LETTERS TO THE EDITOR

Surgical logbooks in neurosurgery: a simple way to enhance training

TO THE EDITOR: I have read the article by Deora et al on neurosurgery training in lower-middle-income countries (Deora H, Garg K, Tripathi M, et al. Residency perception survey among neurosurgery residents in lower-middle-income countries: grassroots evaluation of neurosurgery education. Neurosurg Focus. 2020;48[3]:E11). I want to congratulate the authors on their effort to gather trainee feedback internationally. The authors have analyzed teaching patterns, sub-specialty exposure, examination patterns, work hours, surgical training, and medium of learning in their article.

The authors noted that despite working long hours, residents were dissatisfied with their operative training and hands-on exposure. As a surgical resident, one of the most important aspects of training is the surgical skills they develop through the period. The authors in their study state that more than 60% of the respondents felt the need for better hands-on exposure during the training. This is a concern with regard to the competence of graduating residents safely performing independent procedures.

In the United Kingdom (UK), the accreditation board proposes the candidate should have completed 1200 cases with 50 index cases across specialties. Following successful completion of an examination, registration to the specialist register should satisfy criteria in clinical and operative experience, competence, research, quality improvement, medical education, training, management, leadership, and participation in conferences. This sets high standards in surgical competency and expertise, improving patient safety and outcome.

A surgical logbook that is maintained and validated by trainers will enable us to ensure a higher quality of train-

![FIG. 1. Comprehensive report of procedures. EVD = external ventricular drain; VP = ventriculoperitoneal; AVM = arteriovenous malformation; ICH = intracerebral hemorrhage; A = assisted; S-TS = supervised-trainer scrubbed; S-TU = supervised-trainer unscrubbed but in theatre; P = performed; T = training a trainee; S-S = supervised (scrubbed); S-U = supervised (in theatre); S-H = supervised (in hospital); UC = under my care; O = observed; U = undefined; PCC = performed with consultant colleague; PPT = performed in part by trainee; PAT = performed: assisted by trainee.]
ing in surgical specialties, especially neurosurgery. Monitoring of the type of case is considered one way to ensure a general level of experience and competence before beginning postresidency practice. It provides an objective record of residents and medical schools, and evidence that the level of operative participation is significant in technical skills development. The E-Logbook (www.elogbook.org) is an initiative by the Royal Colleges in the UK to record and monitor the training of its residents and build a surgical portfolio helping them through appraisals, revalidations, and recertifications. It is a free resource that can be used by practicing surgeons across the globe. Each procedure is tagged with the level of involvement of the trainee, and also breaks down each step of the surgery to record participation in operative stages. A comprehensive report at the end of residency can help evaluate one’s strengths and weaknesses and guide further improvement (Fig. 1).

The need of the hour in training centers is to inculcate the western concept of “surgical minimums” or a compulsory operative log for each level of resident training, enabling a finishing surgical resident to be “competent” at a minimum and preferably “proficient” in essential procedures. This would ensure that each trainee has performed a basic requisite of essential procedures both under supervision and with reasonable independence.

To conclude, as rightly pointed out by the authors, postgraduate surgical training in these countries, although grueling and tiresome, needs quantitative and qualitative enhancement. Implementing a surgical logbook is a good step to begin with. It will help us provide the society with competent neurosurgeons trained to perform basic procedures with reasonable confidence, expertise, and minimal complications in an independent setting.

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References

Disclosures
The author reports no conflict of interest.

Response
We thank Dr. Hegde for the interest he has shown in our article. He has pointed out that in our survey, most of the respondents expressed a desire for more hands-on training despite evidently working long hours. He has rightly suggested that maintaining a logbook detailing the types of procedures performed and the level of involvement of the trainee in each procedure would be helpful in objectively evaluating the training experience, so that a certain minimum standard in technical ability of the trainees can be ensured at the conclusion of the residency. This is the practice that is being followed in the UK and has stood the test of time.

However, it is important to acknowledge that the working conditions in developed countries like the UK are substantially different from those that our survey addressed. It is easier to ensure uniformity of training experience in a small nation with a common language and plentiful resources, where certification to residency programs will only be granted once they satisfy certain minimum statutory requirements. Similar standards are also mandated by law for residency programs in low-middle-income countries (LMICs), yet the implementation is not as rigorous, because the interests of providing a clinical service often override the concerns of a training program. Most of the residents in LMICs must also assume administrative roles and arrange logistics too, due to lack of personnel dedicated to these indispensable tasks. Additionally, neurotrauma emergencies claim a substantial chunk of the resident’s time in LMICs due to lack of the requisite number of specialized trauma centers.

However, with economic progress and increasing availability of resources, residency training is getting its due attention, indicated by the growing number of cadaveric workshops and courses organized solely for the residents. The importance of these supplemental teaching activities in crucially enriching the training experience was acknowledged by the respondents in our survey. Regarding surgical logbooks and detailing documentation of training experience from a trainee’s perspective, uniformity is still a long way away.

Fortunately, at least in India, consensus is slowly building towards establishment of a national accreditation board that would replace an individual institution’s examination pattern. It would be an important step toward ensuring uniformity in training and minimum competency.

We are hopeful that with the increasing penetration of high-speed internet, the near future would see enthusiastic adoption of e-logbooks, which will allow comparative evaluation of training programs.

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