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SPECIAL COMMUNICATION

Preparing for a Paradigm Shift in Medical Conference Development and Implementation

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Abstract

The coronavirus disease 2019 pandemic has led to innovation in the way scientific advancements are disseminated and the structure of physician continuing medical education. With in-person medical conferences and meetings throughout the world impacted by travel restrictions and many geographically confined, virtual teleconferences with exceptional attendance have become an integral part of medical education. Our group has successfully produced >50 virtual educational seminars, including multiple global webinar conferences ranging between 24 and 55 h of continuous lectures each. In this special communication, we discuss some of the challenges we overcame in learning “on the job” and share key elements to successful implementation of long-format virtual teleconference events. We hope our experience will guide future online continuing medical education efforts and assist others in planning their own online initiatives.

Introduction

The coronavirus disease 2019 pandemic resulted in cancellations of most medical conferences. The Society of Rhinoplasty Surgeons of South Africa was among the first to initiate online facial plastic surgery seminars based on a previously described telelecture format.¹ Our group has since orchestrated >50 virtual educational seminars, including 4 global conferences ranging from 24 to 55 h in length.^{2–5} Herein, we discuss key elements to successfully implement virtual conferences.

Program Development

Teleconferences overcome temporal, financial, and geographic barriers associated with speaker recruitment—

expanding the number and diversity of available panelists, and attracting a global audience.¹ International collaborations are imperative to recruiting panelists and managing different time zones. We recently organized the 55-h Global Summit of Facial Plastic Surgery and noted consistent attendance throughout the free event. Of 2315 registrants, 1917 (83%) individual viewers attended. This yield was similar to trends observed in our other global conferences and may be used as a proxy to estimate conference attendance.

No attendee, save course directors, is likely to spend significant hours at one sitting watching a webinar. Our approach uses a cable news broadcast format with information divided into topics that cycle and repeat (with

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updates and modification) regularly. We divided each 24-h period into eight 3-h modules, further subdivided into specific 30-min subjects (minimally invasive therapies, functional rhinoplasty, aging face, etc.).

Prerecorded lectures lasted ~25 min, followed by a live 5-min question-and-answer (Q&A) session. A separate videoconference room was used after each Q&A session wherein panelists interacted with interested attendees and answered questions without delaying the main conference. This “virtual lobby” helps promote the intangibles that are gained from in-person meetings such as networking opportunities, informal exchanges of ideas and personal experiences, and collegiality.⁶

Presentations

Common technical difficulties among live presenters include inability to share screen, inability to share audio embedded within presentations, and unstable internet access. Accordingly, we solicited prerecorded presentations from speakers 2 weeks before the meeting. This also allowed sufficient time to review and edit presentations as needed.

Lectures may be recorded using teleconference platforms such as Zoom, Webex, GoToMeeting, Google Hangout, PowerPoint, or QuickTime. Lectures should be recorded with the presenter’s video on, webcam at eye level, in a quiet setting, and with a neutral background. Editing software can be used to modify lectures or to speed up those that surpass the time restraint.

An important consideration in the virtual presentation format stems from the inability for speakers to judge feedback they are receiving from attendees. Unlike live conferences, virtual conferences enable attendees to tune in or out with a simple click. Speakers may view this as added pressure to present in a manner that maintains audience engagement whether that be by discussing novel topics or by incorporating multimedia content such as videos or illustrations.

Hardware

Most built-in webcams and microphones are sufficient for recording and presenting. Alternative options include investing in plug-in webcams/microphones, converting

smartphones into webcams using mobile applications (EpocCam, iVCam, DroidCam), or converting DSLR cameras to webcams through hard-wired connections and specialized software.^{7,8}

Selecting a video communications platform to host conferences depends on user comfort, number of estimated attendees, conference length, and budget.⁹ Sharing operative videos, photographs, and animations is fundamental to surgical presentations. Whereas some recommend the conference host has an internet bandwidth of at least 5–6 Mbps (download)^{7,9} to support high-definition video sharing; our bandwidth specifications are 300 Mbps (download) and 175 Mbps (upload). Hosts should maintain a hard-wired ethernet connection to ensure consistent speed and stability.

Team Development

Staff who are well versed with videoconferencing are essential to teleconference implementation. We recruited motivated trainees who helped collect and edit presenter videos, acted as webinar hosts, and assisted in troubleshooting. This gave trainees the opportunity to network with panelists, understand the logistics of planning a medical conference, and learn as conference attendees. Sessions also included a more established moderator who introduced speakers, presented audience questions, and ensured timely transition to subsequent lectures.

Postconference Availability

The virtual format allows hosts to record high-quality videos of lectures and Q&A sessions directly through teleconference platforms. Lecturers and surgical societies could feasibly charge for conference recordings. However, it is critical to consider informed consent and revenue generation, especially with presentations that include patient photographs or videos. Recordings may also be distributed to speakers as a means of self-directed feedback.

The Future

A poll of *Nature* readers revealed >80% favored some scientific conferences remain virtual.⁶ Revenue-driven conferences with hundreds of speakers giving 5-min presentations will likely be increasingly recognized as

Table 1. List of virtual facial plastic and reconstructive surgery conferences in 2021

Conference	Organizers	Dates
24 Hours of Lasers and Energy-Based Devices in Cutaneous Applications	LSM, ASLMS, UCI	January 29, 2021–January 30, 2021
48 Hours of Otolaryngology Updates	UCI, AMC, UKE Hamburg	February 26, 2021–February 28, 2021
AAFPRS Spring Meeting at COSM	AAFPRS	April 09, 2021–April 10, 2021
Virtual Masters of Facial Plastic Surgery and Advances in Rhinoplasty	AAFPRS	May 13, 2021–May 16, 2021
2021 Global Summit of Facial Plastic Surgery	IFFPSS	August 20, 2021–August 22, 2021
2021 AAFPRS Annual Meeting	AAFPRS	September 29, 2021–October 02, 2021
World Rhinoplasty Day 2021	SORSSA	October 23, 2021

AAFPRS, American Academy of Facial Plastic and Reconstructive Surgery; AMC, Asan Medical Center; ASLMS, American Society for Laser Medicine and Surgery; COSM, Combined Otolaryngology Spring Meeting; IFFPSS, International Federation of Facial Plastic Surgery Societies; LSM, Lasers in Surgery and Medicine; SORSSA, Society of Rhinoplasty Surgeons of South Africa; UCI, University of California, Irvine; UKE, Universitätsklinikum Hamburg-Eppendorf.

ineffective compared with experts giving longer coherent lectures through this low-cost virtual format. Audiences can attend lectures at times that are convenient for them without having to travel. Many facial plastic surgery conferences have shifted to a virtual format (Table 1). We noted significant positive responses from virtual conference attendees,¹⁰ and foresee the evolution of future virtual teleconferences.

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Author Disclosure Statement

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INVITED COMMENTARY

Commentary on: “Preparing for a Paradigm Shift in Medical Conference Development and Implementation” by Hakimi et al.

Zachary Farhood, MD^{1,2*} and Jamil Asaria, MD, BSc, FRCSC^{1,2}

Hakimi et al. raise excellent points regarding the use of virtual platforms to overcome the challenges imposed by the COVID-19 pandemic in “Preparing for a Paradigm Shift in Medical Conference Development and Implementation.”¹ By avoiding the cost associated with in-person

meetings (e.g., registration and travel fees), attendance barriers are significantly reduced.

The “cable news style format” with a “DVR” option to watch later may circumvent potential burnout associated with all-day lectures and allow learners to watch

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