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Teledentistry during Covid-19 Pandemic

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**Summary of the article**

Emer Byrne and Simon Watkinson conducted a case control study involving cross-sectional questionnaires to evaluate the fulfillment of patients and clinicians using virtual appointments for their orthodontic consultations. This study took place at the Orthodontic Departments at Royal Blackburn Teaching Hospital and Burnley General Teaching Hospital in the United Kingdom. The link to its abstract in PubMed is <https://pubmed.ncbi.nlm.nih.gov/33251951/>. The article’s DOI is 10.1177/1465312520973677.

 The cross-sectional questionnaires were given to the patients involved in virtual clinics at the end of their consultation using Attend Anywhere, a secure video call service for patients with appointment times only. A total of 121 people participated in these questionnaires, including 59 patients and 62 clinicians. Based on the patients’ feedback, 93% found the instructions to access the consultation easy to follow, 76% believe it is more convenient to have a virtual appointment than face-to face, and 66% would like more virtual appointments from now on. Based on the clinicians’ feedback, 70% did not have connection issues during the virtual appointments. Teledentistry involves the use of technology to deliver healthcare remotely, and there are many pros and cons involved with it. Overall, the satisfaction of patients and clinicians having virtual appointments during the COVID-19 pandemic was high.

**Article information**

The title of this article is, “Patient and Clinician Satisfaction with Video Consultations during the COVID-19 Pandemic: An Opportunity for a New Way of Working” by Emer Byrne and Simon Watkinson. The article was published in the Journal of Orthodontics in November 2020 (<https://journals.sagepub.com/home/joo>). The link to its abstract in PubMed is provided (<https://pubmed.ncbi.nlm.nih.gov/33251951/>). The article’s DOI is 10.1177/1465312520973677. The authors declared no conflicts of interest in relation to the research, authorship, and/or publication of this article.

**Study analysis:**

This case-control study was conducted at the Orthodontic Departments at Royal Blackburn Teaching Hospital and Burnley General Teaching Hospital in 2020 during the COVID-19 pandemic. Before conducting this study, England in January 2019 introduced its NHS Long Term Plan whose aim was to increase the use of digital health tools. In March 2020, NHS England decided to cancel all routine appointments to help reduce the spread of the virus. Clinicians had to figure out how they would deliver care to patients, and the solution was to go digital. NHS England and NHS Improvement developed the use of the program, Attend Anywhere in which the licenses are free for all providers. Some advantages include cost-effectiveness since there are no travel expenses and patient convenience. Disadvantages include the expense of equipment, reduced quality of communication (connection issues), and accurate diagnosis of the patient without completing a clinical examination. At one UK hospital, 97% of the patients reported being satisfied with the use of teledentistry.

The primary purpose of the authors in conducting this study was to assess patient and clinician satisfaction with a virtual consult using the Attend Anywhere technology. From this investigation, the authors want to exactly aim to learn if any improvements needed to be done, if patients would prefer more virtual appointment than face-to-face appointments, identify if there were any connection issues, and if the instructions on how to access the consultation were easy to follow.

The authors conducted this study by identifying orthodontic patients appropriate for a video consultation at both teaching hospitals. The patients were sorted according to the urgency of their need for care. New patient appointments were not included in the virtual consultations because it would be more difficult to provide an accurate diagnosis without a full clinical examination. The software, Attend Anywhere, webcams, and microphones were installed on the computers at both teaching hospitals, and staff training was done. The patients were notified of their virtual appointments two weeks before with a link to the Attend Anywhere virtual waiting room. The authors of this study, who are also clinicians, designed the questionnaires that consisted of two parts, an analogue scale and short answer questions. The questions included patient demographics, any connection issues, if the consult was easy to follow, consultation satisfaction, and if they would prefer to have video consultations instead of face-to-face appointments when appropriate. The clinicians involved in taking on the virtual clinics were three orthodontic consultants, two post- CCSTs, one orthodontic registrar and two orthodontic therapists. The questionnaires were given to the patients at the end of their consultation, and data was collected over a one-week period. A total of 121 questionnaires were completed, including 59 patients and 62 clinicians.

Of the 59 patients who participated, 63% were female and 37% were male. More than half of the questionnaires were completed by the patient (63%), 24% by the parent, 12% both parent and patient, and 1% by another family member. 55 participants found the instructions easy to follow regarding accessing the video consultation, and 4 participants stated that it was not. If done differently, they would want the instructions to provide more information regarding the appointment. 76% of the patients believe it is more convenient to have virtual consultations than a face-to-face appointment, 5% have no reference, and 19% would prefer a face-to-face appointment. On the analogue scale, 10 is very satisfied and 1 is not at all satisfied. 57 patients (97%) rated their appointments between a 7-10. If appropriate, 66% would like to have a virtual consult and 5% would like to have one, but it would depend on the type of appointment. To improve the consultation, most of the patients had no feedback.

Of the 62 cases that clinicians who participated, 90% did not experience connection issues for 70% of the appointment time. 30% of the connection issues deal with sound difficulties and delays. For one appointment, the patient had to reconnect due to signal loss, and for two appointments, the patient was not present with their parent when needed to do so. 54 out of the 62 cases, the clinicians gathered the information they needed from the patient. A proforma was used to keep the appointment in order so that all the information was gathered from the patient. 57 out of the 62 cases, radiographs and clinical photographs to use during the consultation were available. 90% of the appointments were appropriate for a virtual consult.

Based on the authors’ findings, they conclude that the overall satisfaction of patients during the COVID-19 pandemic was high. Attend Anywhere was easy to follow, and to improve connection issues, both patients and clinicians should have a good internet connection. Before setting up virtual appointments, it is important to triage each patient (who needs to be seen first immediately and who can wait) and determine which type of patient qualifies for these appointments. For example, an orthodontic patient would qualify for a virtual consult if they needed retainer reviews, treatment planning appointments, a review of dental development, and records should be available. 90% of the clinicians felt satisfied with their patient’s appointment, but 36% still felt that the patient would benefit from a follow up face-to-face consult. The authors concluded that a benefit of a virtual consultation is that there is no traveling involved, with evidence that 76% of the patients found the video consultation more convenient than a face-to-face appointment. However, this percentage might have been influenced by the situation during COVID-19; children were off from school and adults were working from home. Now, children are back at school and most adults are traveling to work every day which makes it more difficult to attend a virtual consultation. The authors propose is to continue utilizing teledentistry and to adopt this new remote way of working in practice for the appropriate patients.

This study is very important because it involves an important topic that can benefit everyone. Teledentistry can improve access to care, reduce travel expenses, provide better access for people with disabilities, reduce time away from work, and improve oral hygiene education. These findings can be applied to the field of dental hygiene because dental professionals can use teledentistry to teach patients how to brush and floss, educate patients on good oral hygiene, provide tobacco cessation, and ensure that patients do not get grumpy in the waiting room to be seen by a dentist. A concern that I have on this topic is the quality of care the patient would receive. What if my camera quality is poor and the clinician cannot see clearly what I am showing? What if there are connection issues and I waste my time on my computer and end up having to go in person anyway? People avoid going to the dental office because of their fear of pain or discomfort, or because they feel like the dental professional is intruding on their personal space. I would like to know about the relationship between teledentistry and anxiety.