

Author response to

Ledda, Virginia; Bhangu, Aneel; Nepogodiev, Dmitri

DOI:

[10.1093/bjs/znad183](https://doi.org/10.1093/bjs/znad183)

License:

Creative Commons: Attribution (CC BY)

Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Ledda, V, Bhangu, A & Nepogodiev, D 2023, 'Author response to: Comment on: Reducing the environmental impact of surgery on a global scale: systematic review and co-prioritization with healthcare workers in 132 countries', *British Journal of Surgery*, vol. 110, no. 9, pp. 1241-1241. <https://doi.org/10.1093/bjs/znad183>

[Link to publication on Research at Birmingham portal](#)

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.




When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Author response to: Comment on: Reducing the environmental impact of surgery on a global scale: systematic review and co-prioritization with healthcare workers in 132 countries

Virginia Ledda , Aneel Bhangu  and Dmitri Nepogodiev* 

NIHR Global Health Research Unit on Global Surgery, Institute of Applied Health Research, University of Birmingham, Birmingham, UK

*Correspondence to: Dmitri Nepogodiev, NIHR Global Health Research Unit on Global Surgery, Institute of Applied Health Research, University of Birmingham, Birmingham, B15 2TT, UK (e-mail: d.nepogodiev@bham.ac.uk)

Dear Editor

Thanks to Davies and McGain¹ for their insightful comments. The Original Article represented an attempt to engage a global community of healthcare professionals to identify feasible, safe, and immediately actionable interventions to decarbonize operating theatres². There was a focus on operating theatres because they are controlled environments involving the treatment of one patient at a time. This means that interventions can be carefully introduced and their effects can be closely monitored. Interventions proven to reduce carbon emissions whilst maintaining acceptable cost and safety profiles can then be scaled hospital-wide.

It is agreed that preventative healthcare and reduction of low-value surgery could significantly reduce the environmental impact of surgery, but these were beyond the scope of the Original Article. Furthermore, decarbonization of operating theatres is essential because, as the current large global unmet need for surgery is addressed over the coming years, the overall volume of surgery will substantially increase.

While the literature review mainly captured interventions related to anaesthesia, the global consultation survey identified many potential interventions relating to wider processes in theatre (see the Supplementary material for the Original Article). Many of these proposed interventions are at an early stage and

require robust evaluation. Governments are likely to prioritize sustainable healthcare, and high-quality, robust studies are needed to create an effective change in practice.

Education and carbon literacy are undoubtedly crucial to achieving behavioural change and implementation of environmentally sustainable interventions in healthcare. In the Original Article, healthcare professionals were invited to score the feasibility and perceived safety of shortlisted interventions, rather than their effectiveness in reducing carbon impact. Carbon modelling will be required to further prioritize the feasible interventions and this should then be validated during real-world implementation.

References

1. Davies JF, McGain F. Comment on: Reducing the environmental impact of surgery on a global scale: systematic review and co-prioritization with healthcare workers in 132 countries. *Br J Surg* 2023;**110**:1019
2. National Institute for Health and Care Research Global Health Research Unit on Global Surgery. Reducing the environmental impact of surgery on a global scale: systematic review and co-prioritization with healthcare workers in 132 countries. *Br J Surg* 2023;**110**:804–817