

Identifying and Overcoming the Challenges of COVID-19 on Cardiac Scientist Training



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What has Changed from Pre-Covid-19 Routine Investigations?

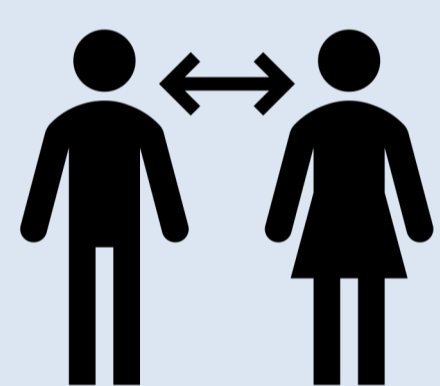
Before COVID-19, the cardio-respiratory department at Raigmore Hospital were able to conduct routine investigations such as 12-Lead ECG's, spirometry, and exercise treadmill tests at large capacities without the need to consider the how many individuals were within the room for training purposes. The hospital had the capability of seeing a vast amount of patients from all over the Highland through outpatient clinics, telephone consultations, NHS Highland Near Me internet calls, and pre-booked department investigations.

The Impact to Training

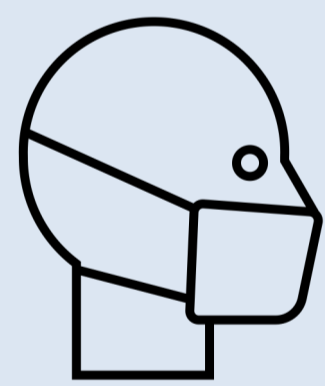
Fortunately, Raigmore Hospital have been able to keep all of the departments running throughout training, however, there have been several impacts on the training including the following:



A significant decrease in the amount of patients being seen at the hospital due to patient cancellations from fear and limited amount of appointments available due to the increase in infection control procedures. This impacted the overall skills portion of training and the time it took to become autonomous in practical skills such as 12-Lead ECG's and interpretation.



A limit on the number of people allowed within a room to comply with social distancing regulations caused some missed learning opportunities – either observational or practical.



To comply with government guidelines, PPE standard operating procedures changed over the months, and required consistent adaptation to ensure that the appropriate PPE was used in the correct manner. Specifically, with the new strain of COVID-19, protocols within the hospital changes promptly, highlighting the constantly changing environment that must be adapted too.



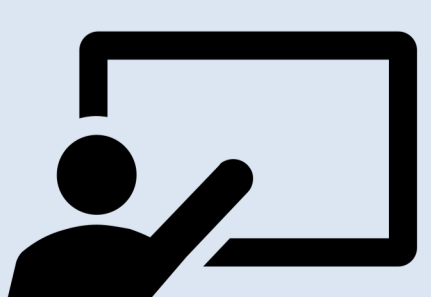
Infection control practices had to be refined throughout the upcoming months and increased the time of appointments.



Reduced number of clinics and patients coming into the hospital with the hospital utilising the NHS Near Me initiative and home monitoring of pacemaker patients.

