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# CUMSUM cannot define competency

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## **Response**

We thank Drs Sinivasan, O’Brien and Shorten for their interest in our article. Obstetric epidural practice for the trainee, once deemed competent by experienced trainers, most often occurs out of hours. In this situation, because much of the trainees work is unsupervised it is difficult to gain an insight on a trainee’s performance in a particular procedural skill.

Anaesthesia is a speciality which the trainee is an apprentice. Working alongside a trainer ensures that important skills required in successfully completing a procedural skill are not being omitted by the trainee and seriously affecting patient safety.

Acquisition of practical skills and then assessment of proficiency is fraught with difficulties in postgraduate education and often requires multiple assessment modalities to ensure some accuracy. Often these assessment methods are ‘real time’ and do not continually assess trainees continued proficiency. CUSUM was originally designed as a surveillance tool in munitions factories. We use CUSUM here in a similar manner to assess when a trainee initially reaches competency and then as surveillance tool to investigate whether competency was maintained. We agree that CUSUM does not directly investigate the trainees continued technique only final outcome but it is the only assessment modality that investigates long term continued proficiency. Its use in an obstetric anaesthetic setting should be real time (not retrospectively from a database as in our study) and used in conjunction with other means of trainee feedback to ensure trainee proficiency and hence the provision of a safe good quality service for patient.

The results from our study are important because we have demonstrated the pattern of success in the skill acquisition in the first epidurals a trainee inserts. Our use of linear regression to assess the success rates for each consecutive epidural attempts suggests that there is no change in the success rate after attempt 10. This is useful for assessing trainee’s readiness for working with minimal support whilst on the on-call rota. Combined with other methods of assessment, if the trainee has had at least 10 attempts at epidural analgesia then it is likely that the trainee should be able to work alone and be able to insert epidurals successfully. The use of a database with the data collected independently, for many years, provides us with data which overcomes most of the problems of the previous work in anaesthesia with CUSUM. Obviously we would agree poor aseptic technique is unacceptable. Trainees in our institution are watched whilst performing initial attempts at clinical skills and poor technique is rapidly remediated.

We believe that assessment of procedural skill proficiency (i.e. good technique) and comprehensive monitoring of efficacy (i.e. CUAUM) are complimentary. A good training programme could usefully combine the two approaches.