FROM THE EDITOR'S DESK

JGIM Welcomes Quality Improvement and Implementation Science Submissions on Healthcare Delivery Change

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The *Journal of General Internal Medicine* (JGIM) aims to "promote improved patient care, research and education in primary care, general internal medicine and hospital medicine"[1] through peer reviewed, unbiased, and high-quality scientific publication. At JGIM and other journals, there has been growing concern about how the publication process can best support the first of these aims—improving patient care. The JGIM Quality Improvement Science and Implementation Science Initiative aims to support publication of articles that use or further develop these sciences in designing, evaluating, and reporting on improvement interventions.

To be useful, publications must enable readers to quickly assess the accuracy and applicability of the information presented. The use of rigorous, theory-based intervention design and evaluation approaches is essential for achieving this goal. A challenge for publications that apply research and education knowledge within and as part of actual healthcare organizations, however, is that the organization's policies, culture, and other context characteristics must be embraced as part of the intervention, and therefore as part of evaluation. This need creates a gap between classical healthcare effectiveness or efficacy work and truly applied work.

To address the gap, scientists from many fields have partnered with healthcare delivery sites and systems to develop two related scientific approaches. One focuses on science relevant to shortening the path between discovery and incorporation of new knowledge into practice (implementation science or IS). The other (quality improvement science, or QIS) focuses on science relevant to narrowing the equally important gap between what healthcare delivery organizations aim to accomplish and their actual results, including but not limited to assuring patient safety. The current QIS and IS approaches have evolved out of different scientific paths, but studies often use knowledge from each synergistically. For example, QIS interventions may be informed by IS evidence on implementation strategies and IS studies may use QI approaches such as Plan-Do-Study-Act cycles.

Table 1 shows the types of writing support, frameworks, and other methods that have been referenced by JGIM authors who have submitted QIS or IS work. This table is not meant to be comprehensive; rather, it is intended to serve as a starting point for authors as they plan for publication of their work before, during, and after project completion. We expect our authors to continue to add lines to the table as they discover new, helpful theories and approaches over time.

THE JGIM QIS AND IS INITIATIVE

Both QIS and IS are powerfully related to JGIM's aims. An initiative aimed at adding to literature applicable to the work of general internal medicine in the real world reflects JGIM's growing engagement with authors from multiple healthcare backgrounds and disciplines, including patients and healthcare delivery operations leaders and experts. A focus on real-world change supports SGIM's focus on diversity and equity by encouraging improvement work aimed at understudied or disadvantaged populations. This focus also connects JGIM to authors around the globe with similar interests.

To develop the JGIM QIS/IS focus, the JGIM QIS/IS workgroup (the authors of this paper) was initiated by the JGIM editors in May 2018. As an initial step, the workgroup convened an advisory group of leaders in QIS and IS. With the input of the advisory group, the workgroup identified its initial tasks, now completed, as (1) defining the types of QIS/IS work to target for JGIM publication; (2) developing a QIS/IS track for these articles

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Table 1 Frameworks and Methods Referenced by JGIM Quality Improvement Science and Implementation Science Submissions or Publications

Type of reference	Main purpose
Frameworks for designing, conducting, and evaluating Quality Improvement Science (QIS) and Implementation Science (IS)	Support intervention design, evaluation, reporting, and/or publication
• SQUIRE Guidelines[2,3]	• Design, evaluation, reporting, publication development, and evaluation
• StariD[4]	• Publication development and evaluation
• RE-AIM[5–7]	• Theoretical framework for evaluation design and reporting
• CFIR (consolidated Framework for Implementation research[8,9]	• Typology and theoretical framework for the key elements of context
• Preceed-proceed[10,11]	• Program or intervention planning
• Pragmatic trials[12]	• Evaluation planning and design
• PRISM (practical, robust Implementation sustainability model)[13]	• Implementation intervention planning and design
• Implementation strategies[14–16]	• Implementation intervention design, reporting, and publication
• LEAN[17,18]	• Intervention design, evaluation, and improvement
• Continuous and evidence-based quality improvement[19–22]	• Evidence-based design for learning organization intervention and evaluation
• Patient safety[23–25]	• Theory and practice of patient safety intervention design and evaluation
Complexity science[26,27]	• Theoretical framework for implementation intervention planning, design, and evaluation
Study design and statistical analysis methods	
• Analytic methods for Stepped Wedge design[28–30]	• Randomized or non-randomized quasi-experimental evaluation design for interventions on separate organizational units within a larger organization
• Difference in difference[31]	• Analytic approach applicable to evaluation of many QIS and IS initiatives
• Interrupted time series[32]	• Analytic approach applicable to evaluation of many QIS and IS initiatives
PDSA quality improvement[33,34]	• Process control charts and statistical approaches to quality improvement interventions that establish rigorous parameters for knowing whether an improvement is an improvement (with or without a comparison group)
Systematic review methodology[35,36]	• Support learning across QI or IS publications through specific guidance on search, selection, and abstraction processes
Ethical approaches for improvement initiatives[37–39]	• Framework and considerations for ensuring adherence to core ethical principles in improvement work
Scientific writing for improvement initiatives[40,41]	• Improve QIS and IS article or grant submissions

within JGIM; (3) identifying sponsorship and editors for an inaugural special JGIM issue on QIS/IS; and (4) further developing the scholarship focus on QIS and IS within the Society of General Internal Medicine, including at national meetings.

