Reviewer's report

Title: Education in anesthesia: three years of online logbook implementation in an Italian school

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Reviewer: Sean Tierney

Reviewer's report:

This is an interesting paper that critically analyses the use of an electronic logbook to record interventional procedures among trainees in an anaesthesia residency programme based around a single academic centre. An electronic portfolio designed to record other aspects of the training programme was adapted for this purpose and a considerable amount of data has been collected over a number of years.

Major compulsory reviews
The English is quite unclear at times in this paper and a full rewrite is required to address this issue. It needs a rewrite to address this issue.

The primary purpose of the project was to "assess the compliance to online medical activities logbook use." Of course, it is difficult to measure compliance without another comparative dataset and the innovative use of the number of procedures recorded per logged in session is an interesting way to assess compliance. In other circumstances, it has been recommended that supervisors should validate logbook data (or even individual entries) but it can prove difficult to have this performed reliably and consistently. Have the authors considered the use of any other data source (such as operative registries) to validate the numbers of entries recorded?

It is not quite clear from the methods exactly what was recorded in each logbook entry. Some of this may be an issue with the English, but I do not understand what datafields are entered for preoperative assessments, postoperative care and pain assessments. While these are listed in the table in the results, the detail is unclear in the methods section?

Minor Essential Revisions

In looking at the results, the raw data for numbers of procedures are shown in Figure 1 but these do seem to vary widely from year to year. The authors have made no comment on whether they believe that these numbers are sufficient for the residents to acquire the underlying competencies. I appreciate that the qualitative assessment is done elsewhere in the programme but there does not appear to be any standard against which the recorded numbers are measured? In particular, there is a considerable drop in the numbers between the 2nd and 3rd years for which no explanation is offered.
The median and interquartile range of procedures entered per session are shown in table 2 (I would prefer to omit the "from" and "to" and report these as median(25-75) - this is easier to read and understand.

Discretionary Revisions

While the use of the logbooks at an annual review is mentioned, there is no analysis of how the trainers and trainees perceive the data from the logbook and whether under (or high) performing trainees can be identified using the logbook data etc.

There needs to be more focus in the discussion on the study design and the potential flaws in the methodology and how these have been addressed (in so far as it is possible). Speculation on how logbook data might be used to match specialists to appropriate posts, while interesting, is not really supported by the data. The key question surely is how well this data matches progression towards competency for individual clinicians. This needs to be teased out more in the discussion.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests