

# Acceptability of teledentistry during the COVID-19 pandemic in Saudi Arabia

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| <b>Submission date</b><br>11/06/2021   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input checked="" type="checkbox"/> Protocol |
| <b>Registration date</b><br>14/06/2021 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input checked="" type="checkbox"/> Results |
| <b>Last Edited</b><br>17/08/2022       | <b>Condition category</b><br>Oral Health          | <input type="checkbox"/> Individual participant data  |

## Plain English summary of protocol

### Background and study aims

COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. Dental care has to be maintained during the COVID-19 outbreak. One of the suggested options to use during the outbreak is telehealth and teledentistry. Teledentistry is defined as “the remote provision of dental care, advice, or treatment through the medium of information technology, rather than through direct personal contact with any patient(s) involved”. This study aims to assess the validity, knowledge, attitude, perceptions and challenges of using teledentistry for diagnosis among dental patients compared to regular dental visits in Saudi Arabia during the COVID-19 pandemic.

### Who can participate?

Patients aged 18 years and over recruited from Umm Al-Qura University (UQU) Dental School, Makkah, Saudi Arabia.

### What does the study involve?

Participants are randomly allocated into the study group or the control group. The study group receive a tele-dentistry session followed by an assessment questionnaire to evaluate their knowledge, attitude, perception, and challenges of teledentistry, in addition to an experience assessment part to evaluate their impression of experiencing teledentistry. The control group receive nothing other than the assessment questionnaire.

### What are the possible benefits and risks of participating?

The main benefit is receiving a diagnosis during the teledentistry session. There are no expected risks.

### Where is the study run from?

Umm Al-Qura University Dental Hospital (Saudi Arabia)

### When is the study starting and how long is it expected to run for?

June 2020 to August 2022

Who is funding the study?  
Investigator initiated and funded

Who is the main contact?  
Dr Khalid Aboalshamat  
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## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**Clinical Trials Information System (CTIS)**  
Nil known

**ClinicalTrials.gov (NCT)**  
Nil known

**Protocol serial number**  
HAPO-02-K-01 2-2021-O1-521

## Study information

**Scientific Title**  
Validity, knowledge, attitude, perception and challenges of using teledentistry among dental patients in Saudi Arabia during the COVID-19 pandemic: a randomized clinical trial

**Study objectives**

Is it valid to use teledentistry for diagnosis compared to a regular dental visit, and what is the level of knowledge, attitude, perceptions and challenges of using teledentistry among dental patients in Saudi Arabia during the COVID-19 pandemic?

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Approved in 10/01/2021, Umm Al-Qura University Institutional Review Board (Umm Al-Qura University, Makkah, 24352, Saudi Arabia; +966 (0)125270000; irb.uqudent@uqu.edu.sa), ref: HAPO-02-K-012-2021-01-521

### **Study design**

Parallel-group single-blind randomized controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Diagnostic

### **Health condition(s) or problem(s) studied**

Teledentistry

### **Interventions**

Randomization is conducted using software to randomly divide the participants into the study group and the control group.

In the study group, the participants are contacted via a WhatsApp social media platform and are given a video demonstrating how to take a proper intraoral photograph. Then they are asked to take five intraoral pictures and send them via WhatsApp. The WhatsApp social media platform is used because of the end-to-end encryption to preserve patient confidentiality. Then the research team have a teledentistry session with the participant. The session is a phone call for about 10 minutes. The first three minutes include questions about past dental history helping the data collector to collect information about the chief complaint and medical history. The next 3 minutes investigate the Decayed, Missing, Filled (DMF) index for each tooth and oral hygiene status. Further information is discussed with the participant in regards to what was found in the sent pictures to clarify anything that cannot be visualized. This discussion also asks about their last dental visit, other dental symptoms, and past dental procedures to help with assessment. After that, the data collector discusses with the participant his/her chief complaint with an emergency evaluation and initial recommendation in simple language. The rest of the session is for the participant's questions and concerns. After that the participant receives a self-report questionnaire to assess their knowledge, attitude, perception, challenges toward teledentistry and their impression from the teledentistry experience.

The control group receive a self-report questionnaire to assess their knowledge, attitude, perception, challenges toward teledentistry without any intervention.

### **Intervention Type**

Other

**Primary outcome(s)**

1. The validity of using teledentistry for diagnosis measured using dental records and clinical examination at baseline and follow up visit (between 1-3 months)
2. The knowledge, attitude, perceptions and challenges of using teledentistry measured via questionnaire at baseline and follow up visit (between 1-3 months)

**Key secondary outcome(s)**

There are no secondary outcome measures

**Completion date**

01/08/2022

**Eligibility****Key inclusion criteria**

1. Adult over 18 years of age
2. Arabic speakers living in Saudi Arabia
3. Have smartphone and social media apps (WhatsApp), with a valid contact number to use for communication during the tele-dental consultation
4. Agree to participate in the intervention and answer all the questionnaires

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

70

**Key exclusion criteria**

1. Patients with hearing problems
2. Did not approve to participate in the trial and did not sign the consent form

**Date of first enrolment**

17/02/2021

**Date of final enrolment**

08/04/2021

# Locations

## Countries of recruitment

Saudi Arabia

## Study participating centre

Umm Al-Qura University Dental Hospital

Taif Road, 21955

Makkah

Saudi Arabia

21955

# Sponsor information

## Organisation

Umm al-Qura University

## ROR

<https://ror.org/01xjqrm90>

# Funder(s)

## Funder type

Other

## Funder Name

Investigator initiated and funded

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author Dr Khalid Aboalshamat (ktaboalshamat@uqu.edu.sa) on reasonable request as an SPSS file (unidentified). The data will be available upon request for 2 years. Data can be accessed by the journal to which the researchers will submit their article, any Saudi Governmental authority, and researchers after careful consideration of their scientific intention to use. All data are anonymous with no identification.

## IPD sharing plan summary

Available on request

## Study outputs

| Output type                                   | Details                       | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|-------------------------------|--------------|------------|----------------|-----------------|
| <a href="#">Results article</a>               |                               | 01/06/2022   | 17/08/2022 | Yes            | No              |
| <a href="#">Participant information sheet</a> |                               |              | 08/07/2021 | No             | Yes             |
| <a href="#">Participant information sheet</a> | Participant information sheet | 11/11/2025   | 11/11/2025 | No             | Yes             |
| <a href="#">Protocol file</a>                 |                               |              | 08/07/2021 | No             | No              |