Maintaining education and professional development for trainees during the COVID-19 pandemic: the Self-isolAting Virtual Education (SAVEd) project

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Editor –

In early 2020, anaesthetists across the world adopted frontline roles in the fight against COVID-19.[1] However, those who were deemed vulnerable to the complications of SARS-CoV-2 infection were asked to 'shield' and so isolated at home to avoid exposure.[2] Likewise, those who tested positive for SARS-CoV-2 or whose household members had experienced symptoms were asked to self-isolate. These anaesthetists were asked to work from home, a challenge considering the 'hands-on' nature of the speciality. Motivated by a wish to make a meaningful contribution during the pandemic, and in response to the ongoing educational need despite the postponement of face-to-face tutorials, the Self-isolAting Virtual Education (SAVEd) project was created by shielding trainees based in the North West School of Anaesthesia, UK. In this report, we describe the design of this online educational intervention, and present its impact in terms of uptake and educational evaluation. The Health Education England Research Governance Group granted permission to collect and present this data (date of approval 19/05/2020).

Based on the Royal College of Anaesthetists' training curriculum, with a focus on preparation for examinations, self-isolating trainees designed and hosted a combination of pre-recorded and live online tutorials. These were delivered using a combination of video conferencing (Zoom Version 5.0.2, Zoom Video Communications Inc., San Jose) and video sharing (Vimeo Pro, Vimeo Inc., New York). At the time of writing, 24 live tutorials and two live study days have been delivered, and over 80 pre-recorded tutorials have been made available through the North West School of Anaesthesia website (www.mmacc.uk). The tutorials were predominantly delivered by trainees, with some taught by consultants; topics were appropriately matched to clinical experience and expertise. All recorded tutorials were peer-reviewed by a senior trainee or a consultant, prior to being published online. The resources were promoted through existing trainee email contact lists, social media and by sharing resources with other deaneries.

We were able to quantify the 'reach' of SAVEd using social media platform analytics and website metrics.[4] Between 27th of March and the 27th June 2020, we recorded 4881 visits to the www.mmacc.uk website; the video tutorials received 8304 impressions (times the video web page was visited) and 3720 views (times the video was played) (Figure 1). Content was accessed from 50 cities within the UK and 27 countries outside the UK. By 27th June the @SAVEd_anaes Twitter account, which was established on 8th April, recorded ~54,000 impressions; 1528 profile visits; 270 followers; 245 retweets; 382 likes; 763 link clicks and a 6.6% engagement rate.

The use of email and social media appeared to have an important impact in stimulating engagement with the project. There has been an increasing trend in the number of impressions and views of the tutorials over time with 'spikes' after interventions such as reminder emails, the opening of Twitter and Facebook accounts and the participation of one of the SAVEd faculty as a panellist in a national

webinar.[5] Likewise, an increase in engagement was seen following the sharing of the resources with other deaneries (Figure 1).

We assessed the educational impact of the SAVEd project using post-tutorial feedback and, at the preference of the presenter in some live tutorials (n=3), pre and post-tutorial multiple choice questions (MCQs), administered using the polling function. Attendees rated the resources using five-point Likert scales and optionally, free-text feedback. We received 456 completed feedback forms which showed median (IQR) scores for quality of content, presentation of material and usefulness compared to traditional tutorials of 5 (5-5), 5 (4-5) and 5 (4-5) respectively. As would be expected, MCQ scores were higher post-tutorial than pre- in the three tutorials where they were used (mean improvement of 23.6, 22.3 and 32.1%). Free-text feedback highlighted benefits including less time spent travelling and the ability to access learning more flexibly. Disadvantages included the loss of social contact between trainees that might normally occur during the breaktimes of face-to-face tutorials,[6] and also less interaction between attendees and facilitators. Social isolation has a role in physician burnout,[7] a relevant problem during the COVID-19 pandemic. We therefore attempted to facilitate social support by continuing the session after the facilitator left, so that attendees were able to engage in informal conversation. The addition of live MCQ polls and the use of pre-tutorial materials notably enhanced attendee-facilitator interaction. Anecdotally, interaction has also improved over time as users have become more at ease with the technology.

Trainees were allocated time away from clinical work to attend live tutorials, so attendance was therefore expected. Nevertheless, more people attended live virtual sessions than would normally be expected for face-to-face tutorials. These were also found to be more reliable as there were fewer cancellations by facilitators due to clinical commitments. Accessing the pre-recorded online tutorials was entirely optional and therefore dependant on trainees' self-direction. Though a small incentive in the form of continuing professional development (CPD) points was available for attending tutorials, this is unlikely to have had a major impact on uptake; previous work has found that the motivation to engage with online learning is predominantly influenced not by external factors but by interest, control and freedom of choice,[8] all of which are features of the approach we have adopted.

The SAVEd project has given our self-isolating trainees the ability to work from home to create online tutorials that have been well-received and widely utilised by colleagues in the North West School of Anaesthesia and beyond. Social media and online sharing has been instrumental in promoting the uptake of these resources. Whilst we are keen that face-to-face tutorials should restart when possible, the success of this project has provided a new vision for anaesthetic training in the North West. We envisage an increasing role for online education to supplement traditional teaching allowing for greater flexibility and hopefully therefore, increased engagement. In this new era of free access to online medical resources and technology-enhanced learning,[8,9] we are confident that our resource and others like it will continue to grow and make a substantial contribution to anaesthetic training in the UK and around the world.

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Declaration of Interest

C.S. is a former member of the editorial board of *BJA Education.* The authors declare no other competing interests. No funding received.

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Caption for Figure:

Figure 1 Daily impressions (light blue) and views (dark blue) of SAVEd video resources on Vimeo, and the timing of promotional interventions (E: emails, S: social media accounts opened, D: resources shared with other deaneries, W: national webinar), between 27th March and 27th June 2020.