



## 1. Introduction

The COVID 19 pandemic has led to social distancing being introduced in order to reduce the spread of the infection<sup>1</sup>. Medical students were no longer able to benefit from the valuable clinical experience gained by seeing patients during their early formative years in medical school. In order to minimise this loss of experience, the Orthopaedics department at Aberdeen Royal Infirmary devised an online teaching method that would allow medical students to have patient contact but at a distance.

## 2. Aims

- To introduce new online medical student teaching, with direct real time patient and doctor contact.
- To seek feedback from participants on these sessions and to identify ways to improve on current methods.

## 3. Methodology

### 3.1 Preparing the Online teaching

- Patients willing to participate in online teaching were selected from those admitted onto an orthopaedic ward. The proposed session was explained to them and then verbal consent was taken to participate in the teaching.
- The junior doctors working on the ward used an electronic tablet with Microsoft Teams installed to enter a pre-selected Teams group of three to four 3rd year Aberdeen University medical students.
- A group video call was started with the participation of all members in the Teams group and after a short introduction, the tablet was taken to the patient's bedside.
- The students (online) and the patient were left alone for roughly one hour to allow the students to take the patient's history
- After the history taking was completed, the students and junior doctor discussed the management of the patient's case

### 3.2 Obtaining feedback

- At the end of the teaching session, the students completed a feedback form
- These results were compiled then analysed to identify areas of improvement.

## 4. The Microsoft Teams interface

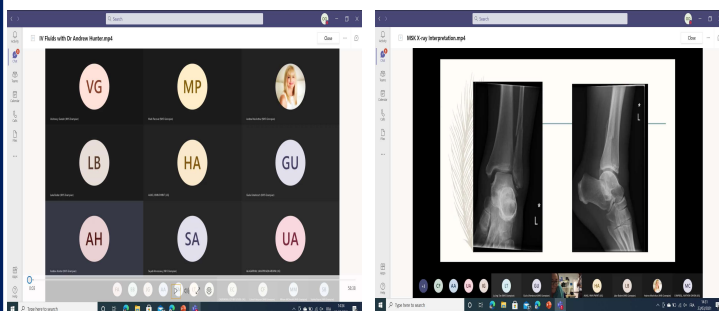
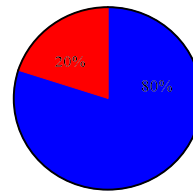


Figure 1: Group session on teams

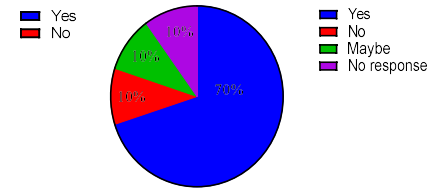
Figure 2: X-ray teaching by an orthopaedics registrar on Microsoft Teams

## 4. Results

Objectives identified and met?



Delivery effective and clear?



Figures 3: Chart showing that objectives were identified and met during the online reaching sessions.

Figure 4: Chart showing that the delivery of the online teaching was effective and clear

- *"Overall it was a really good session, it put into context the theory we had covered in lectures and how it translates into clinical practice. It was really useful looking at the X rays and going through what you could see."*
- *"I enjoyed the whole session and managed to speak to a real patient for the first time in a long time (due to COVID). I also felt the debrief was very well delivered and helpful and the scans were very useful to see, and good to see if they matched the history that we took."*
- *"Getting to speak to the patient and the doctors, obviously being online was harder but still totally worth it."*
- *"Really enjoyed being able to talk to a patient and the mini teaching session at the end was very useful."*

## 5. Discussion

The results show that the majority of students were happy with this form of teaching. It was viewed as an appropriate alternative to face-to-face teaching given the circumstances.

The students were able to practice history taking within the clinical setting and then use their history and prior knowledge to discuss and eventually interpret relevant investigations, in addition, they were able to ask any pertinent questions to doctors on the ward. These actions would ultimately have the desired effect of reinforcing prior learning through reading textbooks and lecture content.

## 6. Conclusion

- The level of interest shown by the students in this novel form of clinical practice, demonstrates that there may be a valid place for this type of learning even after the COVID pandemic.
- If the students and ward staff are appropriately equipped and have access to IT facilities, this can be applied to many different areas of medical teaching.
- However, the lack of face-to-face contact prevents the students from being able to examine patients which may hinder the development of examination skills that is part of the learning experience at the clinical setting.
- This issue could be addressed during the teaching session after the patient encounter.

## 7. References

- 1) Al Samaraee, A. (2020, July 2). The impact of the COVID-19 pandemic on medical education. *British Journal of Hospital Medicine*. MA Healthcare Ltd. <https://doi.org/10.12968/hmed.2020.0191>

