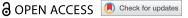




#### **REVIEW ARTICLE**



# Lupus Academy: Keeping Education Live, Virtually

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#### **ABSTRACT**

Delivering medical education meetings in person and online presents different challenges, as highlighted during the COVID-19 pandemic. The Lupus Academy education programme is a decade-old initiative, led by a steering committee of 12 international experts in lupus, with an established following of over 7000 global learners. The COVID-19 pandemic has made educationalists think differently about ways to provide medical education. Early in the pandemic, the Lupus Academy created a new technical platform and scientific programme structure to deliver its education online to its global audience. Many challenges confronted the effective delivery of this education, including video steaming, audience engagement and interaction, and timely delivery of content across multiple time zones. The Lupus Academy adapted well, and its 2020 meeting was a success. The lessons from this meeting helped create a further improved meeting format for 2021, which like 2020 saw over 3000 participants from 101 counties attending. This success was driven by necessity, yet learners still want 'in-person education' . As and when the world opens for travel, a newfound digital literacy will create hybrid programmes that serve both 'in-person meetings' with digital elements, bringing education to a broader audience online at the same time.

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#### Introduction

In recent decades medical education meetings, both in person and online, have served to support physicians in developing and sharing clinical practice experience. Delivering them online or in person, provides different benefits and challenges, whilst aiming to support delivery of common outcomes including physician education and sustained improvement in patient outcomes. The global COVID-19 pandemic presented the world with many challenges, not least the continued management and treatment of vulnerable patients with chronic illnesses like systemic lupus erythematosus (SLE). Physicians were forced to adapt to the pandemic, in many ways and quickly. Similarly, continuing medical education (CME) providers faced many challenges when adapting to new ways of providing education during the pandemic.

The Lupus Academy education programme is led by a steering committee of 12 experts who develop, deliver, and drive the latest in lupus education and clinical practice to physicians from around the world and across several specialities[1]. During recent years the lupus community has seen exciting developments in both clinical research and practice, with the launch of

new classes of treatment [2–9], improving standards in clinical management[7]. During this time, the Lupus Academy has been an integral body facilitating the sharing and discussion of the latest in lupus education, principally through provision of its annual meeting content, interactive "Roadshows", and online education library. These educational initiatives were developed following ongoing needs assessments, derivation of learning objectives and feedback from previous live educational programmes. The Lupus Academy now has a community of over 7000 learners from 101 countries and six continents, across several clinical disciplines and with broad ranging experience.

In early 2020, after 8 years of annual meetings and mostly in-person activities, Lupus Academy faced the challenge of how it was to continue providing education for its learners during the COVID-19 pandemic.

## **COVID-19: Virtual Meeting Development 2020**

As the COVID-19 pandemic took hold and in-person meetings were being cancelled, the Lupus Academy recognised the need for continued engagement in its educational activities and postponing or cancelling its 9<sup>th</sup> Annual Meeting in September 2020 was not

wanted. Instead, working through the practicalities of presenting the meeting as a virtual activity presented the opportunity for Lupus Academy to expand its educational reach to a larger body of its subscriber database, especially those for whom attendance in person was not possible. This required remodelling the scientific programme, logistics and technical delivery of Lupus Academy's 9<sup>th</sup> Annual Meeting using a virtual meeting platform. During the initial months of the pandemic, between March and September 2020, it was hoped that it would end quickly so that the meeting could take place in person, however contingency planning continued exploring various options for the online delivery of the meeting. Several virtual and cloud-based videoconferencing services were emerging, most visibly Zoom and Microsoft Teams were improving their collaboration apps and bespoke systems were also being launched. The Lupus Academy's meeting organisers worked with the technical experts from its long-term audio visual supplier to explore a potential solution.

## **Designing the Technical Solution**

The initial objectives of this solution included providing a simple to use web-based interface that was familiar to the end user and did not require specialist software download, just an intuitive interface without technical distraction. The interface would act as a main entry point to the meeting as well as a place where participants could view live and pre-recorded presentations, posters, and other meeting materials. Importantly, the online meeting needed to be broadcast in high quality video and sound, as well as facilitating discussion and Q&A from the audience, by both voice and text channels. The same system needed to accommodate a presentation "catch-up" facility, where participants could view presentations following the live meeting.

It became apparent early on that no such system existed as a complete solution, so the Lupus Academy decided to develop a virtual studio, to be hosted from the technology partner with their broadcast quality internet connectivity, computing capabilities, and incorporating stable technology offered by Vimeo, a global video hosting, sharing, and services platform provider. The Lupus Academy's virtual studio needed to uphold the quality standard of its previous meetings, while appearing innovative and attractive in a new online environment. The team set out to create a bespoke 3D virtual studio designed around a television newsroom style environment, where faculty and panellists would appear within the virtual studio (Figure 1).

