LETTERS TO THE EDITOR

Letter to the Editor Regarding Kho, et al.

To the editor.—We read with interest the article by Kho et al.¹ on the use of personal digital assistants (PDAs) in medical education. In this article we will discuss similar reports published recently which were not included in the aforementioned study.

Personal digital assistants are significantly cheaper than laptops, while laptop computers do not require synchronization because data can be uploaded directly. There is also a voice recorder in PDA that can be used to record notes for subsequent typing.² A PDA can be useful tool to monitor students' experiences of cardiac auscultation and to track direct observation of such skills by faculty or residents.³ Steinemann and Omori⁴ used personal digital assistants to monitor surgery student work and sleep hours and concluded that majority of students overestimated work hours by a mean of 19.5 hours for 1 week.

There was no effect of a PDA-assisted evidence-based medicine (EBM) course on knowledge test scores, although using the PDA during the test results in higher scores. It is unclear if using PDA Clinical Prediction Rules can improve residents' estimate of disease probability.⁵

Use of handheld computers differed significantly among the medical specialties. Family physicians were more likely to search for information related to patient problem (diagnosis/management) while other specialists were more likely to search for the latest research on specific topic ($\chi^2 = 10.26$, $df = 3$, $P = .01$).⁶—**Prakash, MD,¹ Latha V. Prabhu, MS,¹ Gajendra Singh, MS,²** ¹Department of Anatomy, Kasturba Medical College, Mangalore, Karnataka, India; ²Banaras Hindu University, Varanasi, UP, India.

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Response to Prakash, et al.

To the Editor.—We greatly appreciate the letter from Prakash and colleagues, which brings to light recent reports on the use of personal digital assistants (PDAs) in medical education published since the completion of the literature search for our systematic review.¹ These reports confirm that PDAs remain useful to trainees in a variety of ways—e.g., in logging work hours² and examination skills,³ and in learning about disease processes.⁴

Most of the reports cited by Prakash and colleagues were observational studies, while only 1 was a controlled trial. This underscores the continued lack of, and need for, more rigorously designed investigations. The controlled trial, by Grad et al.,⁵ warrants comment. It found no effect on knowledge test scores after first-year family medicine residents used a PDA-assisted evidence-based medicine (EBM) course. These findings differ from results of a randomized control trial by Leung et al.,⁶ which demonstrated that third-year medical students using PDAs with clinical decision support software increased their learning and application of EBM. Several factors may have led to these conflicting results, including differences in the study design and populations. In addition, more technical problems with the handheld device occurred in Grad's⁵ study, where 65% of the residents in the intervention group had technical problems with their handheld device on an average of 28.5 days over the 208 investigational days.

The recent reports highlighted by Prakash are noteworthy. However, more rigorous controlled studies are still needed to examine how handheld devices impact medical learning and patient outcomes.—**Anna Kho, MD, Laura E. Henderson, MS, Daniel D. Dressler, MD, MSc, Sunil Kripalani, MD, MSc,** *Division of General Internal Medicine, Emory University School of Medicine, 49 Jesse Hill Jr. Drive SE, Atlanta, GA, USA.*

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