follows a fixed protocol that generally will remain unchanged throughout the study. Uses precise and defensible techniques for sampling, data collection and analysis.	Project outline is an adaptive, iterative design; flexible and responsive to change throughout project lifecycle. Includes an aim statement or evaluation questions and measures.
Benefits	Might or might not benefit current participants. Intended to benefit future participants.	Directly benefits a process, system or program. Might or might not benefit patients. Interventions, services and programs are presumed effective, not experimental.
Participant Obligation	Participation must be voluntary because those participating will be involved in activities which are in addition to routine care, program provision, or role performance.	Participants continue to engage in routine care, program provision, or role performance. There may be an innovation to service or delivery, but it typically applies to everyone. There may be additional data gathering. Participant consent may be required.
Endpoint	Answer a research question and contributes to generalizable or transferable knowledge.	Improve a program, process or system.
Primary Audience for Results	Primarily scholars, practitioners, or organizations well beyond the ones comprising the immediate affiliation of the researcher and/ or participant.	Primarily, the organization, institution, or system that is being assessed. Others may have interest in the results or process, but are not the primary target audience.



Quality Improvement / Safety Board or Research Ethics Board (REB) Approval

Approval for the conduct of a QI project may be required according to the rules and regulations of different hospitals affiliated to the Department of Medical Imaging of the University of Toronto [2].

Most scientific journals require a statement in the article about whether REB approval was granted or waived for the project.

Standards for reporting QI initiatives have been developed and published by the SQUIRE Development Group. Individuals intending to publish the results of a QI project should consult this Guideline [5] and publication guidelines for QI studies in healthcare [6].

References

1. <https://irb.research.chop.edu/quality-improvement-vs-research>



2. https://www.uhn.ca/corporate/For_Staff/Krembil_Nursing_Awards/Documents/QI-Submission-Form.docx
3. Carter EJ, Usseglio J, Pahlevan-Ibrekic C, Vose C, Rivera RR, Larson EL. Differentiating research and quality improvement activities: A scoping review and implications for clinical scholarship. *J Clin Nurs*. 2021 Sep;30(17-18):2480-2488

chrome-extension://efaidnbmnnnibpcajpcgiclfindmkaj/<https://www.thehastingscenter.org/wp-content/uploads/The-Ethics-of-Using-QI-Methods.pdf>
4. <http://www.squire-statement.org/>
5. Davidoff F, Batalden P, Stevens D, Ogrinc G, Mooney S; Standards for Quality Improvement Reporting Excellence Development Group. Publication guidelines for quality improvement studies in health care: evolution of the SQUIRE project. *J Gen Intern Med*. 2008 Dec;23(12):2125-30. doi: 10.1007/s11606-008-0797-4. Epub 2008 Oct 2. Erratum in: *J Gen Intern Med*. 2009 Jan;24(1):147
6. chrome-extension://efaidnbmnnnibpcajpcgiclfindmkaj/<https://www.ualberta.ca/research/media-library/reo/human-ethics-files/forms-files/guidelines-for-differentiating-among-research.pdf>