When developing the virtual studio, it was important to consider the global nature of this meeting, including multiple time zones, faculty presentation requirements and recording, faculty meeting room, as well as audience interaction and questions and answers (Q&A). Accommodating participants from different time zones required recording and repeating presentations in a highquality format, to be viewed live, repeated later in the programme (for different time zones), and provided as part of the catch-up education following the online meeting. An online Q&A and polling app (Slido) was used in

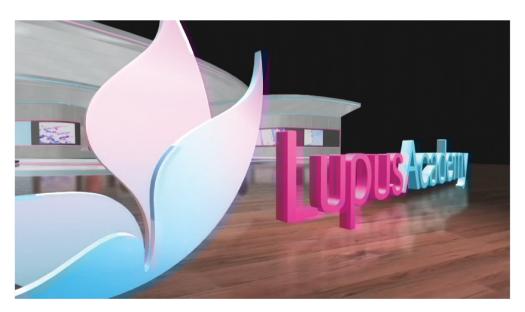


Figure 1. Virtual meeting studio.

presentation sessions, while Zoom-based Q&A was used in interactive workshops. The tailoring of these composite systems to provide a seamless user experience required a team of technicians and content providers working from a technical studio with several gigabit connections. To achieve this seamless user experience, several of the team members were required to travel to a physical location to deliver the virtual meeting.

## **Designing the Scientific Programme**

The 9<sup>th</sup> Annual Meeting scientific programme required a change in pace and format to meet the needs of online learning and interaction. The Lupus Academy's annual meeting programme structure underwent a redesign so participants could choose presentations or sessions to participate in, rather than engage in the entire programme, as they would at the in-person meetings. To facilitate audience engagement and interactivity, the programme was redesigned with structured sessions, comprising shorter presentations of 15 minutes with equal time for questions and discussion. Alongside the Slido app-based audience interaction, this aimed to bring audience engagement online in a way that would help people feel connected and able to drive interaction and discussion. Similarly, the popular, in-person case-based workshops needed to be delivered to participants who wished to interact with the expert presenters, with multichannel discussion tools and co-presenters, supported by technicians, running the workshop via Zoom from different time zones. The diversity of the audience in terms of experience and location provided the Lupus Academy with a great opportunity to facilitate the sharing of clinical experience around engaging and interactive cases. Multichannel discussion tools in both workshops and presentation sessions provided participants with a choice, allowing them to speak up if they wished or text a question or opinion if language or confidence among peers was a barrier. The meeting format saw the introduction of online poster presentations, with over 30 accepted for audio presentation online, and five for presentation and discussion during the meeting. The poster session allowed more junior participants to present their work, by sharing the latest in clinical research and clinical practice from the 'front line" as well as answer questions in the online discussion forum, both during and following the meeting. The Lupus Academy appreciates the value of Socratic style learning from all researchers and physicians, alongside leaders in the field of lupus, whilst at the same time encouraging the voice of all levels of experience in providing an educational foundation for discussion.

Although broadcasting the annual meeting live online was not equal substitute for meeting in person, the format did allow for multiple iterations of talks and discussion, which provided the Lupus Academy with the opportunity to reach a truly globally audience across multiple time zones. This format attracted many participants who took the opportunity to log in to the meeting at a time and for a duration that suited them. The Lupus Academy was able to log and learn from participant statistics gathered, providing the potential to tailor future hybrid programmes in line with different learner profiles around the world, from over 3000 meeting participants from 101 countries, participating in an average of one hour of education per day of the meeting.

The programme format also provided the opportunity for delegates to catch up with any sessions they may have missed or want to see again including the discussions online for a further two months. A total of 516 additional learners engaged in the catch-up content, allowing the Lupus Academy to increase the reach of its annual meeting content by over ten times that of its in-person meetings.

#### **Lessons Learned**

For the organising committee, the Lupus Academy's first virtual meeting came with several lessons of its own, valuable lessons that would inform the design of future education programmes.

- (1) While faculty and delegates will welcome being able to travel to in-person meetings again, the Lupus Academy has gained many new attendees for whom travel will not be possible, especially where it would require intercontinental travel, budgetary or time restrictions. Hosting the meeting online, with catch-up sessions provided the flexibility to overcome this barrier and provide short, adaptable packages of education that fit with the needs of the leaners as they continued to work through the pandemic. Many participants did, however, miss the opportunity to meet in person, network and experience the informal social benefits and discussions that take place at in-person meetings.
- (2) Participant interaction during the sessions was facilitated by live discussion as well as app-based Q&A and polling. These multiple channels of engagement allowed participants from many countries and backgrounds to engage with the faculty and offer their experience, without language barriers or others created by the need to

stand and voice opinion in front of peers at a live meeting. With more junior doctors sharing experience and asking questions, the Lupus Academy could see a broader representation of educational needs in lupus practice. It is important to note that no matter how much interaction is facilitated though online platforms, many of the participants and faculty look forward to the face-to-face interaction they get at live meetings.

