

Implementing a structured digital-based online pathology curriculum for trainees at the time of COVID-19

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Received 21 April 2020
 Accepted 27 April 2020
 Published Online First 4 May 2020

The COVID-19 pandemic has resulted in delayed elective surgeries and reduced surgical pathology case volume. Case volume and feedback are critical components of postgraduate pathology training as they are essential to developing the skills required to transition into independent practice.¹ The current approach has been the utilisation of video-conferencing and sharing of didactic lectures on social media (#virtualpath) platforms to ensure the continuation of medical education. Associations such as the College of American Pathologists (CAP) and the United States and Canadian Academy of Pathology (USCAP) have graciously offered online lectures (CAP: the Virtual Lecture Series for Pathology Residents,² USCAP: eLearning Center).³

These approaches, while incredibly valuable, are relatively passive learning formats when contrasted with conventional pathology residency where trainees actively participate in the reporting of cases with graded responsibilities. The slowdown in operating rooms has reduced the number of surgical cases for trainees to participate in. Furthermore, many trainees may be working from home or have had elective rotations cancelled.

The field of pathology is currently in a transition period with the introduction of digital pathology and there are now robust free online slide collections. What is still needed, however, is an environment in which trainees can use these resources in a manner that recapitulates the traditional pedagogical approach, with targeted questioning to help trainees learn.

Technology and social media can connect learners from across the globe to supplement institutional training. We have experimented with a method of online learning between a resident (SFR) rotating on thoracic pathology and a pulmonary pathology fellow (MJC) at a separate institution. Daily, the fellow provided the resident with cases to supplement the decreased surgical volume of cases of the resident's home institution. The resident had the opportunity to preview the cases and was given defined tasks for cases including: identifying histological subtypes, developing differentials, selecting ancillary tests and staging of cancers. The resident and fellow then had a virtual sign-out using a free videoconference application. Both participants could share their screens and 'drive' the slides as well as annotate areas. The cases were all anonymised and both teaching collections and public

slide databases were used. With the assistance of pathology and subspecialty organisations, this type of complementary learning could be scaled to trainees across the globe.

We propose that a subspecialty-based curriculum with key cases could be developed to link with questions or activities such as synoptic report completion. The answers could be accessed afterwards, with step-by-step video tutorials and examples of reports for each case. It would create a robust resource to practise for board examinations,⁴ could assist with global pathology education in resource limited environments, and aid rotating medical students or residents from other specialties. Most importantly, it would provide a safe environment where trainees could develop skills and gain competency as well as greater autonomy to assist with the transition to independent practice.⁵ The current state of events, while devastating, may act as a catalyst for such new pedagogical approaches.

Handling editor Tahir S Pillay.

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Contributors SFR and MJC designed the study, collected data and wrote the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

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To cite: Roy SF, Cecchini MJ. *J Clin Pathol* 2020;**73**:444.