

Supplementary Data

QI-EBM-CAT

Quality Improvement- Evidence Based Medicine- Critical Appraisal Tool

Appraiser: _____ Date: ___/___/___ Citation: _____

I. INTRODUCTION – Why did they do this?

<p>Problem Description Did the article provide background on the nature and significance of the local problem? Did the authors frame the relevance of the problem beyond their local site?</p>	
<p>Available Knowledge Did the authors provide a summary of the current knowledge about the problem (was a literature review performed)? Did the authors articulate an <i>evidence gap</i> between what we currently know and what we need to know about the problem (is this a novel and needed addition to the literature)?</p>	
<p>Rationale Was there a clear description of the proposed intervention and the rationale behind it (why was it expected to work)? Did the authors explain any models, conceptual frameworks, and/or assumptions used to develop the intervention?</p>	
<p>Aims Were the aims of the project clearly stated?</p>	

II. METHODS – What did they do?

<p>Context Did the authors outline local organizational, environmental, or resource-related factors that may affect the generalizability of the project (eg, hospital size or demographics)?</p>	
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<p>Intervention Did the authors describe the intervention in sufficient detail that others could reproduce it? Did they use a specific QI method/approach (eg, Model for Improvement with PDSA cycles)? Did they utilize multiple, iterative intervention steps?</p>	
<p>Measures Did the authors use a family of measures - including process, outcome, and balancing measures? Were measures clearly stated and defined (operational definitions)?</p>	
<p>Analysis Did the authors use qualitative or quantitative methods to draw inferences from the data? Both? Was a data collection protocol described? How did they measure adherence to the interventions used (process fidelity)?</p>	

III. RESULTS – What did they find?

<p>Presentation What were the results and how were they presented (eg. Run Chart, Control Chart, etc)? What are the strengths and weaknesses of how the results are presented? Did they detail all the relevant process and outcome measures? Did they detail all relevant predetermined balancing measures, <i>and</i> any unexpected benefits/problems/costs of the intervention?</p>	
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<p>Data Fidelity Did the authors explicitly report any missing data?</p> <p>Do you see any potential sources of missing data based on their methodology?</p>	
<p>Follow-Up Was follow-up sufficiently long?</p>	

IV. DISCUSSION & CONCLUSION – What does it mean?

<p>Summary Did the authors start this section with a short paragraph summarizing the <i>key findings</i> and <i>relevance to their aims</i>?</p>	
<p>Interpretation and Reflection How did the authors frame the nature of the association between the intervention and the outcomes?</p> <p>Did they reflect on the influence of their local context on, specifically, differences between <i>observed</i> and <i>anticipated</i> outcomes?</p> <p>Did they reflect on the impact of the project on <i>people</i> and <i>systems</i> (eg. Workflow disruption, costs, trade-offs, etc)?</p> <p>Did they compare the results to findings from previous publications (how does this relate to what is already known)?</p>	
<p>Limitations Did the authors identify limitations to the study and thoughtfully discuss their potential effects on the outcomes?</p> <p>How did the authors account for sources of confounding, bias, or imprecision in the implementation of the intervention?2</p>	

Smeraglio A, Pittenger B, DiVeronice M, et al. Adapting SQUIRE 2.0 to create a quality improvement evidence-based medicine critical appraisal tool (QI-EBM-CAT) for graduate medical education trainees. *J Grad Med Educ.* 2022;14(6):704-709. DOI: <http://dx.doi.org/10.4300/JGME-D-22-00033.1>

Were efforts made to mitigate and adjust for limitations?	
Is this QI intervention exportable to your site? Did they omit any limitations that would affect the <i>generalizability</i> of this intervention? Are the likely benefits worth the potential hassles, harms, and costs?	

Adapted from SQUIRE 2.0 framework.

SQUIRE. Revised Standards for Quality Improvement Reporting Excellence: SQUIRE 2.0. www.squire-statement.org/index.cfm?fuseaction¼Page.ViewPage&PageID¼471.

Supplemental Material 2: QI EBM Survey

How useful was the QI EBM session at providing a framework to appraise a quality improvement study?

Not at all useful → a little bit useful → somewhat useful → quite a bit useful → tremendously useful

Please rate your confidence in each of the following areas before and after completing the QI EBM session.

1=Not confident, 2=Slightly confident, 3=Moderately confident 4=Very confident, 5=Extremely confident

Before completing the QI EBM session my confidence in:

1. Evaluating a QI manuscript
2. Identifying the strengths in a QI manuscript
3. Identifying the limitations in a QI manuscript
4. Recognizing the alignment between the question posed and methods used in a QI manuscript
- 5 Understanding the differences between a randomized controlled trial and a quality improvement manuscript.

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After completing the QI EBM session my confidence in:

1. Evaluating a QI manuscript
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4. Recognizing the alignment between the question posed and methods used in a QI manuscript
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What is your clinical year (R1, R2, R3)?