

Interim Dental Infection Prevention and Control Guidance for the COVID-19 Response – A New Paradigm



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- This course may not satisfy individual state requirements on CDC/Infection Control. Please check with your State Board to verify.

Conflict of Interest Disclosure Statement

- Dr. Huber has done consulting work for Procter & Gamble and serves on the dentalcare.com Advisory Board.

Introduction

Interim Dental Infection Prevention and Control Guidance for the COVID-19 Response – A New Paradigm presents additional and revised essential elements of a hierarchical infection control/exposure control program for and its implementation in oral healthcare settings during the COVID-19 pandemic.

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Overview

This course addresses recently released interim guidance from the CDC for the dental profession to deliver non-emergent patient care during the COVID-19 pandemic. The additional measures proscribed are best considered a supplement to, not a replacement of [*"Clinical Practice Guideline for an Infection Control/Exposure Control Program in the Oral Healthcare Setting \(CE342\)."*](#)

Learning Objectives

Upon completion of this course, the dental professional should be able to:

- Understand the rationale necessitating the incorporation of additional transmission-based precautions and practices intended to prevent or minimize SARS-CoV-2 exposure and infection in the oral healthcare setting.
- Understand the rationale for and implement an appropriate screening protocol for all patients to reduce the potential exposure to SARS-CoV-2.

- Understand and implement strategies to strengthen hand hygiene, respiratory, and cough etiquette protocols for patients and office staff to reduce potential exposure to SARS-CoV-2.
- Understand the need to bring equipment back into service in accordance with manufacturer recommendations.
- Understand and implement a scheduling and work practice protocol to avoid patient therapy overlap and reduce the use of aerosol-producing procedures.
- Understand and adjust as feasible engineering controls to reduce aerosol exposure to SARS-CoV-2.
- Understand the importance of proper hand hygiene and implement appropriate hand hygiene protocols.
- Understand the purpose of source control and incorporate source control protocols to reduce the risk of exposure to SARS-CoV-2.
- Understand the types of PPE used to manage COVID-19 and educate OHCP on appropriate selection and use.
- Understand the principles of proper environmental cleaning and disinfection and ensure appropriate protocol are used to reduce exposure to SARS-CoV-2.
- Understand need for and ensure appropriate sterilization techniques are used to sterilize and disinfect patient care items.
- Understand the need for and develop a protocol to manage the patient with suspected or confirmed COVID-19.
- Understand the limited value of using a test-based strategy to inform patient care.
- Understand the importance of and implement a protocol to monitor and manage dental health care personnel.
- Ensure regular training is accomplished to reinforce measures to reduce the risk of SARS-CoV-2.

Introduction

In response to the COVID-19 pandemic in the United States, in March, 2020, the Centers for Disease Control and Prevention (CDC) and the American Dental Association (ADA) recommended that dental practices defer the delivery of non-emergent dental care and prioritize care delivery to address only urgent and emergency needs.^{1,2} The intent of the guidance was to protect staff and preserve

personal protective equipment (PPE) and patient care supplies, as well as expand available hospital capacity to address the pandemic. However, as the pandemic continues to evolve, the need to address routine dental needs has grown. In response to this need, the CDC and ADA have developed interim guidelines for dental practices to deliver non-emergent dental care during the pandemic.^{2,3}

Background

While the overall transmission of pathogenic microorganisms in oral healthcare settings remains rare, the recent COVID-19 pandemic confirms healthcare-associated infections (HAIs) continue to present a potential hazard to oral health care professionals (OHCPs) and patients alike. The novel SARS-CoV-2, the virus that causes COVID-19, presents several features that, when considered in total, pose a significant new infection control challenge to the OHCP:

- It is a highly contagious respiratory virus.⁴
- It is primarily spread via mucosal (e.g., mouth, nose, eyes, lungs) exposure to respiratory droplets produced when the infected person speaks, coughs, or sneezes.²
- Airborne transmission of small aerosolized particles or droplet nuclei is likely, but person-to-person transmission over long distances (>6 feet) is unlikely.²
- Compared to other respiratory viruses (e.g., common cold, influenza), asymptomatic spread (40% - 45%) appears to be significant.⁵
- As a novel virus, there is no established natural human herd immunity.