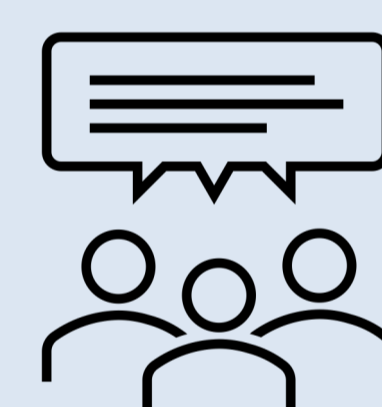
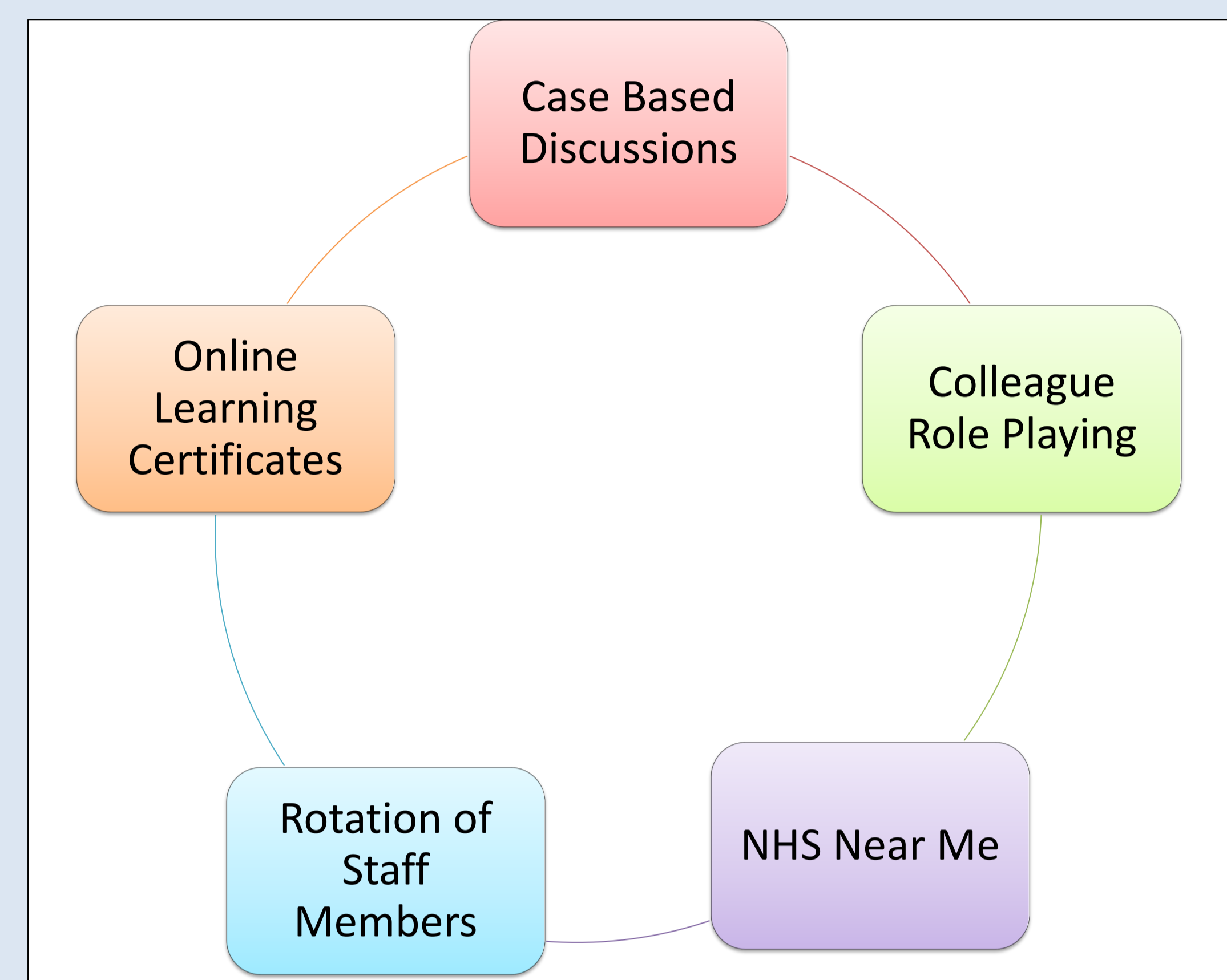
How We Adapted

The impact to training was of concern to both trainee and training officers, however, the challenges that were identified by all members of staff were overcome by a multidimensional framework shown in Figure 1.



During clinics, appointments were broken into rotations, to ensure each member of staff could treat the patient but also conduct teaching elements for the specialism, maintaining social distancing.

Figure 1: Multidimensional Training Framework



The combination of telephone consultations and face-to-face appointments that were already in place in the Highlands to accommodate to the rural areas, enabled the smooth transition of strictly telephone consultations for a majority of clinics. During phone consultations each patient was treated as a case study, facilitating increased learning of patient pathways and pathophysiology of diseases.



To prevent any loss of practical skills that had been developed, role playing with colleagues was vital to enhance learning, competence and confidence between patient appointments. This increased the time for communication with patients, enabling a greater trust between trainee and patient.



Attending web calls with NHS Highland Near Me improved communication skills, specifically for explaining complex procedures in an appropriate manner for patients to understand when they come to hospital.



Online links to virtual ECG printouts facilitated independent learning, and critical analysis. Case-based discussions were followed-up from the results to compensate for the limited number of ECG's at the hospital.

Future Recommendations

The combination of online and face-to-face appointments at NHS Highland enabled training to continue to the same degree as Pre-COVID-19 days. Additionally, the importance of developing a multidimensional training framework increased the quality of training and prevented any disruptions to learning.