Interim Protocol for Preventive Dental Care During COVID-19 in Public Health Settings: Reducing Aerosols and Educating Patients

Introduction
It is important that clinicians follow the Centers for Disease Control and Prevention (CDC) Interim Infection Prevention and Control Guidance for Dental Settings During the COVID-19 and Cal/OSHA safety guidance on Coronavirus. The California Department of Public Health, Office of Oral Health assembled a workgroup to provide guidance for dental health care professional (DHCP) working in public health settings. The workgroup provided input for an interim protocol to reduce aerosols during preventive dental visits and has provided recommendations for patient education.

Preventive Dental Care During COVID-19 Pandemic
Providing preventive dental services should be a primary focus in preventing potential dental emergencies. To preserve personal protective equipment, DHCP may provide as many services as possible during a dental visit.

Dental Prophylaxis:
Dental prophylaxis is a procedure of scaling and polishing to remove calculus, soft deposits, plaque and stains. Removal of hard deposits and stains using devices such as rotary instruments and ultrasonic scalers generate droplets and aerosols. Therefore, cleaning of teeth by hand scalers, toothbrush and selective tooth polishing is recommended at this time. This dental visit provides an opportunity to demonstrate toothbrushing techniques and flossing and emphasize the importance of daily home care. In addition, this visit may include clinical assessment, oral cancer screening and periodontal measurements.

It is necessary to counsel the patient on types of stain and purpose of selective polishing. Extrinsic stain does not harbor bacteria, therefore there is no therapeutic value in removing stain. Patients presenting with stain from tobacco are most at risk for stain and other negative health outcomes. Counseling and referring patients who use tobacco products to the California Smoker’s Hotline https://www.nobutts.org/ is advised.

Dental Sealants:
Dental Sealants can be placed by cleaning tooth surfaces with a toothbrush to remove plaque and debris. Cotton tips and gauzes can be used instead of air/water syringe. When available, use four handed dentistry. Glass ionomer sealants are preferable because they are moisture tolerant and continue to release fluoride long after applied.

Fluoride Varnish:
Fluoride varnish can be painted on the teeth without performing dental prophylaxis. If fluoride varnish is placed in an alternative setting (e.g.: medical office, school, skilled nursing facility), appropriate personal protective equipment should be worn.

Silver Diamine Fluoride (SDF)
SDF can be placed with minimal aerosols and may be an alternative to restorations for some patients during this time. This can be accomplished by removing plaque and debris with gauze or oral hygiene aid (e.g.: toothbrush, proxy brush), and limiting the use of air and water. When available use of four handed dentistry should be employed.
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Recommendations for educating patients:

- Explain selective polishing and the causes of stains. Counsel patients with tobacco stain and refer to CA Smoker’s Helpline: https://www.nobutts.org/.

- Communicate the changes in the procedures to reduce aerosols.

- Discuss the role of an antimicrobial rinse prior to a procedure.

- Encourage healthy habits including daily flossing and brushing 2x day for 2 minutes with a fluoride toothpaste and healthy diet.

Healthy or Maintained Patients

Plaque Removal

- Light Plaque
  - Wipe teeth, gums, and vestibules with gauze

- Heavy Plaque
  - Scale & brush patient’s teeth with a toothbrush dipped in an antimicrobial agent. Other aids can be used such as a rubber tip, proxy brush, or end tuft brush and floss.

Stain Removal

- No
  - Educate patient, document in chart, and address at next appointment

- Yes
  - In addition to the above, scale & toothbrush. Counsel on cause of stain. Exercise professional judgment if selective polishing is needed.

Preventive Care

- Fluoride Varnish
- GI Sealants
- Silver Diamine Fluoride (SDF)

Use toothbrush to clean pits and fissures; cotton tip and gauze to dry tooth surface instead of air/water syringe. Utilize glass ionomer (GI) sealant.

Note: Avoid or limit polishing on patients presenting with active gingival inflammation; this may exaggerate or worsen chances of bacteremia.
Communication to the Dental Health Care Personnel to Limit or Reduce Aerosols at Prophy Appointment

Prior to preventive dental visits - Messaging for the Patient
It is important to educate patients about the production of aerosols during a preventive dental visit and why this must be limited or reduced during the time of community transmission of COVID-19.