The risk of occupational exposure to SARS-CoV-2 in the dental practice environment is considered to be very high.^{2,6} Dental settings have unique characteristics that warrant specific infection control considerations to guide the safe delivery of dental care during the COVID-19 pandemic. Common dental procedures such as tooth preparation and osseous removal with rotary handpieces; tooth cleaning with ultrasonic scalers; and cleansing of the oral environment with air-water syringes all generate contaminated visible sprays and aerosols. The commonly used surgical masks in dentistry

protect mucous membranes of the mouth and nose from droplet spatter, but they are insufficient to provide high-level protection against inhalation of airborne infectious agents such as SARS-CoV-2.^{7,8}

To prevent or minimize COVID-19 infection among OHCPs and patients, the CDC recently released interim guidance for OHCPs to deliver non-emergent patient care during the COVID-19 pandemic. The proscriptive nature of these guidelines incur significant additional requirements on the outpatient dental care delivery model. As such, the guidelines attempt to reasonably maximize aerosol mitigation against the reality that most, if not all, outpatient dental facilities are neither designed nor equipped to routinely manage aerosol-based infections.^{9,10}

As more is learned about SARS-CoV-2, the interim guidelines will undoubtedly change and OHCPs should regularly consult their state dental boards and state or local health departments regarding practice requirements specific to their jurisdictions, including recognizing the degree of community transmission and impact (Table 1).

General measures include:

- Practice universal active source control and patient screening for fever and symptoms of COVID-19 for all who enter the dental facility.
- If patients do not exhibit symptoms consistent with COVID-19, provide dental treatment only after you have assessed the patient and considered both the risk to the patient of deferring care and the risk to OHCP of healthcare-associated disease transmission.
- Ensure the availability of the necessary PPE and supplies to support your patient volume. If PPE and supplies are limited, prioritize dental care to manage the highest need, most vulnerable patients first.
- Consider all patients infectious and incorporate the additional consideration described in the interim guidance detailed below.

Table 1. Community Transmission Categorizations.²

<p>No to minimal community transmission: Evidence of isolated cases or limited community transmission, case investigations underway; no evidence of exposure in large communal setting.</p>	<p>Dental care can be provided to patients without suspected or confirmed COVID-19 using strict adherence to Standard Precautions.</p> <p>Given that patients may be able to spread the virus while asymptomatic or pre-symptomatic, it is recommended that OHCP practice according to CDC Interim Infection Prevention and Control Guidance for Dental Settings During the COVID-19 Response.</p> <p>Because transmission patterns can change, OHCP should stay updated about local transmission trends.</p>
<p>Minimal to moderate community transmission: Sustained transmission with high likelihood or confirmed exposure within communal settings and potential for rapid increase in cases.</p>	<p>Dental care can be provided to patients without suspected or confirmed COVID-19 using the CDC Interim Infection Prevention and Control Guidance for Dental Settings During the COVID-19 Response.</p>
<p>Substantial community transmission: Large scale community transmission, including communal settings (e.g., schools, workplaces).</p>	

Patient Management Considerations

Implement a pre-appointment screening protocol and an upon arrival assessment protocol for all patients to reduce potential exposure to SARS-CoV-2.²

- Contact all patients prior to dental treatment (e.g., telephone, text, videoconference, secure website).³
 - Screen all patients for symptoms consistent with COVID-19 (Table 2).¹¹ A useful list of screening questions is available from the ADA.³
 - Avoid non-emergent dental care if the patient reports symptoms of COVID-19. When possible, delay dental care until the patient has recovered.
- Assess and triage the patient's dental condition and determine whether the patient needs to be seen in office. If feasible, consider the use of teledentistry options as alternatives to in-office care.
- Advise patient or guardian of the need to limit the number of accompanying visitors to only those necessary (e.g., guardian, driver).
- Advise patient or guardian that all who come to the office will undergo screening for fever and COVID-19 symptoms and be requested to wear a face covering when entering the office.
- Systematically assess all patients and visitors upon arrival.
 - Ensure that the patient and those accompanying them have donned their own face covering, or provide a surgical mask if supplies are adequate.

- Ask about the presence of fever or other symptoms consistent with COVID-19.
- Actively take the patient's temperature.
- If the patient is afebrile (temperature < 100.0°F) and otherwise without symptoms consistent with COVID-19, then dental care may be provided using appropriate engineering and administrative controls, work practices, and infection control considerations described in this document.
 - Fever may be subjective or confirmed. If the patient has a fever strongly associated with a dental diagnosis (e.g., pulpal and periapical dental pain and intraoral swelling is present), but no other symptoms consistent with COVID-19 are present, care can be provided with appropriate protocols.
- Ask patient to re-don their face covering at the completion of their clinical dental care when they leave the treatment area.
- Even with appropriate screening, inadvertent treatment of a dental patient who is later confirmed to have COVID-19 may occur. Therefore, OHCPs should request that the patient inform the dental office if they develop symptoms or are diagnosed with COVID-19 within 2 days following the dental appointment.¹²

Facility Considerations

Strengthen hand hygiene, respiratory, and cough etiquette protocols for patients and office staff to reduce potential exposure to SARS-CoV-2.²

- Post visual alert icons (e.g., signs, posters) at the entrance and other conspicuous areas (e.g., waiting areas, elevators, break rooms) to provide instructions (in appropriate languages) about when and how to perform hand hygiene and how to practice proper respiratory hygiene and cough etiquette. Facilities should require the wearing of a cloth face covering or facemask for source control.
- Provide supplies for hand hygiene, respiratory hygiene and cough etiquette at office entrances, waiting rooms, and patient

Table 2. Symptoms* Suggestive of COVID-19.¹¹

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

* Symptoms may appear 2-14 days after exposure to the virus.

check-in areas to include alcohol-based hand rub (ABHR) with 60 – 95% alcohol, tissues, and no-touch trash receptacles for disposal.

