

Are logbooks of training in anaesthesia a valuable exercise?

A logbook of cases experienced and procedures performed is currently required for training in anaesthesia in the UK (Nixon, 2000). But is this process valuable and what are the potential benefits and disadvantages?

Logbooks are useful

Clinical experience is the key to learning anaesthesia. In the current educational paradigm postgraduate medical education is dominated by experiential learning in clinical scenarios, in the apprenticeship model, with gradually increasing levels of responsibility. A logbook, such as the programme recommended by the Royal College of Anaesthetists, describes the number of cases experienced in each subspecialty, the level of supervision, procedures performed and other relevant demographic information such as the American Society of Anesthesiologists physical status classification. A logbook allows both the trainee and his/her supervisors to assess whether or not the trainee is receiving a suitable breadth of experience and appropriate levels of supervision. Logbooks can be used to draw attention to training gaps and hence can act as a guide for both future list assignments and suitable hospitals in a training rotation (Kwok and Hung, 2006).

There is currently an international trend towards reduced working hours during postgraduate training. Logbooks are able to chart the effect of policy change on both individual trainees and whole cohorts. Logbooks are perhaps most useful in showing programme directors what opportunities for training are available in various institutions.

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Logbooks are not useful

Logbooks are essentially evaluation tools, either for trainees, an institution or a training programme. For an evaluation tool to be useful, it must be demonstrated to be feasible, reliable and valid, that is it must evaluate what it set out to evaluate. Logbooks are certainly feasible: appropriate software is available free of charge from the Royal College of Anaesthetists. However, the reliability of logbooks depends entirely on self-reporting and there is little incentive for trainees to keep an accurate record of cases. Mandatory computerized theatre records with details such as all anaesthetists involved in a case and their grade are likely to give more reliable information about cases performed and levels of supervision. A record of direct observation by consultants avoids problems of self-reporting in supervised cases.

Evaluation can be either formative, i.e. during training, or summative, i.e. at the end of a period of training. In order for formative evaluation to be useful it must encourage further learning. Logbooks do not encourage reflective thinking; they simply look at the number of cases and not what was learned. Case studies or series with an appropriate literature search are more likely to result in trainees reflecting on what they have learned and building on that knowledge.

In order for logbooks to be useful for summative assessment, they must evaluate what they set out to evaluate. Logbooks only describe the opportunity for learning and ignore the quality of the teaching, the motivation of the trainee and whether competency was actually achieved. Listing a number of unsupervised cases is no guarantee of the quality of anaesthetic care. If the same mistakes are performed repeatedly there is no educational benefit and patients are put at risk (Tetzlaff, 2007).

Although a certain number of cases performed are clearly necessary to provide the opportunity to progress through the stages of acquisition of proficiency this number

is highly variable between individuals (De Oliveira Filho, 2002).

Logbooks tend to focus on a current problem, which is the reduction of opportunity for clinical experience. In the new paradigm of competency-based training evaluation tools are needed which enable a solution: to determine whether or not trainees have attained appropriate competencies at various stages of training.

The doubts about validity are equally applicable to using logbooks for the evaluation of institutions or training programmes. Logbooks only describe the interaction between the patient population and the on-call rota and neglect vital aspects such as the quality of teaching.

Conclusions

Although long used because of their feasibility, self-reported logbooks do not satisfy criteria of reliability and validity that are required for robust educational evaluations within a programme of competency-based training. Other methods such as detailed case histories and direct observation by consultants using assessment tools such as checklists and global rating scales are more useful methods of formative and summative evaluation. **BJHM**

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