Lessons learned from Virtual Teaching during Covid-19

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Developing people for health and healthcare

www.hee.nhs.uk
Speaker

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Context

The pandemic has prompted changes across the whole of the education sphere.

Sharing experiences and research is vital. We are all “finding our feet” and adopting to a new and evolving environment.
Introduction

- Health Education England’s (HEE) Technology Enhanced Learning (TEL) team conducted a rapid scoping exercise concerning the shift to remote teaching facilities online learning.

- We will use some of their findings and a range of academic publications to explore this topic today.
Introduction

Covid-19 has impacted more than 1.7 billion students, across 188 countries, representing over 91% of all learners*.

The impact of Covid-19 has increased the need to adapt training delivery at pace to enable professional development to continue.

Now the world has changed...
Pre COVID 19

Prior to COVID 19 most people said that they had hoped to move some or more training activity online but barriers included:

• Time
• Budget
• Lack of Hardware
• Technical support
• Attitudes (‘always done this way’ / ‘less engaging’)

Beware: These barriers still exist to a greater or lesser extent
Strategies Identified

• Tutors produced / recorded material to be **shared electronically** (or signposting to existing platforms / content)

• Teaching converted to webinars to allow training to continue. Plus there are some options for **practical training** – DFT (Midlands & East).

* Creating predoctoral orthodontic laboratory online modules and a complete course kit in response to COVID-19  
Ahmad Abdelkarim DMD, PhD, EdD  
First published: 04 August 2020 https://doi.org/10.1002/jdd.12359
Synchronous vs Asynchronous

• “viewer *retention was poor* during webinar playback compared to the very high attendee retention during live webinars”*

*Transforming postgraduate medical education during the COVID-19 pandemic: creating a trainee-led virtual teaching platform*
Author(s): Collins, Emma; Ahmad, Aminah; May, Hannah; Price, Kathryn; Egbase, Elizabeth; Mathews, Catherine
Source: Future healthcare journal; Mar 2021; vol. 8 (no. 1); p. e7
Publication Date: Mar 2021
Poll

• Do you think men find virtual meetings more tiring than women?

• Yes

• No
“Zoom Fatigue”

Zoom and gloom
Videoconferencing habits by sex*

Density plot

Duration of typical video call, %

Time between meetings, %

Source: “Nonverbal mechanisms predict zoom fatigue and explain why women experience higher levels than men”, by G. Fauville, M. Luo, A. Queiroz, J. Bailenson, & J. Hancock

*Survey of 10,332 people conducted February 22nd to March 12th 2021

The Economist
“Zoom Fatigue”

- Having to stay within the camera’s gaze leaves limbs stiff and backs sore.

- Looking at your own face on screen can be bad for self-esteem.

- Trying to communicate without all the usual visual cues (not least because of time-lags) adds to the “cognitive load” for already stressed-out employees.
Finally, this meta-analytic review* shows that webinars and face-to-face classroom teaching are comparable in their effectiveness to promote student learning...

Webinars offer higher levels of flexibility for the learners...

*Webinars in higher education and professional training: A meta-analysis and systematic review of randomized controlled trials
• Authors: Andreas Gegenfurtner & Christian Ebner
• Educational Research Review
• Received 6 November 2018, Revised 17 September 2019, Accepted 30 September 2019, Available online 7 October 2019.
Strategies Identified

As with all tools there is a learning curve and limits to the possible outcomes.

For more **interactive sessions** you may need to consider:

- **Smaller** learner groups
- **Greater** educator presence
Risks

• The impetus to provide a rapid adaptation to online learning could result in a “Wild West” situation.

• Guidance, sharing & standardisation will help prevent this from occurring.
Risk mitigation

- HEE in the Midlands & East have produced formal:
  
  - **Speaker Guidance for Virtual Courses**

- This supports our education providers and helps provide a consistent offering to learners.