- Inform patients that some procedures may be different to limit or reduce aerosols including the use of the air/water syringe, ultrasonic scaling and polishing. Provide reasons for not using the rubber cup:
  - Produces abundant aerosols and splatter that can present an infection transmission hazard
  - Abrasives remove superficial fluoride rich enamel layer of tooth

- Communicate with patient before appointment and ask them to brush and floss their teeth.
- Brushing and flossing should be done at home and not in a public restroom. Educate patients that the procedures look and feel a little different at the dental clinic during the current COVID outbreak.
  - Due to the aerosol and splatter produced during traditional dental cleanings, we feel this is a great opportunity to provide alternatives available in achieving and maintaining optimal oral health.
  - There is real value in these alternative methods, we are going to start with an antimicrobial mouthwash that has been shown to be valuable in decreasing disease from gingivitis to dental cavities.
  - Fluoride varnish reduces sensitivity and cavities.

During Visit: Messaging for the Patient
Limiting or reducing aerosols is an important safety measure that dental clinics must now take to prevent transmission and assure the safety of staff and patients. Remind patients:

- **Routine home care is vital,** and they play a major role in the health of their mouth and body and helping to keep their immune system stronger to fight infection. Generally, routine home care should include:
  - Brushing twice a day for two minutes with fluoride toothpaste.
  - Floss or clean between teeth once a day.
  - Limit foods and drinks containing sugar and fermentable carbohydrates.
  - Drink tap water. Encourage the use of fluoridated water where available.

- **Wash hands before and after brushing and flossing.**
- **Replace toothbrushes when bristles begin to fray or after illness.**
- **If you have a dental emergency, call your dental office.** Do not go to the emergency room.

Conclusion
Providing preventive services plays a crucial role in preventing potential dental emergencies. However, DHCPs are also at high risk for exposure to SARS-CoV-2 because of aerosol generating procedures. Limiting or eliminating aerosols during preventive appointments will substantially reduce this risk of exposure and transmission. Educating patients about this modification to the practice of dentistry is an important priority, as well as promoting preventive care and routine home care. A protocol for Dental Health Care Professionals (DHCP) is provided in Appendix 1.
The following is an excerpt from the CDC Guidelines for Work Place Practice- CDC Administrative Controls and Work Practices In the Dental Setting: [https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html](https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html)

- DHCP should limit clinical care to one patient at a time whenever possible.
- Set up operatories so that only the clean or sterile supplies and instruments needed for the dental procedure are readily accessible. All other supplies and instruments should be in covered storage, such as drawers and cabinets, and away from potential contamination. Any supplies and equipment that are exposed but not used during the procedure should be considered contaminated and should be disposed of or reprocessed properly after completion of the procedure.
- Avoid aerosol-generating procedures whenever possible. Avoid the use of dental handpieces and the air/water syringe. Use of ultrasonic scalers is not recommended. Prioritize minimally invasive/traumatic restorative techniques (hand instruments only).
- If aerosol-generating procedures are necessary for dental care, use four-handed dentistry, high evacuation suction and dental dams to minimize droplet spatter and aerosols. The number of DHCP present during the procedure should be limited to only those essential for patient care and procedure support.
- Preprocedural mouth rinses (PPMR)
  - There is no published evidence regarding the clinical effectiveness of PPMRs to reduce SARS-CoV-2 viral loads or to prevent transmission. Although COVID-19 was not studied, PPMRs with an antimicrobial product (chlorhexidine gluconate, essential oils, povidone- iodine or cetylpyridinium chloride) may reduce the level of oral microorganisms in aerosols and spatter generated during dental procedures.

Other materials that helped inform the Workgroup

- AAP Policy on the Role of Dental Prophylaxis in Pediatric Dentistry: [https://www.aapd.org/globalassets/media/policies_guidelines/p_prophylaxis.pdf](https://www.aapd.org/globalassets/media/policies_guidelines/p_prophylaxis.pdf)
- ADA Evidence-Based Clinical Practice Guideline on Nonrestorative Treatments for Carious Lesions: [https://jada.ada.org/article/50002-8177(18)30469-0/fulltext](https://jada.ada.org/article/50002-8177(18)30469-0/fulltext)
- Glass Ionomer sealant video: [http://www.getsealants.com/resources.php](http://www.getsealants.com/resources.php)

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