Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Journal of Clinical Anesthesia 69 (2021) 110107

Contents lists available at ScienceDirect

Journal of Clinical Anesthesia

journal homepage: www.elsevier.com/locate/jclinane

Correspondence

Resident education during Covid-19, virtual mock OSCE's via zoom: A pilot program

ARTICLE INFO

Keywords
OSCE
COVID19 education
Resident education

Letter to editor:

Simulation center activities were curtailed during COVID-19 due to deployment of personnel to other locations, conversion to screening locations or limitations due to social distancing. The Applied exam of the OSCE component tests for communication and technical skills [1]; web-OSCE programs have been used with success for training purposes [2,3]. To provide our graduating residents with practice sessions, we modified our existing OSCE curriculum and conduct a pilot mock OSCE program that was administered via Zoom.

The OSCE curriculum included 2 case scenarios with standardized patients and 2 technical skills stations with monitor and TEE video clips (3 scenarios each). Scoring sheets were developed using the ABA format. We interviewed and prepared standardized patients (SP's) via Zoom and did multiple dry run sessions with SP's and technical staff to ensure a successful session. SP's were given hospital gowns to wear for the encounter and create a realistic setup for the virtual environment. Prior to the sessions, learners were sent instructions via email detailing the ABA OSCE outlines, format of the Zoom platform session and rules for Zoom etiquette.

Fig. 1 outlines the flow of the session. We conducted a total of 4 sessions; each session comprised of 4 concurrent stations and 4 residents rotating through each station in a timed format. Each station was 10 min long; 2 min to read the case stem, 8 min for the encounter and 2 min to rotate between stations. After an introduction in the 'main room', residents were sent to the waiting room for 2 min after which they were moved to their respective stations. The co-host displayed the clinical scenario and task statement on the screen for 2 min, after which the SP was available for the encounter. The faculty instructor for the station assessed and scored the resident performance in real time. In the technical skills station; instructions were displayed for 2 min followed by videos of the monitor and TEE images. At the end of the 10 min, residents were moved to the next station. At the end of the 4 stations, team members met in the 'main room' for the group debrief, which was led by an experienced faculty. Feedback was also taken from the SP's and technical task videos were replayed for discussion.

We were able to conduct each session successfully with minimal interruptions. Surveys were sent out via email to all participants and analyzed in a de-identified manner. Table 1 shows the survey results; 10 out of 14 residents returned the surveys. 80% found the virtual session easy to navigate; 70% responded that the virtual encounter was a good substitute for an on-site practice session; the interaction with the SP and technical station tasks to be realistic and the debriefing to be effective and useful.

The residents appreciated the opportunity to practice the mock sessions in a timed and controlled environment. It is important for residency programs to prepare their residents for both the oral and OSCE component of the exam [4]. The ABA has provided excellent resources on their website [1], however, practice with standardized patients in a timed manner is key to success. We have shown that a virtual video communications format for the mock OSCE's is a viable option for providing residents with a practice session. The virtual format is also useful for centers that do not have a dedicated simulation center or adequate space to conduct the sessions [5]. Attention must be paid to adequate preparation of the SP's and creating realism in the virtual setting. Consideration must be given to availability of technical support and faculty for conducting the session.

Acknowledgements

We would like to thank the simulation center team at UAMS for their expertise and time in making this endeavor possible for us.

IRB approval was taken prior to the study and residents consented to the curriculum and survey.

Disclosures

None.

Declaration of Competing Interest

The authors declare no competing interests.

References

[1] Warner DO, Isaak RS, Peterson-Layne C, Lien CA, Sun H, Menzies AO, et al. Development of an objective structured clinical examination as a component of assessment for initial board certification in anesthesiology. Anesth Analg 2020 Jan; 130(1):258–64.

[2] Novack DH, Cohen D, Peitzman SJ, et al. A pilot test of WebOSCE: a system for assessing trainees' clinical skills via teleconference. Med Teach 2002;24:483–7.

https://doi.org/10.1016/j.jclinane.2020.110107
Received 2 July 2020; Received in revised form 30 September 2020; Accepted 10 October 2020
Available online 21 October 2020

[3] Major S, Sawan L, Vognsen J, Jabre M. COVID-19 pandemic prompts the development of a Web-OSCE using Zoom teleconferencing to resume medical students' clinical skills training at Weill Cornell Medicine-Qatar. BMJ Simul Technol Enhanc Learn 2020;0:1–2. bmjstel-2020-000629.
[4] Rebel A, Hester DL, DiLorenzo A, McEnvoy MD, Schell RM. Beyond the "E" is OSCE. Anesth Analg 2018 Oct;127(4):1092–6.
[5] Khan Faiza A, De Ruyter Marie L, Traunero Justin, Bernstein Wendy K. OSCE in anesthesiology – trials and tribulations: update from the simulation in education network (SEN) meeting. ASA Monitor 2019;83(12):30–3.

