

# Measures

- Outcome Measure:
  - This is the specific result that is generally included in the Aim
- Process Measure:
  - This is designed to evaluate how the process is functioning
- Balancing Measure:
  - This is designed to catch unintended consequences

# Analysis, Publishing, and Sharing

name	Section or item description
Notes to authors	<ul style="list-style-type: none"> <li>▶ The SQUIRE guidelines provide a framework for reporting new knowledge about how to improve healthcare.</li> <li>▶ The SQUIRE guidelines are intended for reports that describe system level work to improve the quality, safety and value of healthcare, and used methods to establish that observed outcomes were due to the intervention(s).</li> <li>▶ A range of approaches exists for improving healthcare. SQUIRE may be adapted for reporting any of these.</li> <li>▶ Authors should consider every SQUIRE item, but it may be inappropriate or unnecessary to include every SQUIRE element in a particular manuscript.</li> <li>▶ The SQUIRE glossary <a href="http://qualitysafety.bmj.com/content/early/2015/10/9/10/bmjqs-2015-004411.full">http://qualitysafety.bmj.com/content/early/2015/10/9/10/bmjqs-2015-004411.full</a> contains definitions of many of the keywords in SQUIRE.</li> <li>▶ The Explanation and Elaboration document provides specific examples of well written SQUIRE items, and an in-depth explanation of each item.</li> <li>▶ Please cite SQUIRE when it is used to write a manuscript.</li> </ul>
Title and abstract	
1. Title	Indicate that the manuscript concerns an initiative to improve healthcare (broadly defined to include the quality, safety, effectiveness, patient-centredness, timeliness, cost, efficiency and equity of healthcare).
2. Abstract	<ol style="list-style-type: none"> <li>Provide adequate information to aid in searching and indexing.</li> <li>Summarise all key information from various sections of the text using the abstract format of the intended publication or a structured summary such as: background, local problem, methods, interventions, results, conclusions.</li> </ol>
Introduction	<i>Why did you start?</i>
3. Problem description	Nature and significance of the local problem.
4. Available knowledge	Summary of what is currently known about the problem, including relevant previous studies.
5. Rationale	Informal or formal frameworks, models, concepts, and/or theories used to explain the problem, any reasons or assumptions that were used to develop the intervention(s), and reasons why the intervention(s) was expected to work.
6. Specific aims	Purpose of the project and of this report.
Methods	<i>What did you do?</i>
7. Context	Contextual elements considered important at the outset of introducing the intervention(s).
8. Intervention(s)	<ol style="list-style-type: none"> <li>Description of the intervention(s) in sufficient detail that others could reproduce it.</li> <li>Specifics of the team involved in the work.</li> </ol>
9. Study of the intervention(s)	<ol style="list-style-type: none"> <li>Approach chosen for assessing the impact of the intervention(s).</li> <li>Approach used to establish whether the observed outcomes were due to the intervention(s).</li> </ol>
10. Measures	<ol style="list-style-type: none"> <li>Measures chosen for studying processes and outcomes of the intervention(s), including rationale for choosing them, their operational definitions, and their validity and reliability.</li> <li>Description of the approach to the ongoing assessment of contextual elements that contributed to the success, failure, efficiency and cost.</li> <li>Methods employed for assessing completeness and accuracy of data.</li> </ol>
11. Analysis	<ol style="list-style-type: none"> <li>Qualitative and quantitative methods used to draw inferences from the data.</li> <li>Methods for understanding variation within the data, including the effects of time as a variable.</li> </ol>
12. Ethical considerations	▶ Ethical aspects of implementing and studying the intervention(s) and how they were addressed, including, but not limited to, formal ethics review and potential conflict(s) of interest.
Results	▶ <i>What did you find?</i>
13. Results	<ol style="list-style-type: none"> <li>Initial steps of the intervention(s) and their evolution over time (eg, timeline diagram, flow chart or table), including modifications made to the intervention during the project.</li> <li>Details of the process measures and outcome.</li> <li>Contextual elements that interacted with the intervention(s).</li> <li>Observed associations between outcomes, interventions and relevant contextual elements.</li> <li>Unintended consequences such as unexpected benefits, problems, failures or costs associated with the intervention(s).</li> <li>Details about missing data.</li> </ol>
Discussion	▶ <i>What does it mean?</i>
14. Summary	<ol style="list-style-type: none"> <li>Key findings, including relevance to the rationale and specific aims.</li> <li>Particular strengths of the project.</li> </ol>
15. Interpretation	<ol style="list-style-type: none"> <li>Nature of the association between the intervention(s) and the outcomes.</li> <li>Comparison of results with findings from other publications.</li> <li>Impact of the project on people and systems.</li> <li>Reasons for any differences between observed and anticipated outcomes, including the influence of context.</li> <li>Costs and strategic trade-offs, including opportunity costs.</li> </ol>
16. Limitations	<ol style="list-style-type: none"> <li>Limits to the generalisability of the work.</li> <li>Factors that might have limited internal validity such as confounding, bias or imprecision in the design, methods, measurement or analysis.</li> <li>Efforts made to minimise and adjust for limitations.</li> </ol>
17. Conclusions	<ol style="list-style-type: none"> <li>Usefulness of the work.</li> <li>Sustainability.</li> </ol>

Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. SQUIRE 2.0 (Standards for QUality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process. *Am J Med Qual.* 2015 Nov-Dec;30(6):543-9



# How to Guide a Quality Improvement (QI) Project

AAAAI 2024 Program Directors Assembly Meeting

## Contact Us

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## What is QI?

- Quality is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge – National Academy of Medicine
- A continuous and ongoing effort to achieve measurable improvements... which achieve equity and improve the health of the community - CDC
- Quality improvement is the framework used to systematically improve care

## Purpose

- Quality improvement seeks to standardize processes and structure
- Reduce variation
- Achieve predictable results:
  - Improve outcomes
  - Patients
  - Healthcare Systems
  - Organizations

## Benefits

- Improved safety
- Improved product quality
- Increased efficiency and productivity
- Decreased cost
- Reduced waste
- Employee satisfaction and teamwork
- Patient/Customer satisfaction
- Wait/service time

## Barriers

- Lack of time
- Lack of funding
- Lack of staff training and resources
- Lack of support from management
- Lack of buy-in from clinicians
- Lack of leadership
- Lack of data systems and analytics infrastructure
- Poor communication
- Resistance to change

## Aim

- Is the goal an increase or decrease?
- What is the specific population?
- What is the baseline rate and what is the desired rate?
- What is the timeline for achieving the desired rate?

## Design

Create a Process Map and Identify the Key Drivers and Interventions:

- Start with the problem or global goal
- Are there national benchmarks or professional guidelines? What is currently known about the problem including relevant prior studies
- Why is your quality problem relevant?
  - Common in multiple healthcare settings?
  - Financial incentives (i.e. reimbursement, legislative monitoring)
  - External impact should be evident, and not just applicable to your healthcare setting
- What can you measure? Have objective measures set before project is started
  - It is critical to select measurable results
  - Do you have existing reports that can be used to establish a baseline?
  - Knowing what data you have can help guide selection of an appropriate target population