

# Remote learning in a periodontal workshop during the COVID-19 pandemic

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## 1 | PROBLEM

Social distancing guidelines and shelter in place orders due to the coronavirus disease 2019 (COVID-19) pandemic have made preclinical instruction in periodontics challenging. Ordinarily, 18–36 students would be working in the clinic in teams of three, practicing infection control protocols, performing periodontal examinations, practicing periodontal instrumentation, and improving their communication skills. Clinical dentistry involves decision-making skills, communication skills, and most importantly, psychomotor skills. How can dental students replicate a periodontal recall visit virtually, in preparation for treating patients?

## 2 | SOLUTION

The teaching process in periodontics that had been in place before the pandemic was a product of incremental development. The theme for the current quarter was Recall Care. Once it was decided that the instruction would be virtual, faculty were trained to teach via Webex (Cisco Systems, Inc., San Jose, CA, USA). A flipped classroom approach was used. Every week, students followed a familiar schedule, watched curated educational videos, looked up answers to critical thinking questions prior to the workshop, and engaged in discussions with familiar faculty. Ample time was allotted for question and answer or discussion. Students were graded on their participation in the seminar. Questions that were not answered in class were addressed through email in a timely manner. Participant

feedback was reviewed for implementation before the subsequent groups rotated through. Faculty also offered small group or individual videoconference tutoring as needed. Technical support operators were readily available ensuring a smooth virtual experience.

## 3 | RESULTS

### 3.1 | What went well?

Attendees were able to participate despite environmental circumstances, differences in time zones, etc. Students reviewed the sequence of clinical care and were kept informed of changing guidelines concerning personal protective equipment. Small groups discussed various aspects of instrumentation and patient management, addressed broader concerns pertaining to becoming a provider, and received timely grading and feedback. Students as a group, reaped the benefit of one person posing a question and having multiple faculty offer responses in real time. Students gave positive feedback on this format; they appreciated the pace, efficiency, and the learning effectiveness.

### 3.2 | What did not go well?

A true clinical simulation was not possible because not all students had the necessary equipment and instruments. Faculty and students were unable to utilize the camera during lessons due to connectivity issues. Faculty could not give very detailed personalized feedback to students.

### 3.3 | Lessons learned

There is an underutilization of videoconferencing applications and other technology to engage students in synchronous and asynchronous teaching. It is important to understand the limitations of remote learning and design learning objectivess accordingly. Teaching manual skills is a unique challenge to meet and may need to be separated from the virtual experience, taught in a laboratory environment, or delayed until initial clinical experiences begin. With the possibility of a resurgence of the pandemic in the future, it is imperative that we evaluate this experience and attempt to streamline our objectives. Future direction could be to assess students' ability to perform the sequence of clinical care, via recorded video of them role playing a recall periodontal appointment. Case-based discussions could provide context and help with the decision-making process.

### REFERENCES

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