Standards for Quality Improvement Reporting Excellence for Education – SQUIRE-EDU

Text Section and Item Name	Section or Item Description	SQUIRE-EDU Specific Extensions
Notes to authors	• The SQUIRE guidelines provide a framework for reporting new knowledge about how to improve healthcare • 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). • A range of approaches exists for improving healthcare. SQUIRE may be adapted for reporting any of these. • Authors should consider every SQUIRE item, but it may be inappropriate or unnecessary to include every SQUIRE element in a particular manuscript. • The SQUIRE Glossary contains definitions of many of the key words in SQUIRE. • The Explanation and Elaboration document provides specific examples of well-written SQUIRE items, and an in-depth explanation of each item. • Please cite SQUIRE when it is used to write a manuscript.	• The SQUIRE-EDU extension of the SQUIRE guidelines provides a framework intended to increase the completeness, transparency, and replicability of published reports that describe systematic efforts to improve health professions education. • They may apply to all learning settings (e.g., classroom, simulation, clinical, etc.) • The guidelines encourage the description of the process and context of educational change, use of iterative cycles, and use of data over time. • Authors should consider every SQUIRE and SQUIRE-EDU item, but it may be inappropriate or unnecessary to include every SQUIRE and SQUIRE-EDU element in a particular manuscript. • Educators use a range of systematic methods to make learning and healthcare demonstrably better. SQUIRE-EDU may be adapted for reporting any of these. • Please cite SQUIRE-EDU when it is used to write a manuscript.

Title and Abstract		
1. Title	Indicate that the manuscript concerns an initiative to improve healthcare (broadly defined to include the quality, safety, effectiveness, patient-centeredness, timeliness, cost, efficiency, and equity of healthcare)	**EDU1:** Indication that the manuscript concerns efforts to improve health professions education and learning
2. Abstract	a. Provide adequate information to aid in searching and indexing b. Summarize 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	**EDU2:** Keywords are focused on health professions education and learning
Introduction	*Why did you start?*	
3. Problem Description	Nature and significance of the local problem	**EDU3:** Description of the nature and significance of the need for change in the local educational system
4. Available knowledge	Summary of what is currently known about the problem, including relevant previous studies	**EDU4:** Alignment of the need for change in the educational system to what is currently known in the health professions education literature
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	**EDU5:** Identification of the guiding theory (learning, change, implementation, other) used to direct the change in the local educational system
6. Specific aims	Purpose of the project and of this report	

Methods	*What did you do?*	
7. Context	Contextual elements considered important at the outset of introducing the intervention(s)	**EDU7:** a. Contextual elements for learning (*e.g.*, setting, program, people, resources, social, geopolitical influences) b. The initial interrelationships between the contextual elements and the local educational and healthcare system
8. Intervention(s)	a. Description of the intervention(s) in sufficient detail that others could reproduce it b. Specifics of the team involved in the work	**EDU8:** a. Description of the primary and co-interventions; co-interventions may include faculty or tool development. b. Specify how the interprofessional education team, including faculty, staff, patient and learners were part of the design of the intervention.
9. Study of the Intervention(s)	a. Approach chosen for assessing the impact of the intervention(s) b. Approach used to establish whether the observed outcomes were due to the intervention(s)	**EDU9:** a. Design elements used to assess the impact or possible impact of the educational intervention beyond the learner (may include patients, families, communities, faculty, educational program, healthcare systems, or organizations). b. The plan to assess the changes to the intervention(s) over time
10. Measures	a. Measures chosen for studying processes and outcomes of the intervention(s), including rationale for choosing them, their operational definitions, and their validity and reliability b. Description of the approach to the ongoing assessment of contextual elements that contributed to the success, failure, efficiency, and cost	**EDU10:** Data (qualitative and/or quantitative) chosen to assess the educational processes and outcomes as well as impact (or potential impact) on patients, families, communities, learners, faculty, educational program, healthcare systems, or organizations.

	c. Methods employed for assessing completeness and accuracy of data	
11. Analysis	a. Qualitative and quantitative methods used to draw inferences from the data b. Methods for understanding variation within the data, including the effects of time as a variable	
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	**EDU12:** Approaches to address vulnerability of learner participants and patients.

Results	*What did you find?*	
13. Results	a. Initial steps of the intervention(s) and their evolution over time (*e.g.*, time-line diagram, flow chart, or table), including modifications made to the intervention during the project b. Details of the process measures and outcome c. Contextual elements that interacted with the intervention(s) d. Observed associations between outcomes, interventions, and relevant contextual elements e. Unintended consequences such as unexpected benefits, problems, failures, or costs associated with the intervention(s). f. Details about missing data	**EDU13:** a. For each educational intervention and co-intervention cycle, the degree to which the intervention was modified based on assessment of the learning and the program
Discussion	*What does it mean?*	
14. Summary	a. Key findings, including relevance to the rationale and specific aims b. Particular strengths of the project	**EDU14:** Connection of the findings to the guiding theory (learning, change, implementation, other) used to direct the change in the local educational system
15. Interpretation	a. Nature of the association between the intervention(s) and the outcomes b. Comparison of results with findings from other publications c. Impact of the project on people and systems d. Reasons for any differences between observed and anticipated outcomes, including the influence of context e. Costs and strategic trade-offs, including opportunity costs	**EDU15:** c. Explicit inclusion of the impact of the intervention(s) on patients, families, communities, learners, faculty, educational program, healthcare systems, or organizations.
16. Limitations	a. Limits to the generalizability of the work b. Factors that might have limited internal validity such as confounding, bias, or imprecision in the design, methods, measurement, or analysis c. Efforts made to minimize and adjust for limitations	

17. Conclusions	a. Usefulness of the work b. Sustainability c. Potential for spread to other contexts d. Implications for practice and for further study in the field e. Suggested next steps	**EDU17:** b. Scalability of the work to other learners and contexts d. Lessons learned for clinical practice, education, and policy
Other information		
18. Funding	Sources of funding that supported this work. Role, if any, of the funding organization in the design, implementation, interpretation, and reporting	