

Simulation-Based Training in Medical Education: Immediate Growth or Cautious Optimism?

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For years, professional athletes have used simulation-based training (SBT), a combination of virtual and experiential learning that aims to optimize technical skills, teamwork, and communication.¹ In SBT, critical plays and skills are first watched on video or reviewed on a chalkboard, and then run in the presence of a coach who offers immediate feedback to the player. The hope is that the individual will then be able to perfectly execute that play or scenario when it is game time. While SBT is a developing tool in medical education—allowing learners to practice important clinical skills prior to practicing in the higher-stakes clinical environment—an important question remains: what training can go virtual and what needs to stay in person?

In this issue, Carter et al² present a single-site, telesimulation curriculum that addresses consult request and handoff communication using SBT. Due to the COVID-19 pandemic, the authors converted an in-person intern bootcamp into a virtual, Zoom[®]-based workshop and compared assessments and evaluations to the previous year's (2019) in-person bootcamp. Compared to the in-person class, the telesimulation-based cohort were equally or better trained in the consult request portion of the workshop. However, participants were significantly less likely to perform the assessed handoff skills optimally, with only a quarter (26%) appropriately prioritizing patients and less than half (49%) providing an appropriate amount of information in the patient summary. Additionally, postworkshop surveys found that SBT participants were more satisfied with their performance in both the consult request and handoff scenarios and felt more prepared (99% vs 91%) to perform handoffs in clinical practice compared to the previous year's in-person cohort.

We focus on this work as it explores the role that SBT or virtual training could have in hospital communication and patient safety training. While previous work has highlighted that technical and procedural skills often lend themselves to in-person adaptation (eg, point-of-care ultrasound), this work suggests that nontechnical skills training could be adapted to the virtual environment. Hospitalists and internal medicine trainees perform a myriad of nontechnical activities, such as end-of-life

discussions, obtaining informed consent, providing peer-to-peer feedback, and leading multidisciplinary teams. Activities like these, which require no hands-on interactions, may be well-suited for simulation or virtual-based training.³

However, we make this suggestion with some caution. In Carter et al's study,² while we assumed that telesimulation would work for the handoff portion of the workshop, interestingly, the telesimulation-based cohort performed worse than the interns who participated in the previous year's in-person training while simultaneously and paradoxically reporting that they felt more prepared. The authors offer several possible explanations, including alterations in the assessment checklist and a shift in the facilitators from peer observers to faculty hospitalists. We suspect that differences in the participants' experiences prior to the bootcamp may also be at play. Given the onset of the pandemic during their final year in undergraduate training, many in this intern cohort were likely removed from their fourth-year clinical clerkships,⁴ taking from them pivotal opportunities to hone and refine this skill set prior to starting their graduate medical education.

As telesimulation and other virtual care educational opportunities continue to evolve, we must ensure that such training does not sacrifice quality for ease and satisfaction. As the authors' findings show, simply replicating an in-person curriculum in a virtual environment does not ensure equivalence for all skill sets. We remain cautiously optimistic that as we adjust to a postpandemic world, more SBT and virtual-based educational interventions will allow medical trainees to be ready to perform come game time.

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