Consultant and Trainee Attitudes towards Supervision of Operative Procedures in the UK and Ireland

Abstract:

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Abstract

The e-logbook is used to monitor progression through training and to assess training within teaching units. We document consultant and trainee opinions with regards to supervision status, and to inform guidelines for trainees and trainers using the e-logbook. A questionnaire was sent to consultants and trainees in the UK and Ireland. Eight theatre scenarios were described and respondents were asked to state what they felt was the appropriate supervision status for the trainee. Significantly more consultants in the UK use the e-logbook than those based in Ireland (58.5%:14.5%). There were differences in consensus response to the scenarios between consultants and trainees, and between Irish and UK based surgeons. We have documented the opinions of consultants and trainees from across the UK and Ireland with regards to supervision status for trainees under certain theatre situations. This information should support formal guidelines for all users of the logbook.

Introduction

Surgical trainees in the United Kingdom (UK) and in the Republic of Ireland (Ire) keep a logbook of surgical procedures that they are involved in during their training. This has been compulsory in Trauma & Orthopaedics (T&O) since 2003. Many trainees choose to use the online electronic Pan-Surgical Logbook (www.e-logbook.org)[1]. The e-logbook is endorsed by The Royal College of Surgeons of Edinburgh (RCSEd), The Royal College of Surgeons of England (RCSEng), The Royal College of Physicians and Surgeons of Glasgow (RCPSG), and The Royal College of Surgeons in Ireland (RCSI), and is recommended as the first choice logbook by The British Orthopaedic Association (BOA). There are 11,000 registered users, ranging from medical students to consultants, including surgical assistants and overseas surgeons. This vast on-line database of surgical procedures has a number of advantages over individual paper logbooks.

The e-logbook offers instant access to a traineeâ s operative records. These records can be reviewed in a number of formats, and condensed into â consolidation sheetsâ to allow peer comparison of operative experience at a glance[2]. Although the e-logbook is password protected for individual users, approved trainers can access the logbook data for their own trainee with permission. Programme Directors can access the records of all trainees within their training programme, and this data can be used to audit that programme[1,2]. The Specialty Advisory Committee in Trauma & Orthopaedics (SAC in T&O) can also access trainee logbooks, thus providing an independent audit of theatre practices, to ensure adequate and appropriate operative exposure for trainees.

Surgical logbooks have been used as an aid in selecting candidates to progress from basic surgical training (BST) to higher surgical training (HST)[3]. In some training regions the level of trainee supervision documented in the e-logbook is used as an aid to assess that traineeâ s development of surgical skills[1,3,4]. This data can be used to examine the surgical exposure that trainees receive in different training institutions[1,4-6]. Ideally, trainees can be preferentially attached to trainers who provide adequate surgical exposure for ongoing skills development, thereby encouraging all trainers to maintain a high level of training activity within their operative practice. Trainers who do not provide adequate training opportunities could have their trainees re-assigned to other trainers.

Electronic logbooks provide guidelines on how a trainee should record the level of supervision they receive for each procedure[7]. The e-logbook also provides guidelines, but the supervision status documented for surgical procedures is at the discretion of the trainee[1]. The aim of this study is to determine how e-logbook users are documenting the procedures that they are involved in. We aim to analyse differences in interpretation between consultants and trainees with regards to supervision status, and to compare the UK with Ireland. Finally, we aim to display a consensus opinion with regards to supervision status for a variety of hypothetical situations that a trainee may find themselves in.

Methods

A questionnaire was developed to represent a variety of scenarios that trainees may find themselves in during surgical training. Respondents were asked if they used the e-logbook and to identify their level of operative experience. Questionnaires were anonymous. In Ireland the questionnaire was posted to all orthopaedic consultants working in public practice, and all orthopaedic trainees at registrar and specialist registrar (SpR) level. A stamped self addressed envelope was included to encourage responses. In the UK the questionnaire was converted to an on-line survey and consultants and trainees in certain deaneries were contacted by e-mail and asked to complete the questionnaire online. Respondents could omit any questions that they did not wish to answer. Responses to the questionnaire were collated and assigned a numeric value: Assisted (A) = 1; Supervised, Trainer Scrubbed (S-TS) = 2; Supervised, Trainer Un-scrubbed (S-TU) = 3; Performed (P) = 4. These numeric values were analysed using a Studentâ s t-test and p values were calculated for each question comparing consultants with trainees, and Irish based surgeons with UK based surgeons.

Results

We received 266 responses to the questionnaire. There were 108 responses from consultants, and 157 responses from trainees. One respondent did not answer this question. In Ireland we received 55 responses from consultants and 50 from trainees. This is an Irish response rate of 70.5% for consultants and 50.5% for trainees. Due to the method in which the survey was conducted in the UK we were unable to calculate a response rate. In total, one hundred and ninety-six respondents (73.7%) use the e-logbook, and 66 (24.8%) do not. Four respondents did not answer the question. All trainees (100%) who responded to this question stated that they use the e-logbook. Consultant responses to this question can be seen in Table 1. The responses to the questionnaire can be seen in Table 2. Differences in responses between consultants and trainees in Ireland and in the UK are shown in Table 3.

