Purpose: The purpose of this guidance document is to provide an overview of the Quality Improvement (QI) application review process; outline the common factors the IRB might consider in determining if the project qualifies as human subjects' research; and to provide a list of useful resources related to QI projects.

Background: There is often confusion as to whether a QI project is human subjects' research. This may be due to the fact that there are several common features between QI activities and research. In addition, there is no clear definition for a QI activity in the federal regulations or literature. Although this distinction can be challenging, it is an important one to be made because human subjects' research requires IRB review and generally, activities that fall within the QI domain are not considered to be research and therefore, not subject to IRB review. Although IRB review may not be required for QI activities, in some circumstances, journals or professional organizations may require documentation that IRB review was not required before accepting a QI project for publication or presentation. The IRB's QI review process is designed to review such projects to ensure they are assessed prior to implementation to confirm whether the proposed activity qualifies as research subject to IRB review or is a quality improvement project not subject to further IRB review. For QI projects where the project leaders are certain that the project is quality improvement and there is no requirement for a formal IRB determination, submission to the IRB is not required. Similarly, for QI projects that seem to qualify as human subjects' research, they should be submitted directly to the IRB for review via the HS ERA online application system.

QI application review process: The review process for QI applications is depicted in the flow chart available at **http://www.upenn.edu/IRB/mission-institutional-review-board-irb/guidance**. To summarize, the following steps are involved in the review of a QI application:
Step 1: Consult the operational leader;
Step 1a: If the project is clearly a research activity, then, submit to the IRB for review via HS ERA.
Step 1b: If the operational leader determines the project is QI and no formal determination by IRB is needed, proceed with the project.
Step 1c: If the operational leader is unsure or a formal determination by IRB is desired, proceed to the steps below.
Step 2: Complete the QI application available at http://www.upenn.edu/IRB/mission-institutional-review-board-irb/guidance.
Step 3: Email completed materials to qiirb@upenn.edu.
Step 4: Initial assessment by the QI review team; QI Review team may contact the submitter for additional information/clarification; and final Assessment.
Step 5a: If the project is determined to qualify as QI, the QI Review team generates a Penn ERA application number and sends the submitter a formal QI determination letter via email**.***
Step 5b: If the project is determined to qualify as human subjects' research, the submitter will be directed to submit an application to the IRB via HS-ERA.
***Please note even when a project is determined to qualify as QI, HIPAA regulations and other Institutional policies may apply. For more information and guidance on these aspects, please contact the project operational leader. For HIPAA related questions, please contact your HIPAA Entity Privacy Officer or the IRB.*

Information to include in a QI application to the IRB: The QI application should include- a summary of the operational issue that is being addressed by the project; the data collection methods employed; background for the project; and a description of how the project will be used to assess or improve the area of focus.

Factors the IRB may consider during review of the application[1, 2]

a) **Purpose**: Whether the project seeks to establish new practice standards; generate generalizable knowledge; testing a hypothesis, or whether the purpose is limited to improve current practice and for local use only.
b) **Design**: Whether the project involves group assignments (e.g. randomization to different intervention/treatment arms or involves control groups) or is structured to make comparisons of safety or effectiveness.

c) **Procedures**: Whether the interventions are within existing standards of care and are evidence based or are on the extreme ends of the standard of care spectrum; or whether the project involves following a protocol that overrides clinical decision-making or manipulation of current standard processes to determine which is best;
d) **Population or number of sites**: whether the project involves the local institution (employees or patients) only or involves participants from additional sites.
e) **Risk**: Possibility of exposure of participants to any additional risk beyond standards of care/practice.
f) **Funding**: How the project is funded (example, federal agencies or research-focused organizations).
g) **Personnel**: Who is responsible for carrying out the project – Is it conducted by Penn employees or external entities.
h) **Applicability of project results**: Will the results be used to provide feedback to evaluate internal processes/ bring immediate improvement in services. Does the project seek to draw broader conclusions beyond the local setting?

