

Electronic logbooks for residents: A step forward

Sir,

There are as many as 236 medical colleges (99 Universities) offering post-graduation in Anaesthesiology in India.^[1] Most of these universities, advocate keeping logbooks and their submission before final examinations. Unfortunately, there is no data available to analyse compliance to this guideline. Furthermore, the submitted logbooks may not accurately reflect a resident's training for various reasons. Generally these are paper logbooks, which is a cumbersome and effort intensive way of logging information, and one that would expectedly result in below average compliance. We believe that electronic logbooks may be a step ahead in the right direction.

Our western counterparts embraced this technology much earlier than us and e-logbooks have been available on hand held devices (Personal Digital Assistant using HandBase[®]) since the year 2000. The

arrival of smartphones has seen a windfall of e-logbooks and other medical apps available to the medical professionals. A recent survey by d4 (independent UK based charity with focus on mobile technology for health care professionals) found that 81% of health professionals used smartphones.^[2] A Nielsen survey “Mobile Youth Around The World” showed that smart phone penetration in Indian youth was a lowly 10%; however, by 2012, 1 in 5 youth (in the world) with a smart phone is expected to be an Indian.^[3] Hence, it may not be boastful to propose that such electronic platform for data collection among young Indian medical professionals would be both popular and successful.

Electronic logbooks allow data entry at the point of care (theatre, ward or intensive care) which is their biggest selling point. Because they offer an intuitive interface, are less effort intensive and utilise a mobile device, compliance with e-logbooks is expected to be better than paper based logbooks. Many of the available logbooks allow an end user to edit and customise headings, menus and other data sets according to their needs which is a desirable feature among others. Such logbooks allow data to be entered and synchronised in real time over wireless local area network (Wi-Fi) or 3G (3rd generation) network with Google Documents or storage as a comma separated value (CSV) file locally on the device. These files can then be accessed through the internet, on another device (such as a personal computer) and be edited and processed according to one’s need. At the end of the assessment period, they can be compiled and printed for submission as a proof of competency for a given qualification (as done by anaesthesia trainees in the United Kingdom).^[4] An analysis of online resident logbook has been recently used to assess training among anaesthesia residents. The authors concluded that such exercises in future may help to assess and standardise curriculum.^[5] Maintaining personal logbooks for clinical and academic activities have also been stressed as tools for appraisal and revalidation for all practitioners (residents and consultants) by the General Medical Council in the United Kingdom.^[6]

iGaslog is a prime example of an electronic logbook that has been successfully adopted by many trainees in the United Kingdom.^[7] It is characterised by intuitive drop down menus, automated fields, customised report generation, exporting databases as CSV files and E-mailing options among others. However, it is

expensive, restricted to Apple devices and there have been issues with loss of database in the past.

On the downside, there is no gold standard in e-logbook app yet. Obstacles include cost of the app, need for a smartphone (and an internet connection), lack of an app for a given mobile platform, lack of a good customer service, possibility of data loss and issues with report generation. E-logbooks enter data objectively and hence a detailed record of preoperative assessment, optimization, intra-operative notes and incidents may not be possible. Additionally, factors to consider in the Indian context may include set up cost, infrastructural issues, differences in logbooks in different universities and need of locally customised e-logbooks.

Nevertheless, the benefits of e-logbooks far out-weigh potential issues. Most logbooks are available on different mobile platforms and a few are free as well. Many apps are now available covering different sub-specialities within anaesthesia (such as pain medicine, cardiac anaesthesia, neuro anaesthesia, regional anaesthesia and intensive care). In future, we envision the availability of many more such apps with better interfaces, customised list generation, better customer care and good back up options. With a large resident base, provision of affordable customised e-logbooks can be easily accomplished in India. In conclusion, there is a serious need to consider, develop and embrace technology as far as the issue of electronic logbooks for residents is concerned.

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