Discussion

The e-logbook contains details of more than twenty million operative procedures performed in the UK and Ireland. This information can be accessed by training bodies and has been used to assess trainees and training institutions[1,4,5], and to determine which trainees progress through training[3,4]. It is essential that all trainees document their training experience in the same manner. As Table 1 demonstrates, five of the eight scenarios (1,3,4,7,8) returned a consensus

opinion of greater than 90% overall. The remaining four scenarios returned a majority opinion, but did not reach 90% consensus (2,5,6). Despite this, marked differences of opinion occurred only in scenarios 2,3,6 and 7 (Table 3).

Scenario 2 was conceived by the situation experienced by trainees during total hip arthroplasty, where the trainee performs the approach, preparation of bone surfaces, and wound closure, but the consultant inserts the implants. This does not happen in all institutions, and indeed one consultant did not answer the question stating that the question was inappropriate in his/her practice. We found significant differences of opinion with regards to this scenario (Table 2). Overall, almost two thirds of those polled felt that the procedure should be documented as S-TS, and just over one third felt it should be A. In an annotation published in 2005, the designers of the e-logbook[1] state that in order for a case to be designated S-TS, the trainee must have performed more than 70% of the operation[2]. It is the authorsâ opinion that final supervision status should be agreed between consultant and trainee on a case by case basis. In scenario 3, more than 96% of those polled agreed that the procedure should be documented as S-TS, yet there was still some significant differences of opinion. All (100%) of UK consultants polled stated that this scenario should be documented as S-TS, but 12.2% of Irish consultants stated that the procedure should be documented as P. Despite this, 96% of Irish trainees and 99% of UK trainees agreed that the procedure should be documented as S-TS. The significant difference then occurs between the opinions of the Irish consultants and the UK consultants and all trainees.

In scenario 6, we found a significant difference of opinion between UK consultants and Irish consultants. Our study shows that 26.1% of Irish consultants felt that the traineeâ s procedure should be documented as S-TU, but only 9.6% of UK consultants agreed. In scenario 7 we found a significant difference of opinion between UK consultants and Irish consultants, and between UK consultants and UK trainees. UK consultants agreed almost unanimously that the procedure should be documented as P, whereas almost 10% of UK trainees and Irish consultants felt that the procedure should be documented as S-TU.

Our study has shown that overall there is a general consensus with regards to consultant supervision of trainees for all of the scenarios, with the exception of scenario 2. From those who did respond to this scenario, there was almost a 1/3 to 2/3 split in opinion. Some of this disagreement may come from the fact a specific case was not presented. It seems that this particular scenario will remain an area of contention, and must be dealt with on a case by case basis by agreement between trainer and trainee. The e-logbook currently offers options for the trainee with regards to supervision status during arthroplasty cases. This option breaks the case down into stages, and allows the trainee to select different supervision status for different stages of the procedure. This feature of the e-logbook was not available at the time of our study, but would certainly seem to address some of the issues raised by scenario 2. This â stagingâ of a procedure is more common in the neurosurgery logbook, and perhaps could be developed further for other complex cases in the T&O e-logbook. We accept that this study has limitations. Ideally we would have liked to have included all UK trainees and consultants, logistically this was not possible. The questionnaire was distributed in two different formats in different regions, but content of the questionnaire remained consistent throughout. The electronic survey did not enable us to calculate a response rate as we could not guarantee that all e-mail addresses used were accurate and/or current. Based on the results that we have gathered we have provided a summary of responses for trainee supervision (Table 4). In all cases, it is imperative that the case is discussed between the trainee â performingâ the procedure and the consultant responsible for the procedure, prior to bringing the case to theatre.

The applications of the e-logbook continue to expand, and if it is to be used to monitor training units and trainee development then it is imperative that all trainees are documenting their operative cases consistently. A formal process of mandatory validation of trainee logbooks would help in this regard. This process will help validate the e-logbook as a form of assessment and will ensure accuracy of data for the purposes of audit. All trainees who responded to our questionnaire use the e-logbook. This level of participation ensures that the e-logbook is a unique and invaluable source of information for research and audit. We would recommend that all consultants who are involved in post-graduate training be encouraged to register as users of the e-logbook. This would further strengthen the validity of information derived from the e-logbook.

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References

1. Sher JL, Reed MR, Calvert P, Wallace WA, Lamb A. Influencing the national training agenda. The UK and Ireland orthopaedic eLogbook. J Bone Joint Surg Br. 2005;87:1182-6.

2. https://www.elogbook.org/Portals/elogbook/documents/Directors_Handbook.pdf

3. Gallagher AG, Neary P, Gillen P, Lane B, Whelan A, Tanner WA, Traynor O. Novel method for assessment and selection of trainees for higher surgical training in general surgery. ANZ J Surg. 2008;78:282-90.

4. Beasley SW, McBride C, Pearson ML. Use of the operative logbook to monitor trainee progress, and evaluate operative supervision provided by accredited training posts. Surgeon. 2011; 9 Suppl 1:S14-15. Epub 2011 Feb 17.

5. Lonergan PE, Mulsow J, Tanner WA, Traynor O, Tierney S. Analysing the operative experience of basic surgical trainees in Ireland using a web-based logbook. BMC Med Educ. 2011 Sep 25;11:70.

6. Wilson T, Sahu A, Johnson DS, Turner PG. The effect of trainee involvement on procedure and list times: A statistical analysis with discussion of current issues affecting orthopaedic training in UK. Surgeon. 2010;8:15-9.

7. Eroes CA, Barth C, Tonn JC, Reulen HJ. The revised European neurosurgical electronic logbook of operations. Acts Neurochir (Wien). 2008;150:195-8.