

# Clinical examinations: a medical student's perspective

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## Dear editor

We read with great interest the research by Shields et al,<sup>1</sup> evaluating the most effective ways of teaching the clinical abdominal examination to medical students. As medical students ourselves, we too have noticed how variability in cohort size, teaching style, and levels of practice can affect competency when performing a clinical examination.

At Imperial College, London, students are taught to perform examinations on real and simulated patients from an early stage. It is natural that students would like to examine real patients with clinical signs as without this experience early on in their medical career, it would put them at a disadvantage when they are required to recognize pathology. A randomized experiment found that what students valued most was the “authenticity” of real patient encounters.<sup>2</sup> We do however acknowledge that simulated patients have their benefits, especially during the early learning stage. Furthermore, finding real patients who are willing to volunteer their time for the teaching of medical students can be challenging.<sup>1</sup>

Another important factor to the successful teaching of the clinical examination is the size of the group. In a study of 48 medical students studying the musculoskeletal examination, it was found that through small-group interactive examination skills teaching, the students improved their skills immediately after the teaching but also maintained these acquired skills several months on.<sup>3</sup> The controls on the other hand, who only carried out regular clerkship activities, such as hospital placements, were unable to improve their examination skills.<sup>3</sup>

At Imperial College London, peer-assisted learning has become a vital way of improving both the confidence and clinical skills of students. A study looking at peer-assisted learning used a visual analog scale to assess the efficacy of the teaching while recording comments and feedback from all 86 trainees.<sup>4</sup> The outcome was generally very positive, with trainees finding the sessions both enjoyable and useful.<sup>4</sup> Peer-assisted learning, therefore, could be another way to reinforce clinical examination skills.

We agree with the authors that small-group teaching is the best way to reinforce clinical skills but would suggest that the use of real patients would be preferable when possible. Peer-assisted learning has also been shown to improve clinical skills such as communication and examination.<sup>4</sup> Perhaps there is some merit in the introduction of a peer-assisted learning program as an adjunct to the professional small-group teaching that students already receive as part of their curriculum.

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## Disclosure

The authors report no conflicts of interest in this communication.

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## Authors' reply

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## Dear editor

We are happy to respond to the excellent comments in the Letter to the Editor by Arjun Menon, Rahul Menon, and Vishnou Mourougavelou, medical students at Imperial College, London, regarding our recently published article entitled "Volunteer Patients and Small Groups Contribute to Abdominal Examination's Success".<sup>1</sup>

We completely agree with Imperial College London's routine practice of using "real patients" from the beginning of medical school for students to practice their physical examination skills. We would like to clarify and confirm that it is also our practice to use "real patients" for our Abdominal Examination Exercise. Our ability to recruit sufficient "real" volunteer patients each year for 43–46 small groups for the Abdominal Examination is the result of the popularity of this exercise with these patients.<sup>1</sup> We have not had the difficulty in recruiting patients as noted by Bokken et al<sup>2</sup> perhaps because all the patients came from the practices of the two Directors of the Abdominal Examination (HS and DH) who were committed to utilizing "real" patients. Volunteer patients frequently say it is gratifying and worthwhile to work with a small group of medical students and tell their medical histories after the students have tried to guess their diagnoses through examination of their abdomen.<sup>1</sup> All volunteer patients are given instructions before they participate

to maximize their understanding of the teaching exercise and their important role in it as both a mystery patient for the physical examination and a clear communicator of their medical problems for the students afterward. Thirty-nine percent of the "real patients" volunteered to be patients for the Abdominal Examination three to five times over the 5-year period.<sup>1</sup> Students rated having "real volunteer patients" as the best part of the Abdominal Examination Exercise.<sup>1</sup>

Keeping the group size small (3–4 students per group) was the second most highly rated factor in our Abdominal Examination Exercise. Perrig et al<sup>3</sup> used both small groups (4–7 students) as well as "real inpatients" for a group of students to practice the musculoskeletal examination. Compared to the control group, not exposed to these additional six one-hour targeted interactive teaching sessions, the intervention group did significantly better immediately following the learning sessions as well as a few months later.<sup>3</sup>

Finally, we agree with Field et al<sup>4</sup> and Arjun Menon, Rahul Menon, and Vishnou Mourougavelou that there may be a definite advantage to establishing "peer-assisted" teaching tracks for interested and enthusiastic medical students to improve training of their peers' clinical and physical examination skills. In two of the five years of teaching the Abdominal Examination, we had a fourth-year student as a full-fledged teacher for a small group of second-year students. After the mandatory faculty development session, the two medical students, with an interest in medical education, did just as well as the faculty and fellows in teaching peers the Abdominal Examination.<sup>1</sup>

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