Faiza A. Khan, M.D.*, Matthew Williams, M.D., Charles A. Napolitano, M.D., Ph.D.
Department of Anesthesiology, Suite 515, University of Arkansas for Medical Sciences, 4301 W Markham Street, Little Rock, AR-, 72205, USA

* Corresponding author.
E-mail addresses: fakhan@uams.edu (F.A. Khan), MWilliams@uams.edu (M. Williams), NapolitanoCharlesA@uams.edu (C.A. Napolitano).

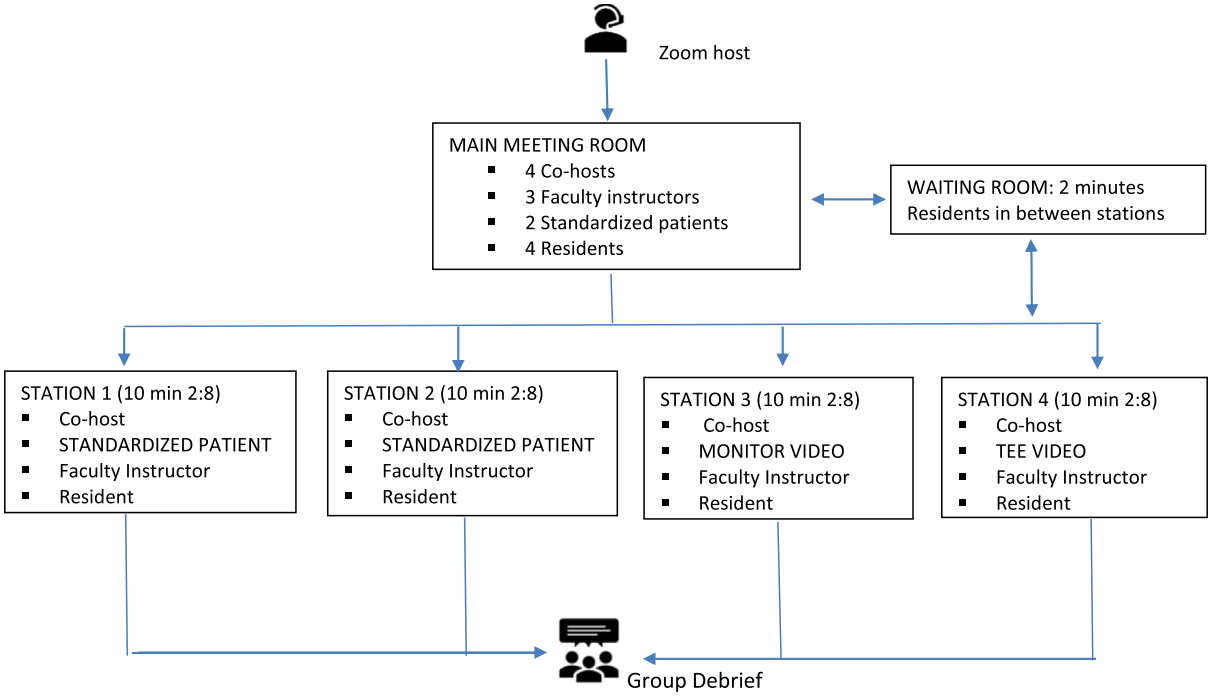

Fig. 1. Flowchart of the session flow.

Table 1
Survey results forthe virtual mock OSCE session

MOCK OSCE	Strongly disagree (1)	Disagree (2)	Unsure (3)	Agree (4)	Strongly agree (5)	N	Mean	SD
This MOCK OSCE was valuable.				3 (30%)	7 (70%)	10	4.7	0.458
This MOCK OSCE was organized well.				3 (30%)	7 (70%)	10	4.7	0.458
This MOCK OSCE helped me gain confidence for the American Board of Anesthesia OSCE.				3 (30%)	7 (70%)	10	4.7	0.458
This MOCK OSCE helped me develop strategies for improving my performance on the American Board of Anesthesia OSCE.				3 (30%)	7 (70%)	10	4.7	0.458
During the post-MOCK OSCE debriefing, reflection on my performance helped me close gaps in my performance.				4 (40%)	6 (60)%	10	4.6	0.49
The Faculty's feedback was helpful.				3 (30%)	7 (70%)	10	4.7	0.458
Monitoring station								
The respiratory and hemodynamic recordings seemed realistic.				3 (30%)	7 (70%)	10	4.7	0.458
The scenarios were realistic.			2 (20%)	1 (10%)	7 (70%)	10	4.5	0.806
Zoom- virtual OSCE								
I found the virtual format easy to navigate.			1 (10%)	1 (10%)	8 (80%)	10	4.7	0.64
The virtual encounter with the SP was realistic.				3 (30%)	7 (70%)	10	4.7	0.458
Virtual OSCE is a good substitute for the on-site mock practice exam.				3 (30%)	7 (70%)	10	4.7	0.458
Debriefing in the virtual session was effective and useful.				3 (30%)	7 (70%)	10	4.7	0.458
Standardized participants								
The standardized patient in the role of a nurse with a maternal history of malignant hyperthermia portrayed it well.				3 (30%)	7 (70%)	10	4.7	0.458
The standardized patient in the role of a mother with a headache portrayed it well.				3 (30%)	7 (70%)	10	4.7	0.458