# FRCR 2B Revision Course at NIAW during COVID-19 pandemic

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The Royal College of Radiologists (RCR) Fellowship examinations (FRCR) are described as "central pillars of the assessment of UK trainees and an important marker of quality for overseas doctors" (RCR, 2020). The exam consists of 3 parts: rapid reporting, long cases and Vivas. Revision courses for these exams are considered essential to aid successful preparation with many candidates accessing multiple training courses to prepare them for this vital assessment.

In order to mimic the exam and provide candidates with a realistic experience, candidates would traditionally attend the NIAW for the course. Rapid reporting and long case scenario sessions were undertaken on PACS workstations and viva scenario sessions would be undertaken in a room with the candidate being examined face to face with 2 examiners.

In response to the COVID-19 pandemic, RCR took the unprecedented decision to move all exams online, through the use of Microsoft Teams and the use of regional examination centres.
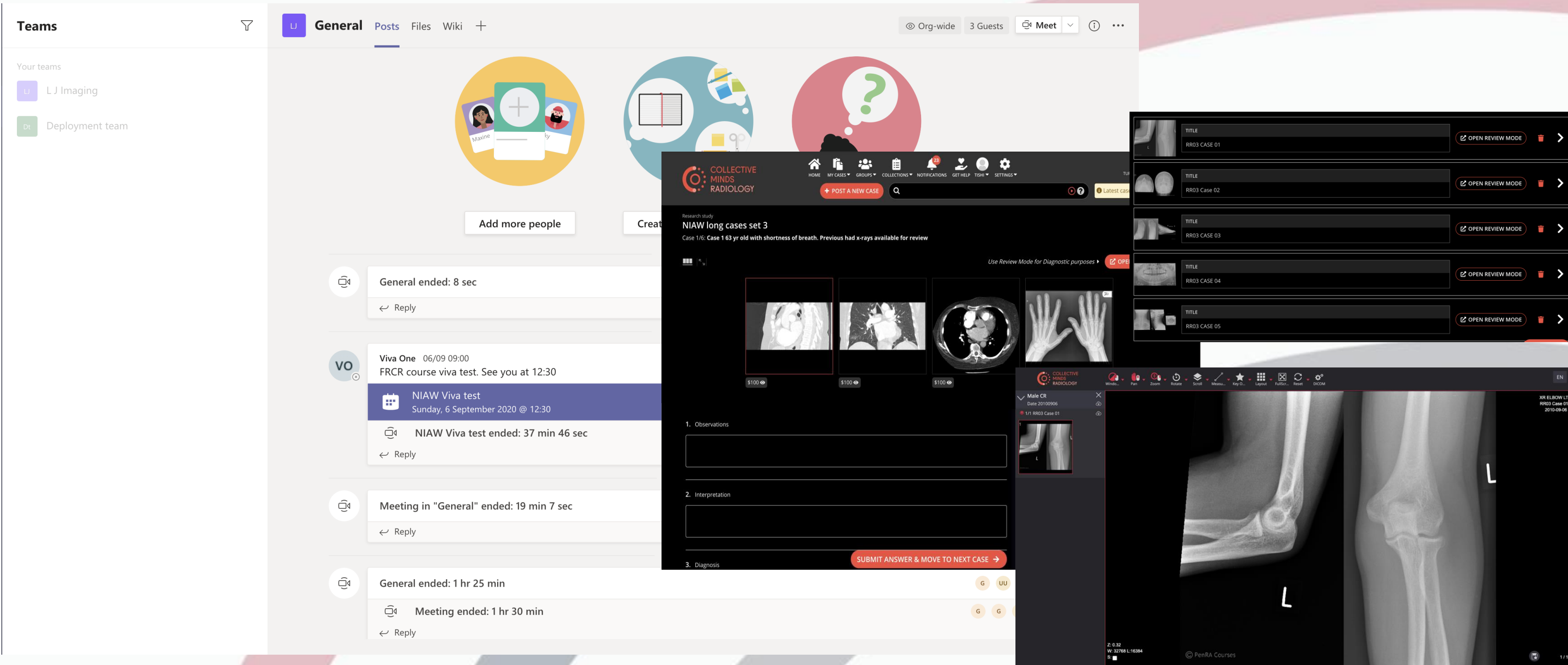
## Challenge:

- Accurately replicating the novel examination format to deliver a realistic and effective revision course without compromising staff/candidate safety or course quality.
- Transferring an established & successful course into a virtual and COVID-19 safe environment, accommodating candidates and trainers from across the UK at short notice.

## Design:

The Course was carefully reviewed to determine how the course could be delivered safely whilst maintaining strong replication to the new examination format.

The approach taken was:

- Rapid/Long Case components provided through Collaborative Minds software
- Viva components provided via Teams
- Course delivery was online, with attendees at remote sites (home or otherwise)
- Examiners attended NIAW, delivering viva practice via Teams in socially distanced working environments.
- All onsite teaching delivery was risk assessed for COVID-19 safety
- Preparation was considerable, with a new layer of preparation including attendee connectivity tests prior to the course to minimise impact of IT hiccups



| Challenges | Solutions |
|---|---|
| With varying internet speeds and differing familiarity with the software among examiners and candidates, how do we ensure a smooth performance on the day? | We performed 'connectivity tests' with candidates and examiners. This helped to identify issues early and find ways round them |
| Simulation of the written parts of the test | We collaborated with a specialized radiology image sharing site called 'collective minds'. We used their research module to simulate the online tests. |
| Marking the tests | The answers were downloaded as .csv files. These were then processed using Microsoft Excel and Python. |
| Viva and feed back sessions | These were conducted using separate sessions of Microsoft 'Teams'. Other similar software like 'zoom' and 'Slack' can be used. |
| Feedback | The feedback was collected using 'Google forms'. Other similar software like 'survey monkey' and 'MS forms' can be used. |

## Software used:

1. Collective minds     - cmrad.com
2. Microsoft Office 365  - Microsoft Incorporation (including Excel & Teams)
3. Python v.3.7          - Anaconda open source software
4. Google Forms          - Googleincorporation

## Outcome:

- The course was delivered safely with excellent course feedback
- Travel and accommodation costs for candidates were significantly reduced
- Candidates from as far as Aberdeen and Plymouth were able to attend
- Reflection affirms that complex teaching delivery can be delivered remotely. Collaboration with Collective Minds was key

## Innovation & Take-Home Messages:

- Conducting connectivity tests earlier helped to identify and troubleshoot problems
- Collaboration with software manufacturers for bespoke development of supporting software
- Using software like Excel and Python helped to process the data quicker and automate the marking
- Iterative approach to Risk Assessments and Training Delivery
- Timely preparation and connectivity testing
- Collaboration with software manufacturers for bespoke development
- Adoption and adaptation of appropriate training software
- Teamwork