

# Author response: Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE)

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# Author response to: Comment on: Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE): pragmatic, batched stepped-wedge, cluster-randomized trial in 64 countries

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Dear Editor

Thanks to Dr Alverdy<sup>1</sup> for their interest in the EAGLE trial<sup>2</sup>. In response, it is fully agreed that an anastomotic leak does not occur only as a result of a technical or procedural failure. Though anastomotic technique forms part of the educational modules, the other two pillars of EAGLE focused on careful patient assessment and in-theatre team building. The key interventions employed were: patient selection using a validated online anastomotic leak risk calculator; and an in-theatre pre-anastomosis checklist. The checklist involved all members of the theatre team, including medical students, nurses, and anaesthetists, who would not regularly take part in anastomotic technique decision-making. It was found that teams with higher rates of engagement with the modules (which introduced all three pillars: surgical technique; use of the anastomotic leak tool; and use of the in-theatre checklist) were associated with higher rates of clinical implementation of all pillars and lower rates of

anastomotic leak (Table 1). Furthermore, 41.7% of all the hospital-team participants were not consultant surgeons. These findings have led to the conclusion that it is the harmonization of the practice and engagement of surgical and theatre teams that results in the lower rates of anastomotic leak.

EAGLE-2, a cohort study aimed at expanding engagement with the online modules, is now being launched, aiming to open in May 2024; Dr Alverdy and all others interested in surgical education and behavioural change are welcome to join. Collaborators do not have to have taken part in EAGLE-1. The intention is to carry out a snapshot rapid data capture of implementation and impact, with the aim of reporting results by the third quarter of 2024. To register interest, please follow this link: <https://bistc.redcap.bham.ac.uk/surveys/?s=LW8H88TKEKN7NCJJ>. The modules are open access: <https://eagle-escp.eu.com/>. The authors look forward to progressing this novel method of disseminating knowledge and improving patient outcomes.

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**Table 1 Rates of engagement of hospital teams with the online educational modules, rates of clinical implementation in patients, and rates of anastomotic leak in those patients**

Rates of engagement of hospital teams with modules	Implementation of all components introduced in the modules in patients (per protocol)	Anastomotic leak	Implementation lacking for at least one component in patients	Anastomotic leak
<50%	449/1302 (34.5)	53/449 (11.8)	853/1303 (65.5)	77/853 (9.0)
50–79%	316/726 (43.5)	34/316 (10.8)	410/726 (56.5)	38/410 (9.3)
≥80%	505/966 (52.3)	28/505 (5.5)	461/966 (47.7)	57/461 (12.4)

Values are n/n (%).

## References

- Alverdy J. Comment on: Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE): pragmatic, batched stepped-wedge, cluster-randomized trial in 64 countries. *Br J Surg* 2024;**111**:znae066
- ESCP EAGLE Safe Anastomosis Collaborative and NIHR Global Health Research Unit in Surgery. Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE): pragmatic, batched stepped-wedge, cluster-randomized trial in 64 countries. *Br J Surg* 2024;**111**:znad370