

**Sir,  
Reply: Intensive cataract training: a novel approach**

I read with interest the novel approach to intensive cataract training<sup>1</sup> piloted by the team in East Midlands (April 2013). The initial results look promising, especially the reduction of complications in the steepest learning curve (0–100 cases).

The study implies that the surgeon trainers were not blinded as to which trainees in the deanery were part of the Intensive Cataract Training programme (of course this would have been difficult as the trainees were required to reach intensive numbers by 12 months). This, however, meant that the surgeons would have been aware that these particular trainees are having their complication rates recorded, analysed, and submitted for the study. This may have caused a particular bias (perhaps subconsciously) in the level of attention the surgeon gives to the case when he is observing down the assistant microscope but more importantly it may have reduced the threshold of takeover when the trainee encounters a problem during the case. This particular factor may potentially have 'saved' a few posterior capsules from rupturing.

This bias may have also extended to the pre-list case selection. It was commented that more complex cases were picked as the trainees progressed but could there have been a possibility that with the pressure to get such high numbers (to consistently do half of the list), the cases pre-emptively selected still would all mostly have been routine ones? This may not reflect the selection of cases normally found in a trainee that has equivalent numbers but training in a non-intensive manner.

It will be interesting to know the complication rates of the East Midlands trainees not in the ICT but operating in a similar setting under the same surgeons. It may be a (wonderful) reflection of the department's excellence in delivering surgical training that has allowed for this low complication rate.

The idea to balance patient safety with quality of surgical training is truly commended, however; and the department's success in being able to provide 291, 318, and 294 cases to each of their ICT trainees within 12 months is truly noteworthy!

**Reference**

- 1 Baxter JM, Lee R, Sharp JAH, Foss AJE, Intensive Cataract Training Study Group. Intensive cataract training: a novel approach. *Eye* 2013; **27**: 742–746.

D Yeo

Department of Ophthalmology, Royal Glamorgan Hospital, South Wales, UK  
E-mail: cm.yeo@doctors.org.uk

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**Sir,  
Response to Dr Yeo**

We thank Dr Yeo<sup>1</sup> for the kind comments and would like to answer the specific points raised:

1. The lists were training lists and trainees started on the straight forward cases and avoided, for example, white cataracts, pseudo-exfoliation, and vitrectomized eyes initially and we believe that this is the standard practice.
2. The trainers were not blinded and there was no clear tendency to take over early, please note that completed number of cases in the 6-month block ranged from 151 to 194. In fact, the program was designed with reverse module training to ensure that this was minimized as repeatedly taking over cases both reduces confidence and interferes with learning, which we were keen to avoid.

There is a tension between the six sigma approach, adopted here, to try and reduce the risk of an adverse event to more than six standard deviations from the mean (or one in a million) with evidence-based medicine (which is two standard deviations from the mean (or one in twenty) and requires a control arm). The advantage of the six sigma approach is that it is potentially much more responsive to change, easier to implement, and has the added advantage of setting a higher standard to aim for. We think that the role of a randomized control trial is best indicated when there is equipoise between the competing options, which we do not think is the situation here. So, while the authors are supporters of evidence-based medicine and actively undertake clinical trials, here the improvements were achieved by implementing what we thought would be a much better system, in keeping with the six sigma approach, followed by evaluation. It should be noted that the trainee surgeons were not selected but were simply the next three in-line on the basis of their appointment dates to the program. Although the numbers are small, what we have shown is proof of principle that it is possible to train a cataract surgeon without an initial high-risk phase for the patient and we would now consider it inappropriate to revert, even for a control arm in a trial.

We see the challenge now is to make these results the norm and not the exception.

**Reference**

- 1 Yeo D. Reply: Intensive cataract training: a novel approach. *Eye* 2014; **28**(2): 236.

JM Baxter and A Foss

Department of Ophthalmology, Queen's Medical Centre, Nottingham, UK  
E-mail: alexander.foss@nuh.nhs.uk

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