The SQUIRE Guidelines: A Scholarly Approach to Quality Improvement

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The Challenge

Quality improvement (QI) work resonates with physicians and trainees, as it is immediately relevant to their work. Yet the academic medical community has largely avoided QI work, because it is perceived as time consuming, lacking scientific merit, and adversely impacting academic advancement. The Accreditation Council for Graduate Medical Education's Clinical Learning Environment Review program's focus on quality has prompted more physicians to do QI work, but often without the needed skill sets, which results in poorly conceived and ultimately unsuccessful improvement initiatives. Since this renders the work unpublishable, it further impedes progress in the field of health care improvement and widens the quality chasm.[1] Academic physicians skilled in QI processes are crucial to the transformation of health care delivery. Along with trainees, they represent an untapped resource and are important players in addressing organizational quality problems.[2]

What Is Known

The 2008 Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines sought to provide a structured approach to the reporting of, and lend legitimacy to, the scholarly dissemination of QI initiatives. In 2015, SQUIRE 2.0 was released as an update to these guidelines[3] to minimize redundancies and offer a standardized framework for reporting and planning QI work.[4]

The guidelines are broken down into 4 main sections: (1) Why did you start?; (2) What did you do?; (3) What did you find?; and (4) What does it mean? Each section is divided into subsections (18 total), which together delineate the key elements of a QI report. SQUIRE 2.0 more explicitly emphasizes the importance of articulating a rationale for proposed changes and describing the role of context, allowing authors and readers to determine the generalizability of this QI approach to other settings. Awareness and use of SQUIRE 2.0 guidelines can support academic physicians' and trainees' ability to complete rigorously conducted QI initiatives. The guidelines may facilitate greater engagement in and recognition for QI work in the academic environment.

How You Can Start TODAY

QI work may appear daunting. However, using the SQUIRE 2.0 guidelines as a starting point, interested faculty members or program directors can take simple steps to engage colleagues and trainees.

BOX Action Items

Program directors should:

1. Make quality improvement (QI) visible: review and use SQUIRE 2.0 guidelines, include QI articles in your journal club, and engage in QI scholarship.
2. Secure QI training for faculty and incentivize their engagement in QI through academic recognition.
3. Work with department, university, and health care system sponsors to create infrastructure (eg, ethical review process, access to data, protected time) to support QI.

1. Increase faculty and trainee awareness of the SQUIRE 2.0 guidelines. Familiarize faculty and trainees with online educational material currently available. The Institute for Healthcare Improvement's Open School online modules[5] introduce foundational concepts in QI. The SQUIRE 2.0 website[3] summarizes the guidelines and provides an "explanation and elaboration" section along with a worked QI example to highlight underpinning QI principles and key considerations when embarking on a QI initiative.
2. Include QI articles in your journal club. Review QI publications using the SQUIRE 2.0 framework to structure the critical appraisal of QI reports. This approach serves to elucidate QI processes and principles while demonstrating what a finished QI project looks like.
3. Encourage trainees to undertake and present QI work in a scholarly fashion. Given that many residency programs now teach QI, faculty and residents should be encouraged to disseminate and publish their QI projects just like they would a traditional research project. Provide a forum for trainees to present their work locally: 1 approach is to include a QI submission option at local "research" days.
4. Hold writing workshops for QI projects. SQUIRE 2.0 can serve as a guide for 1-on-1 coaching sessions, small group sessions, and/or to structure writing workshops. The *Journal of Graduate Medical Education* (*JGME*) recently provided authors with suggestions for how to write up a QI initiative for publication.[6]
5. Create a list of journals publishing QI projects. Generate a list of core QI journals—*BMJ Quality*

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and Safety, *American Journal of Medical Quality*, *BMJ Quality Improvement Reports*[7]—along with general and medical education journals, including *JGME*, that publish QI.

What You Can Do LONG TERM

Long-term efforts should be focused on building capacity for QI work in academic settings, and include investing in infrastructure at an institutional level and ensuring trained, incentivized faculty.

1. Create an expedited ethical review process. The specific ethical principles governing QI oversight differ from those governing traditional research studies. Many institutions have an expedited process for QI. Work with your institution to ensure that the ethical review process facilitates rather than demotivates QI teams.
2. Build and leverage QI infrastructure. QI work must have prompt access to data to determine if a problem exists or an improvement has occurred. Locally, decision-support departments can facilitate access to data. Many graduate medical education sponsors are affiliated with national organizations that provide benchmarking data, which may help teams to identify local problems that could serve as targets for improvement.
3. Encourage faculty to complete formal training in quality and safety. There are numerous certificate-level courses available (eg, Veterans Affairs Quality Scholars fellowship program) and an increasing number of masters-level training programs in QI that faculty can pursue. Alternatively, leverage graduate medical education requirements to teach residents QI and include faculty in the learning process as "colearners."
4. Create an academic career path in quality. Work with academic leaders to include language in promotion criteria that recognizes QI work. Create a QI job description to foster the development of QI leaders in academic departments.

Resources

1. Dixon-Woods M, Pronovost PJ. Patient safety and the problem of many hands. *BMJ Qual Saf*. 2016;25(7):485–488.
2. Sklar DP. How medical education can add value to the health care delivery system. *Acad Med*. 2016;91(4):445–447.
3. SQUIRE. Revised Standards for Quality Improvement Reporting Excellence: SQUIRE 2.0. www.squire-statement.org/index.cfm?fuseaction=Page.ViewPage&PageID=471. Accessed September 6, 2016.
4. Ogrinc G, Davies L, Goodman D, et al. SQUIRE 2.0 (Standards for QUality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process [published online ahead of print September 14, 2015]. *BMJ Qual Saf*. doi:10.1136/bmjqs-2015-004411.
5. Institute for Healthcare Improvement. Open School. www.ihi.org/education/ihiopenschool. Accessed September 6, 2016.
6. Wong BM, Sullivan GM. How to write up your quality improvement initiatives for publication. *J Grad Med Educ*. 2016;8(2):128–133.
7. BMJ Publishing Group Ltd. BMJ Quality Improvement Reports. http://qir.bmj.com. Accessed September 6, 2016.

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