



## Letter

## Reply to: “Factors affecting the mortality of patients with COVID-19 undergoing surgery and the safety of medical staff: A systematic review and meta-analysis”

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Dear Editor,—We read with interest ‘Factors affecting the mortality of patients with COVID-19 undergoing surgery and the safety of medical staff: A systematic review and meta-analysis’ by Wang et al. in *EClinicalMedicine*. [1] Protecting patients from perioperative SARS-CoV-2 infection at present is a priority to surgeons. However, we must express concerns about the quality of methodology in this manuscript.

Firstly, we are concerned about the inclusion and exclusion criteria. There was no PROSPERO pre-registration and the authors appear to have excluded cohort studies from their search criteria unjustifiably. This may explain why several large prospective and retrospective series have been missed by the authors; for example, just these three studies alone, [2–4] all published within the inclusion window have 6-times more patients than have been included in this meta-analysis. Furthermore, the inclusion of case studies and small case-series in meta-analyses is strongly discouraged due to huge risks of publication bias as only ‘cases of interest’ are reported. [5]

Secondly, the rate of postoperative mortality in SARS-CoV-2 infected patients seems inconsistent with higher quality reports which have been excluded from this meta-analysis (6% versus 23.8%)<sup>2</sup>.

Evidence has demonstrated that both ‘COVID-19 free surgical pathways’ and routine preoperative testing can mitigate additional risks posed during the pandemic. However, we fear that this study’s conclusions may encourage surgeons to proceed without due caution.

The COVIDSurg collaborative has now collected prospective data on over 10,000 patients with perioperative SARS-CoV-2 infection. We welcome open collaboration with a transparent data sharing agreement to fill remaining research gaps ([www.globalsurg.org/covid-surg](http://www.globalsurg.org/covid-surg)).

## References

- 1 Wang K, Wu C, Xu J, Zhang B, Zhang X, Gao Z, Xia Z. Factors affecting the mortality of patients with COVID-19 undergoing surgery and the safety of medical staff: a systematic review and meta-analysis. *EClinicalMedicine* 2020;100612 Epub ahead of print.
- 2 COVIDSurg Collaborative. Mortality and pulmonary complications in patients undergoing surgery with perioperative SARS-CoV-2 infection: an international cohort study. *Lancet* 2020;396:27–38.
- 3 Jonker PKC, van der Plas WY, Steinkamp PJ, et al. Perioperative SARS-CoV-2 infections increase mortality, pulmonary complications, and thromboembolic events: a Dutch, multicenter, matched-cohort clinical study. *Surgery* 2020;24 S0039-6060(20) 30625-5.
- 4 Knisely A, Zhou ZN, Wu J, Huang Y, et al. Perioperative morbidity and mortality of patients with COVID-19 who undergo urgent and emergent surgical procedures. *Ann Surg* 2020 Epub ahead of print.
- 5 Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA, editors. *Cochrane handbook for systematic reviews of interventions version 6.1* (updated september 2020). Cochrane; 2020. Available from: [www.training.cochrane.org/handbook](http://www.training.cochrane.org/handbook) [Accessed 30/11/2020].

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