- (3) Changes to the scientific programme format presented faculty with new challenges and reservations about presenting complex education in just a 15-minute presentation, particularly when many are used to a 30-minute format. The "less is more" principle applied to the development of their presentations, allowed more time for discussion and ultimately greater engagement during the Q&A and focused discussion of the most salient points in the presentation for the individual participants. In addition to conducting a pre-programme needs assessment, audience engagement and individual educational needs and interests become more apparent and more focused during the discussion of presentations. Moreover, questions were received from a much broader base of participants, not just senior doctors, allowing a more inclusive and diverse path for discussion.
- (4) COVID-19 has changed the world and how we practice medical education, with online meetings and resources developing rapidly. Furthermore, the level of engagement in the catch-up sessions was higher than expected, as was the length of time people spent with the education.

## **COVID-19: Virtual Meeting Development 2021**

The lessons learned from the Lupus Academys' 9th Annual Meeting in September 2020 informed both the programme format as well as technical delivery of its 10th Annual Meeting in April 2021. Despite hopes for a hybrid meeting, given the pandemic, success of the first virtual meeting and short planning and delivery timeframe, the organising committee decided to continue with the fully virtual meeting format. A similar number of participants from 104 countries attended the 2021 meeting as in 2020, with those attending viewing for a longer average of one-hour 25 minutes of education per day of the meeting.

Following initial reservations from faculty regarding the request for them to give shorter presentations in its 2020 programme, the steering committee welcomed the continuation of this format for its 2021 meeting, somewhat inspired by the audience engagement during the first virtual meeting. With the 2020 example at hand, many of the faculty invited to participate in the 2021 meeting were now much more comfortable with distilling their presentations down to a 15-minute picture to allow for the opportunity to discuss their work with a global audience online. In addition, the Lupus Academy developed an extended meeting format, by hosting three pre-annual meeting sessions in the three weeks leading up to the 10<sup>th</sup> Annual Meeting, to drive interest in the annual meeting programme. Promoting these sessions though Twitter and LinkedIn resulted in these sessions being well attended with participants engaged in content and discussion through the Lupus Academy virtual meeting platform.

As in 2020, pre-meeting and annual meeting presentations were pre-recorded, while discussion and Q&A were live, with catch-up session broadcast for key presentations during the meeting and all presentations and discussion made available online for twomonths after the live meeting. The retention of poster sessions was well received, with a 25% increase in poster submissions on the previous meeting. Moreover, feedback from the first virtual meeting highlighted the importance of participant engagement and contributions from junior delegates, driving the steering committee to introduce a "thieves' market" session. The thieves' market session involved presentation of clinical cases by specialists in training and audience polling during the live meeting. The addition of both poster and thieves' market sessions to the Lupus Academy virtual meeting programmes has highlighted the importance of sharing views from broad reaching clinical experience, allowing experienced physicians to comment on cases presented by junior doctors and for them to showcase their unique experiences with a global audience. Audience engagement in this second virtual meeting was similar to that in the first, with both demonstrating that short presentations, ample discussion and provision of broad clinical insights through both presentation and case studies (workshops and thieves market) are critical to retaining interest in educational programmes.

#### **Conclusions**

While it is challenging to replicate many aspects of an inperson meeting, creating a digital equivalent goes some way to continue providing education to the audience, especially during the COVID-19 global pandemic. The Lupus Academy continuously reviews its educational programme and evaluates its successes and where it can improve. At a time when face-to-face meetings were not possible, the Lupus Academy adapted its education programme and increased its use of digital channels to continue providing its education through the pandemic. While meeting in person affords an interaction that cannot be replaced online, the Lupus Academy virtual meetings allowed for the adaptation of the programmes, to offer an interactive forum to participants and reach several learners from many countries, many of whom may not even be able to attend an international meeting. The novel techniques employed allowed the participants to engage with faculty and each other, and as the medical community increases its digital literacy, it is difficult to see how educational activities will return to the way they were. The meeting environment during COVID-19 was very different to when Lupus Academy first live streamed content during its 3<sup>rd</sup> Annual meeting in 2014 when there were only a small number of online participants. The Lupus Academy will continue to evaluate how to enhance its in-person meetings with digital techniques, by deciding whether to make the meetings hybridusing an extended meeting techniques and supporting the activities with asynchronous education so that learners can engage with the education at times convenient to them. It is also looking at other techniques for providing education, such as social media for bite-size education, podcasts, short-format, and enduring education. What is evident is that the digital component of medical education will increase in importance and will be essential for any future educational activities. Most importantly, as critical consumers, digitally-competent learners will choose the most convenient and appropriate format of education for their needs, and therefore drive our the planning of educational provision in the future. This will

be a key focus for the Lupus Academy in coming years.

## **Disclosure statement**

No potential conflict of interest was reported by the author-(s). Julian Ball received a fee from Lupus Academy, which also paid the article publishing charge.

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