higher compared with sevoflurane, we can expect the greatest environmental effects by using anaesthesia gas capture systems for desflurane. Implementation of inhaled anaesthesia gas capture systems can be a relevant measure to reduce the CO\textsubscript{2}e footprint while maintaining the current portfolio of anaesthetic drugs.

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**Declarations of interest**

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**Appendix A. Supplementary data**

Supplementary data to this article can be found online at https://doi.org/10.1016/j.bja.2022.04.009.

**References**


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the patient is no longer exhalating into the anaesthetic circuit), and the efficiency of recapture during anaesthesia. As Hinterberg and colleagues point out, despite the fact that desflurane is our least water-soluble volatile agent, a considerable proportion will still be in the body at the moment of tracheal extubation. Based on data provided by Lockwood, we estimate that a patient who receives 0.8 MAC of desflurane for 4 h will have absorbed ~20 g of desflurane. After administration is stopped, clearance from the lungs will only have eliminated 5 g of this absorbed amount by the time of emergence from anaesthesia. This means that the 80 patients in the study of Hinterberg and colleagues would have likely breathed out ~1200 g in the hours after extubation. Of the maximum amount that could have been recaptured before extubation (5700 g), the system did not recapture 4000 g. There is clearly room for improvement, but even with a perfectly efficient system, recapture will remain a strategy that adds to the already high costs of desflurane, but will never be able to mitigate completely the environmental harm caused by the inevitable exhalation of desflurane in the hours after emergence from anaesthesia.

It is becoming increasingly difficult to understand the rationale for ongoing desflurane use. Although times to emergence are marginally faster than with other agents, cognitive recovery rates are similar and there is no clinically significant reduction in time spent in the PACU compared with sevoflurane. Given the marginal clinical benefits, at best, of desflurane, and the fact that it is the most expensive and environmentally harmful volatile agent in use, many departments of anaesthesia have chosen to become ‘desflurane-free’, by requesting pharmacists to stop purchasing the drug and then removing vaporisers from circulation. TRA2SH (Trainee led Research and Audit in Anaesthesia for Sustainable Healthcare), an Australasian sustainability network that launched Operation Clean Up in 2021, urges all anaesthetic departments to pledge to become desflurane-free by removing desflurane from machines, reducing desflurane procurement, and removing it from their hospital formulary by 2025.

Those anaesthetists that have still not heeded such calls to stop using desflurane may soon have no choice. The EU is setting increasingly ambitious targets aimed at reducing greenhouse gas emissions. The aim is climate neutrality by 2050. As fluorinated gases comprise 2.5% of total EU greenhouse gas emissions, the EU has proposed draft legislation that includes a proposal to prohibit desflurane use by 2026. If this is passed into law, other countries and jurisdictions will surely pass similar laws. The proposed EU legal text is:

The use of desflurane as inhalation anaesthetic is prohibited as from 1 January 2026, except when such use is strictly required and no other anaesthetic can be used on medical grounds. The user shall provide evidence, upon request, on the medical justification to the competent authority of the Member State and the Commission.

We applaud the research efforts of Hinterberg and colleagues to assess the efficiency of desflurane recapture and efforts to optimise desflurane capture while there are still colleagues using the drug. With our planet rapidly heading towards a climate disaster, it is a more logical and reasonable step to prohibit the use of environmentally harmful drugs such as desflurane. Our question and challenge to those anaesthetists who do still use desflurane is: why wait for it to be banned before stopping using a drug that can safely and easily be replaced by much cheaper and much less harmful alternatives such as sevoflurane or total intravenous anaesthesia, a technique associated with a significantly smaller carbon footprint?

**Declaration of interest**

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**References**