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**Before we start**

This course is for your personal learning and development. The content MUST NOT be shared with others via any medium including social media.

- Participants will not audio or video record online sessions. Photos of Slides may be taken only with the Presenters’ consent.
- As a default, webcams should be switched on, but the microphone should be muted.
- The speaker will describe how to ask a question and the process for interaction during the session.

Slide to be used by all online providers of DWD
Benefits Identified

• Training involving a whole day (as trainees had travelled, been released for full day) – now **shorter sessions** can provide similar content

• Better **engagement and attendance** at meetings held online as people don’t have to travel*

* Gegenfurtner et al., 2018
Warning: Service Delivery

• Some Trusts have highlighted that it is easier to construct an efficient rota if Trainees have longer blocks of training (i.e. whole days).

• The ability to offer short learning events in a flexible fashion may suit Trainees, but not service delivery.
Benefits Identified

• **ARCPs** and **interviews** have been held online which has worked well and saved time and cost.

• Standard training could be delivered to much **larger groups nationally** in one session. Potential to standardise training material used (Foundation Training).
Common Findings

It may be too early to draw concrete conclusions – but there are some common findings to explore:

• Less face to face in the future.
• This has benefits in terms of travelling time and cost.
• Many trainees are finding it increasingly difficult to attend study days off site.
Common Findings

It may be too early to draw concrete conclusions – but there are some common findings to explore:

• **Increased use of online tools.** We must not go back to face-to-face unless it is demonstrably more effective. Trainees are used to flexible delivery from undergraduate education.

• Online training will give trainees the power to take control of their own training.
Common Findings

• Some activities (practical training / assessment of practical skills) are suited to **face to face** environment. A **blended learning approach** is required.

• **Shared platform** will promote collaboration across schools and regions. The best resources/practices should be shared.
Figure 10 Interoperability of video conferencing tools used by government organisations, 1 May and 15 July 2020

<table>
<thead>
<tr>
<th>Organisation</th>
<th>1 May</th>
<th>15 July</th>
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<tbody>
<tr>
<td></td>
<td>Default</td>
<td>Google Meet</td>
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<td>BEIS</td>
<td>MS Teams</td>
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<td>MS Teams</td>
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<td>DfT</td>
<td>MS Teams</td>
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<td>DWP</td>
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<td>FCO</td>
<td>MS Teams</td>
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<td>GDS (CO)</td>
<td>Google Meet</td>
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<td>HMRC</td>
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<td>Parliament Digital</td>
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<tr>
<td>Wal Gov</td>
<td>MS Teams</td>
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**Can use** | **Restricted** | **Cannot use** | **Unknown**
Are we talking about the same thing?

• The Quality Assurance Agency for Higher Education

• https://www.qaa.ac.uk/docs/qaa/guidance/building-a-taxonomy-for-digital-learning.pdf
Common Findings

- **Teams** now has Breakout Rooms. Teams will be the preferred option for most NHS organisations. Zoom will continue in use in some environments.

- We must consider ability to **access** hardware and general inclusivity – **digital divide/digital exclusion**.
The proportion of non-users of the internet is unchanged since 2014; older people and those in the DE socio-economic group remain less likely to be online.

- **All adults 2018**:
  - 16-24: 1%
  - 25-34: 1%
  - 35-44: 4%
  - 45-54: 7%
  - 55-64: 19%
  - 65-74: 33%
  - 75+: 48%

- **DE socio-economic group**:
  - AB: 6%
  - C1: 8%
  - C2: 15%
  - DE: 23%
Dental Foundation Training

• Midlands & East rapidly embraced a specific and long-term response to the pandemic challenges.

• The goal was to utilise the acceleration of change, and control the outcome.
Flipped Classroom

- In flipped classrooms (inverted classrooms) students review lecture materials before the session.

- In-class time is dedicated to discussions, interactive exercises, and independent work that would have previously been completed at home.

