



An analysis of the operative experience of plastic surgery trainees in the United Kingdom using eLogbook

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Received 29 November 2016; accepted 11 May 2017

KEYWORDS

Surgical training;
Surgical logbook;
eLogbook;
Indicative numbers;
Competency;
CCT

Summary *Introduction:* We performed a comprehensive analysis of the operative experience of UK Plastic Surgery Trainees using the web-based eLogbook.

Methods: An analysis of data recorded prospectively by Plastic Surgery Registrars 2010–2014 in eLogbook.

Results: The eLogbook data of 336 Specialty Registrars entered from 2010 to 2014 was analysed. Over the six-year training programme, trainees participated in a mean of 2117 procedures and performed a mean of 1571 procedures with or without supervision. We also determined the mean number of procedures for 14 indicative operative domains performed during training and compared these to current (2012) indicative numbers required prior to the award of a Certificate of Completion of Training (CCT).

Conclusion: The eLogbook contains valuable data to determine the operative experience of UK Plastic Surgery trainees. This new data will be reflected in the updated indicative numbers required for CCT. Both trainees and trainers may use the data to monitor the acquisition of operative experience over time and target training where necessary.

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Introduction

Surgical training in the United Kingdom has undergone considerable change in recent years, with developments aimed at improving and streamlining training. Central to these changes have been implementation of the European Working Time Directive (EWTD) and Modernising Medical Careers (MMC),¹ which modified the training pathway. With a shorter time available for trainees to gain the necessary knowledge and skills for independent practice, the model of learning changed from that of an apprenticeship to competency based learning. The Postgraduate Medical Education and Training Board was established to set the standards of training and the end-point to be achieved in order to enter the GMC Specialist Register. A curriculum for training (Intercollegiate Surgical Curriculum Project (ISCP)²) was introduced in 2007. Educational outcomes should now be quantifiable to provide evidence of a surgeon's competence.

Since 2009, it has been mandatory for Plastic Surgery trainees to record their operative experience using eLogbook, a secure web-based database originally developed by the Royal College of Surgeons of Edinburgh.³ This is now the designated logbook for UK surgeons by the four Royal Surgical Colleges of the UK and Ireland. eLogbook was developed to support training, by providing data for individual trainees and allowing national analysis of surgical training experience.

In 2012, the Joint Committee on Surgical Training (JCST) published specific guidance for award of a Certificate of Completion of Training (CCT) in all surgical specialties. The guidelines aim to ensure that competency requirements detailed in the curriculum have been achieved, demonstrating that the new consultant has sufficient experience to practice. These guidelines require trainees to show evidence in clinical and operative skills and a range of generic professional skills.⁴

Along with Workplace Based Assessments (WBAs) and Supervisor reports, the content of a surgeon's logbook reflects the level of operative experience and competency achieved. Over the course of the 6-year specialist training programme in Plastic Surgery, logbooks are reviewed at Annual Review of Competence Progression meetings (ARCPs).⁵ Although logbook content is discussed during these meetings, there is currently no specific mathematical mechanism to identify trainees who fall short on operative experience. A final review of the trainee's logbook occurs at the end of training prior to award of CCT.

In order to simplify the evaluation of operative experience the SAC in Plastic Surgery established indicative procedures, which represent groups of common procedures and are easier to analyse than full logbook consolidation sheets. For example, hand fracture fixation is comprised of eight operation codes in eLogbook representing a range of internal and external fixation techniques. Indicative numbers were established as a guide to the minimum number of procedures that a trainee should perform with or without senior supervision over the 6-year training programme (Figure 1). The original indicative numbers were established in 2012, set by the SAC as the mean number of procedures performed by all trainees awarded CCT in 2005 and 2008⁴ following analysis of surgical logbooks.

The eLogbook database generates a considerable amount of data and offers the facility to comprehensively review the experience of current trainees. Whilst data has been published on the operative experience of Orthopaedic Trainees,⁶ to date there have been no reports on Plastic Surgery Trainees.

In this article, we analyse the operative experience of UK Plastic Surgery trainees using the eLogbook database. This data will be used to monitor progress during training and to update the indicative operative numbers for CCT.

Methods

We performed a retrospective analysis of eLogbook data for Specialty Registrars (ST3-ST8) in Plastic Surgery between January 2010 and December 2014. All trainees who register to use eLogbook give consent for their logbooks to be accessed and analysed to facilitate research for the benefit of surgery. Ethical approval for this study was obtained. The records of eligible Specialty Registrars enrolled on the training programme were identified using a list of trainees provided by the Joint Committee for Surgical Training (JCST). We excluded the records of individuals entering <50 procedures in a year to omit those missing a significant part of a year for reasons such as maternity leave or research. The data was analysed as a group with no analysis of the performance of individual trainees.

The data was stratified according to training grade (ST3 to ST8), supervision level and whether procedures were recorded as elective or emergency. Data for seven elective and seven trauma indicative procedures was analysed individually.

Operations can be entered into eLogbook under a number of supervision levels (Figure 2). For the purpose of data analysis, we formulated "operations performed" (OP), calculated by addition of supervised trainer scrubbed (STS) + supervised trainer unscrubbed (STU) + performed (P). We also formulated "all procedures" (AP), calculated by addition of assisted (A) + supervised trainer scrubbed (STS) + supervised trainer unscrubbed (STU) + performed (P) + teaching (T).

The data was analysed by a Medical Statistician, using SPSS to calculate weighted means and standard deviations. The output was used to formulate national annual means for each year in training. Cumulative performance charts were created to demonstrate the acquisition of operative experience during training.

Current indicative numbers were taken from the 2012 version of the JCST guidelines for the award of a CCT in Plastic Surgery.⁴

Results

The eLogbook records of 336 Specialty Registrars who started Plastic Surgery training between August 2007 and July 2014 were interrogated. Data entered between January 2010 and December 2014 was analysed.

Over the six-year training programme, trainees participated in an average of 2117 procedures, performing an average of 1571 procedures with/without supervision. Of the emergency indicative procedures, trainees performed

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