Teleophthalmology as a Valid Teaching Tool in Medical Education: Medical students' Views during a Pragmatic Pilot

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INTRODUCTION

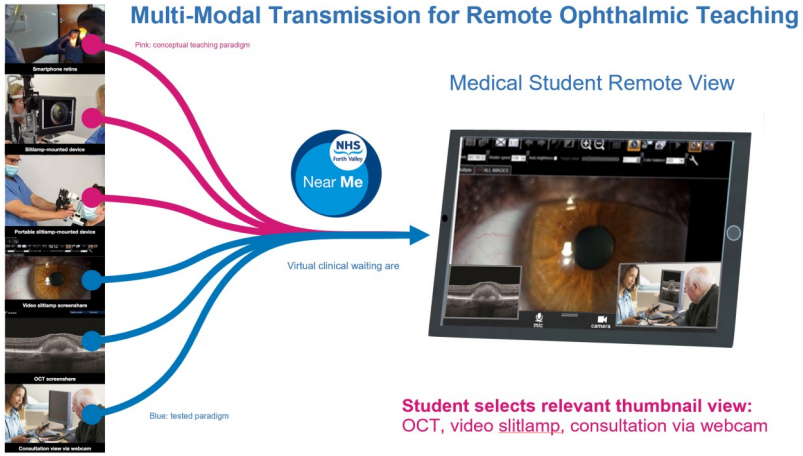
In March 2020, medical students on placement were sent home and clinical training was discontinued for 5 months leading to a significant number of students being unable to be part of a clinical team during this time [1]. Social distancing measures have impeded traditional teaching from absence of non-essential staff and decreased patient throughput. Clinical rotations have now shortened to ensure missed experiences can be regained.

There have been many advances in Teleophthalmology, especially for diabetic retinopathy [2] with reliable screening tools in place. In order to prevent massive backlog of appointments, ophthalmologists have begun to do teleconsultations for a wide variety of patients during COVID19. Teleophthalmology has been a central part of the pandemic eye care response in several Scottish Boards, building on pathways in clinical use [3, 4, 5]. Pre-established technology can theoretically be used to teach students on clinical rotations if they are given access to the software and instructions on how to use it (Figure 1).

AIMS

The aim of this project is to evaluate if using pre-existing video conferencing and teleophthalmology tools is an effective method to teach medical students remotely.

Figure 1: Multi-Modal Transmission for Remote Ophthalmic Teaching



METHODS

Three separate surveys were produced through the use of a mini Delphi process involving a small panel of experts and the 5 point Likert Scale: one to be completed by the medical students present either in-person or remotely at the time of the consultations, one to be completed by the patient to establish their views of the teaching techniques, and one to be completed by the ophthalmologist doing the teaching. These were then evaluated for potential improvements; suggestions were taken on board and re-drafts were finalised.

During the consultation, there was a medical student present in the room and/or a medical student dialled in through the use of 'NHS Near Me' software. The patients were asked for consent, made aware of both students and the consultation proceeded. The survey was then completed by all parties involved. Responses were stored and then tabulated to determine patterns and establish medical student opinions of how they perceive the teaching to be remotely, compared to views on traditional in-person teaching, as well as rating their comfort levels during consultations.

Figure 2: Medical Student Opinion on Comfort Level

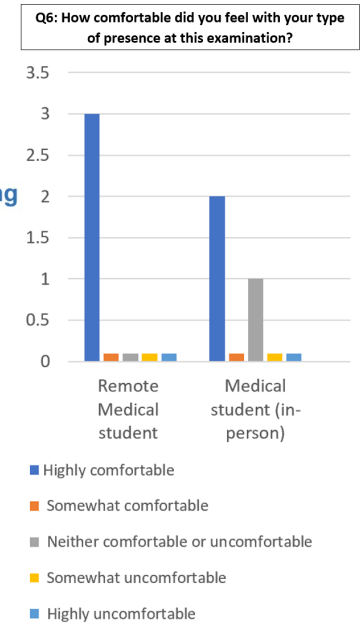
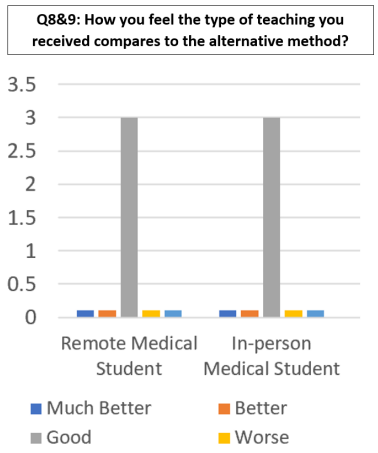


Figure 3: Medical Student Comparison on Type of Teaching



RESULTS

As the project is still in the initial days of collecting data, a definitive correlation cannot be made at present without more responses. There were 2 medical students from the University of Glasgow present for these three sessions, the remote student was in their final year and the in-person student was in their fourth year.

Responses were identical for most questions except for rating their comfort level, and usefulness of the teaching method. All 3 responses for question 6 for the remote student were highly positive (Figure 2) but one of the responses for the in-person student was between both positive and negative (Figure 3). This may have been due to the patient's annoyance at the waiting time which could have made them more apprehensive.

CONCLUSION:

Preliminary data suggests that remote teaching may be at least just as good as traditional, face-to-face teaching for ophthalmology. However, more data, which will be collected in the oncoming weeks, is needed.

If remote teaching is judged valuable, it may be highly useful during current social distancing measures, and also further down the line as an alternative to teach more students remotely. Finding the maximum effective number of remote students will be subject to further study, evaluating opportunities for small versus large group remote teaching.

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