The Inaugural JGIM QIS/IS issue was published as a JGIM Supplement in November 2020.[42] Sponsored by Kaiser Permanente, the Agency for Healthcare Research and Quality, and the Department of Veterans Affairs, and led by guest editors Lucy Savitz, PhD, and Christian Helfrich, PhD, the issue attracted a large number of high-quality articles. In addition to 13 articles accepted for the Supplement, over 20 additional articles submitted for the Supplement will appear in subsequent JGIM issues over the next year. These and other relevant articles from 2020 are the initial basis for a JGIM QIS/IS Article Collection, accessible from the Journal's website.

Going forward, the Workgroup will use our experiences with the 2020 QIS and IS articles to develop additional written guidance to help both submitting authors and reviewers. We will also continue to encourage expansion of our QIS/IS reviewer pool.

TYPES OF QIS AND IS STUDIES OF INTEREST TO JGIM

JGIM seeks QIS and IS studies that rigorously evaluate improvement approaches and their relationships to achievement of improvement or implementation goals within functioning healthcare settings. JGIM also seeks data-informed studies that advance QIS or IS theories or methods more broadly.

One of the first decisions JGIM authors make is which article format best fits their planned submission. The QIS and IS track spans JGIM article formats. Common features of high-quality, publishable QIS or IS *Original Research* or *Concise Research Report* studies include the intentional design and documentation of study interventions or innovations, rigorous measurement, evaluation methods that are appropriate for assessing study aims, and reporting of findings in a manner that facilitates learning by others who aim to address similar problems or achieve similar impacts. High-quality QIS or IS *Perspectives*, *Viewpoints*, *Editorials*, and *Capsule Commentaries* enable readers to apply the learnings and expertise of the authors by synthesizing, documenting, and referencing elements of a theme, framework, or set of experiences. High-quality QIS or IS *Review Articles* assess context and intervention features in addition to outcomes.

Based on JGIM experiences with 2020 QIS and IS articles, one challenge often faced by QIS or IS authors is that of packing all of the needed information into a limited number of words. Often judicious use of appendices combined with economical wording is sufficient for achieving an article's goals. Sometimes, however, more than a single article is needed so that important study components can be better documented through cross-referencing.

One reason that space is challenging is that in order to produce work that is interpretable by others—an essential goal for publication—these studies must clearly document study context and conduct. For example, QIS and IS studies often involve partnerships between researchers and a healthcare delivery organization. Key stakeholders such as patients, clinicians, and organizational leaders are often integrally involved in study development, implementation, evaluation,

and publication. Neither clean separation of study findings from the study environment nor rigorous adherence to a detailed study protocol can be assured under these circumstances. In addition to basic information such as organizational structure, size, and urban or rural location, QIS and IS articles often need to provide baseline information on, for example, organizational policies, resources, or culture, as well as on the timing of intervention and evaluation components.

Another challenging area for QIS and IS studies and the publications they produce is the design and reporting of study ethics and human subjects protection methods. Ensuring equity, participant privacy protection, and management of conflicts of interest, for example, are part of these studies with or without a requirement for ongoing human subjects committee review. The needed information may go beyond a simple statement that a review board has judged the study to be non-research. Yet while guidance on improvement ethics is available, guidance on how to monitor and report on these aspects of studies is sparse.

Finally, journal editors and reviewers expect submitting authors to be aware of relevant prior QIS and IS literature. This can be a challenge in these rapidly evolving fields.

HOW JGIM QIS AND IS ARTICLES ARE REVIEWED

Submitted articles are first screened by one of the JGIM Editors, then sent, if relevant, to a dedicated group of QIS/IS Associate Editors that includes the authors of this editorial. The Associate Editors identify appropriate peer reviewers, interact with authors based on review comments, and make final decisions on acceptance. We thank the outstanding group of peer reviewers who reviewed this year's submissions. That group includes reviewers who classified themselves as focused on quality, implementation, or safety, as well as reviewers who indicated other needed expertise. We look forward to expanding our reviewer cadre substantially over the next year.

SUMMARY

JGIM looks forward to being recognized as one of the leading repositories for QIS and IS studies that address the broad set of topics applicable to general internal medicine. As such, JGIM increases the value of more traditional types of healthcare research by promoting the development of effective approaches for spanning the gap between scientific knowledge and its application. QIS and IS require participation from investigators and partners from multiple healthcare-related professions and healthcare settings, as well as patients. We view the JGIM QIS/IS Initiative as a partnership venture between authors, reviewers, and editors; we thank our partners for supporting this new JGIM track and welcome continued input for advancing science-based implementation and improvement in the real world.

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