

A Response to “In vivo Simulation-Based Learning for Undergraduate Medical Students: Teaching and Assessment” [Letter]

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Dear editor

We read with interest the article by Sideris et al¹ on in vivo simulation based learning (SBL) for medical students. Animal simulations have been included in medical education for decades. However, in 2016 the University of Tennessee College of Medicine became the last medical school in the US to stop animal use for teaching purposes, stating that: “non-animal teaching methods have supplanted the cruel and unnecessary use of live animals”.² By contrast, many UK medical schools still believe that the use of animals in teaching is necessary.

As medical students at Oxford University, in vivo SBL has been a compulsory part of our course. In preclinical years we investigated the physiological effects of clinically relevant drugs like adrenaline in vivo. This extraordinary waste of animal life for a negligible educational gain is at odds with Oxford University’s claim to follow the 3Rs. Similar educational impact could be achieved through videos of the experiments, reducing animal suffering. Sideris et al¹ argue that although in vivo SBL does not lead to improved practical skills, it can provide excitement and inspiration, which could boost medical students to “strive for perfection”. In our experience this was very much not the case; many students found the experience upsetting and demoralising.

The method of recruitment to the “Essential Skills in the Management of Surgical Cases” course³ introduces selection bias. Students had to register their interest for this course and were selected based on their CV. High ratings from this subpopulation of students, for a course tailored to their surgical career aspirations, cannot be generalised to the whole student body. A rigorous investigation should include all medical students. It is striking that even this biased sub-population preferred that animal use was limited.¹

The authors state that in vivo SBL should be used with caution in undergraduate teaching. Indeed, adding in vivo simulation to the general medical curriculum raises a host of ethical questions. Cheong⁴ questions whether a student refusing to partake in a compulsory animal experiment should be allowed to become a doctor. If refusing does not result in failing assessments, it implies that animal use is supplementary rather than essential, making it harder still to justify. On the other hand, refusing progression to students who do not take part conflicts with the ethical pillars of autonomy and justice; medical students should be supported to

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make autonomous decisions about what they believe is ethically just. Further, the GMC document “Outcomes for Graduates”, states doctors should “act with integrity”.⁵ Abstaining from an activity that results in an unnecessary animal death could certainly be interpreted as acting with integrity, therefore failing students for this action would be in contravention of the GMC guidance.

While the authors advocate for a cautious approach to in vivo SBL, we would go one step further and propose that UK medical schools follow US medical schools and eradicate animal use from the curriculum.

Disclosure

The authors report no conflicts of interest in this communication.

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<https://doi.org/10.2147/AMEP.S338895>