- Virtual tools can facilitate this delivery.
Delivering Better Education – Our Proposed Post-Covid Learning Model

Our proposed programme of Study Days will still equate to c10% of the total learning time for the year.

Current Study Day Programme

- 10 days Facilitated discussion
- 10 days Hands on skills
- 6 days Online
- 4 days Interactive Seminar

Proposed Study Day Programme

- 10 days Online discussion
- 4 days Pre-read & hands on skills training
- 4 days Online
- 2 days Pre-work and live interactive online sessions
- 4 days Interactive seminar split over several sessions
- 6 days Live online sessions with in-surgery activities
## Delivering Better Education – Our Future Model

<table>
<thead>
<tr>
<th>Pre-read &amp; Hands-on Skills</th>
<th>Online (self-study)</th>
<th>Online Discussion</th>
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</thead>
<tbody>
<tr>
<td>• Clinical Skills Refresher</td>
<td>• eLearning for Health (3 days)</td>
<td>• Regional Induction</td>
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<tr>
<td>• Oral Surgery</td>
<td>• SCRIPT – safe prescriber (1 day)</td>
<td>• Scheme Induction</td>
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<tr>
<td>• Restorative</td>
<td>• E-lift project (2 days)</td>
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<td>• Endodontics</td>
<td>• BDA Oral Cancer Guide</td>
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<table>
<thead>
<tr>
<th>Pre-Work &amp; Interactive Sessions</th>
<th>Interactive Seminar over Several Sessions*</th>
<th>Live Online Session with In-Surgery Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Behavioral Change</td>
<td>• Milestones 1, 2 &amp; 3</td>
<td>• Prosthetics</td>
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<tr>
<td>• Communication</td>
<td>• Audit</td>
<td>• Occlusion &amp; Toothwear</td>
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<tr>
<td>• Treatment Planning</td>
<td></td>
<td>• Paediatrics</td>
</tr>
<tr>
<td>• Periodontics</td>
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<td>• Teamwork &amp; Human Factors</td>
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<tr>
<td>• Public Health Day</td>
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<td>• Health &amp; Safety</td>
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<td>• Medicolegal</td>
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<tr>
<td>• Oral Cancer</td>
<td></td>
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<tr>
<td>• Anxiety &amp; Pain Management</td>
<td>* Where FDs present a case and / or an audit</td>
<td></td>
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<tr>
<td>• Finance / Contracts</td>
<td></td>
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</tbody>
</table>

* Where FDs present a case and / or an audit
A positive outcome?

• Despite the disruption of the pandemic, trainees have continued to learn.

• They have also accelerated their attainment of the types of competencies that 21st-century physicians must master.
Finally…and most importantly? Well being

• “In addition, it has allowed us to continue to foster a sense of community that we hope can attenuate trainee burnout and promote wellness in a time when isolation has become a part of everyday life.”*

Published online 2020 Apr 15. doi: 10.1016/j.jacc.2020.04.015

Virtual Learning During the COVID-19 Pandemic: A Disruptive Technology in Graduate Medical Education

• Zaid I. Almarzooq, MBBCh,* Mathew Lopes, MD, and Ajar Kochar, MD
Useful research

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Useful research

The Transformational Effects of COVID-19 on Medical Education
- Catherine R. Lucey, MD¹; S. Claiborne Johnston, MD, PhD²
- Author Affiliations: Article Information
- JAMA. Published online August 26, 2020. doi:10.1001/jama.2020.14136

Real-time measurement for effectiveness of novel educational endeavors during the COVID-19 pandemic
- Kimberly K. Patterson DDS MS; Priyanshi Ritwik DDS MS; Carolyn A. Kerins DDS PhD; Abimbola Adewumi BDS FDSRCS(Eng)
- First published: 04 August 2020 https://doi.org/10.1002/jdd.12363

Creating predoctoral orthodontic laboratory online modules and a complete course kit in response to COVID-19
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Thank You