LETTER

Virtual Shadowing - at the Forefront of Clinical Experience, or Merely a Shadow? [Letter]

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Dear editor

We read with great interest this study by Wheelwright et al[1] assessing the efficacy of virtual shadowing (VS) for medical students in Emergency medicine (EM). We greatly resonate, as our UK medical schools adapted in-person clinical placements to VS during the COVID-19 pandemic. We agree that VS may be valuable in supplementing clinical shadowing, but would like to highlight potential drawbacks, and propose alternatives to maximize medical education.

We agree that VS was effective in exposing medical students to EM, as did 79.1% of participants. Despite the accessibility of VS, 0% of students chose VS over in-person, with 69.6% less satisfied with VS.

One reason for dissatisfaction may be the inability to physically examine patients. Physical examination is vital for eliciting signs to form differential diagnoses, learning correct technique, and becoming comfortable in patient-doctor/student interactions.[2] Developing adequate examination skills prevents medical errors from occurring and enhances patient care.[2] From our perspective, not being able to examine patients was detrimental to our learning, requiring significant catching up in later years. Additionally, students attended VS online, but it is not clear if there were regulations about the location in which they joined from. Other people may have been in the vicinity, potentially breaching patient confidentiality. Likewise, subjectively, students may have reported VS as useful. However, it would not be possible to assess their actual engagement with VS, as can be done in-person.

The authors also suggest "smart glasses" as an improvement to VS. We agree, as this could overcome poor video angles and enable recognizing non-verbal cues from patients. Alternatively, we suggest virtual reality (VR) simulation. VR, which we have personally used in the form of Oxford Medical Simulation,[3] allows medical students and professionals to immerse themselves in clinical scenarios, elevated by using VR headsets. Scenarios are accessed in real time from a laptop or headset.[3] VR has been shown to improve clinical performance in students.[4] Perhaps VR could be amalgamated with VS, allowing for more realistic interactions, ward-like environments and could eliminate confidentiality issues as it is a simulated experience. Furthermore, Artificial intelligence (AI) is a more novel approach, but becoming increasingly popular in clinical practice, as demonstrated by Proximie.[5] This state-of-the-art digital platform allows surgeons to attend theatre lists virtually, extending their expertise globally. This could be widened to medical education; although, we appreciate the budgetary and logistical limitations.

Finally, the study only sampled pre-clinical students and not their clinical counterparts. Findings may not represent all cohorts. Clinical students would have had more prior clinical exposure compared to pre-clinical students, facilitating better comparisons to be made between in-person and VS – especially if they previously had an in-person EM attachment. We agree VS could provide exposure to various specialties but believe that to gain full insight into the effectiveness of the study, clinical students should also be sampled.

To conclude, we agree VS can supplement learning and exposure for medical rotations but believe it cannot fully replace in-person shadowing due to vital aspects of conventional shadowing being excluded.

Disclosure

The authors report no conflicts of interest in this communication.

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