FAQ/additional information section:

1. Why is the Operational Leader input important in the QI project review and implementation process?

For projects that involve health care interventions, it is sometimes difficult for the IRB team to assess if the intervention is going to change standard of care. In such cases, it is helpful during the assessment to know that the project is intended as a quality improvement project by the department/team.

In addition, the operational leader's input helps to establish what the current standards of practice are pertaining to a particular service area and confirm whether the proposed project meets an operational need.

2. Does the intent to publish a QI project mean that project is considered research?

No. Per OHRP[3], "the intent to publish is an insufficient criterion for determining whether a quality improvement activity involves research. The regulatory definition under 45 CFR 46.102(d) is "Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." Planning to publish an account of a quality improvement project does not necessarily mean that the project fits the definition of research; people seek to publish descriptions of non-research activities for a variety of reasons, if they believe others may be interested in learning about those activities. Conversely, a quality improvement project may involve research even if there is no intent to publish the results. "

Note: To avoid confusion, QI projects should not be referred to as research in publications/presentations. If a project is established as quality improvement by the IRB the following statement may be included in the resulting publication: "This project was reviewed and determined to qualify as Quality Improvement by the University of Pennsylvania's Institutional Review Board."

When results from a QI project that was not submitted to the IRB for a formal determination are published, the Operational Leader and the project team should be comfortable with including a statement along the following lines in the publication: "This project was undertaken as a Quality Improvement Initiative and as such was not formally reviewed by the University of Pennsylvania's Institutional Review Board."

3. What is human subjects' research as defined in regulations?

The regulations define "research" under 45 CFR 46[4], as "… a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge…" However, it does not define what a "systematic investigation and "generalizable knowledge" are.

Human subject[4] means a living individual about whom an investigator (whether professional or student) conducting research obtains
(1) Data through intervention or interaction with the individual, or
(2) Identifiable private information.

4. What happens if my project is truly research and the project was not submitted to IRB?

If the project was not assessed up front as research, the data may not be usable and journals/professional conferences may not accept the work.

5. Why does the IRB require a separate application in HS ERA if my project does not qualify as QI?

When a project is determined to qualify as "human subjects' research"; the project needs IRB review and approval. Based on several characteristics of the project it might qualify for one of the three levels of IRB review categories: exempt, expedited, and full review.

For studies that might qualify for exempt review, the QI IRB team will work with you to obtain any additional information needed to make an exemption determination. A separate IRB application will not be required. If the exemption determination is made outside of the online application system, a Penn ERA protocol record will be created and an exemption determination letter will be sent to you. For additional information on exempt review, please refer IRB SOP on Exempt Research available at IRB website[5].

For expedited and full review projects, the Code of Federal Regulations[5] and ongoing oversight/monitoring by the Office of Regulatory Affairs apply; as such, a full IRB application via online application system (HS ERA) will be required.

6. What do I do if my project has evolved from QI to research after implementation?

If the QI project evolves into research, then the research will need to undergo IRB review. This should occur as soon as it is known. QI and research components should be clearly distinguished.

7. When do I submit the QI application to the IRB?

An application should be submitted before the project is implemented.

8. Whom can I contact if have questions related to submitting QI application for IRB review?

If you have further questions, after reviewing this guidance document, please contact Hoon Chung at hoonc@upenn.edu, 215-898-2881 or David Prakash at dprakash@upenn.edu, 215-746-6268 for assistance.

References:

1. Raval MV, Sakran JV, Medbery RL, Angelos P, Hall BL. Distinguishing QI projects from human subjects research: ethical and practical considerations. Bull Am Coll Surg. 2014 Jul;99(7):21-7. PubMed PMID: 25076737.
2. Partners Human Research Committee Quality Improvement/Measurement Project Checklist; Accessed from http://navigator.partners.org/Pages/Policy_and_Guidance.aspx
3. DHHS, OHRP- Frequently Asked Questions About Human Research, http://www.hhs.gov/ohrp/policy/faq/
4. DHHS, OHRP- Code of Federal Regulations: Available at http://www.hhs.gov/ohrp
5. University of Pennsylvania IRB SOP: Available at http://www.upenn.edu/IRB/mission-institutional-review-board-irb/irb-operations-0