- Install physical barriers (e.g., glass or plastic windows) at reception areas to limit close contact between office personnel and potentially infectious patients.
- Ensure office waiting room / reception area allows for appropriate social distancing.
 - Chairs placed at least six feet apart.
 - Remove high touch items such as toys and magazines that cannot be regularly and/or effectively cleaned or disinfected from waiting areas.
 - Regularly disinfect high touch items that patients may contact (e.g., doorknobs, light switches, chair arm, tables, hangers).³
- Minimize the number of persons waiting in the waiting room.
 - If necessary, patients may be directed to wait in a personal vehicle or outside the dental office to be contacted by mobile phone when it is their turn for dental care.
- Minimize overlapping dental appointments.

Equipment Considerations

Ensure dental equipment is maintained and brought back into service in accordance with manufacturer recommendations.²

- After an extended period of non-use, dental equipment may require specific maintenance and/or repair. Review the manufacturer's instructions for use (IFU) when bringing equipment back into service. Some considerations include:
 - Dental unit waterlines (DUWL):
 - Verify water quality meets standards for safe drinking water as established by the Environmental Protection Agency (EPA) (< 500 CFU/mL) prior to delivering dental care.
 - Follow manufacturer IFU guidance regarding the need to shock DUWL of any devices and products that deliver water used for dental procedures.
 - Continue standard maintenance and monitoring of DUWL according to the IFUs of the dental operatory unit and the DUWL treatment products.
 - Autoclaves and instrument cleaning equipment
 - Ensure that all routine cleaning and maintenance has been performed according to the schedule recommended per manufacturer's IFU.
 - Test sterilizers using a biological indicator with a matching control (i.e., biological indicator and control from same lot number) after a period of non-use prior to reopening per manufacturer's IFU.
 - Air compressor, vacuum and suction lines, radiography equipment, high-tech equipment, amalgam separators, and other dental equipment: Follow protocol for storage and recommended maintenance per manufacturer IFU.
- For additional guidance on reopening buildings, see CDC's "Guidance for

Reopening Buildings After Prolonged Shutdown or Reduced Operation."¹³

Administrative Controls and Work Practice Considerations

Align scheduling to avoid patient therapy overlap and minimize aerosol-generating procedures to the greatest extent possible.²

- OHCP 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 planned dental procedure are readily accessible.
 - 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 (e.g., use of dental handpieces air/water syringe and ultrasonic scalers).
 - Prioritize minimally invasive/atraumatic 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.
- Limit the number of OHCP in the operatory to only those essential for patient care and procedure support.
- The use of a preprocedural mouth rinses (PPMR) to reduce viral load or prevent SARS-CoV-2 transmission has not been clinically validated.¹⁴ Nonetheless, the use of antimicrobial PPMR (e.g., chlorhexidine gluconate, essential oils, povidone-iodine or cetylpyridinium chloride) may reduce the level of oral microorganisms in aerosols and spatter.

Engineering Controls

Incorporate appropriate engineering controls to reduce potential risk to patients and office personnel via aerosol exposure of SARS-CoV-2.²

CDC does not provide guidance on the decontamination of building heating, ventilation, and air conditioning (HVAC) systems potentially exposed to SARS-CoV-2. To date, CDC has not identified confirmatory evidence to demonstrate that viable virus is contaminating these systems. CDC provides the following recommendations for proper maintenance of ventilation systems and patient placement and volume strategies in dental settings.

- Properly maintain ventilation systems.
 - Ventilation systems that provide air movement in a clean-to-less-clean flow direction reduce the distribution of contaminants and are better at protecting staff and patients. For example, in a dental facility with staff workstations in the corridor right outside the patient operatories, supply-air vents would deliver clean air into the corridor, and return-air vents in the rear of the less-clean patient operatories would pull the air out of the room. Thus, the clean air from the corridor flows past the staff workstations and into the patient operatories. Similarly, placing supply-air vents in the receptionist area and return-air vents in the waiting area pulls clean air from the reception area into the waiting area.
 - Consult a HVAC professional to investigate increasing filtration efficiency to the highest level compatible with the HVAC system without significant deviation from designed airflow.
 - Consult a HVAC professional to investigate the ability to safely increase the percentage of outdoor air supplied through the HVAC system (requires compatibility with equipment capacity and environmental conditions).
 - Limit the use of demand-controlled ventilation (triggered by temperature set point and/or by occupancy controls) during occupied hours, and when feasible, up to 2 hours post occupancy to assure that ventilation does not automatically change. Run bathroom exhaust fans continuously during business hours.
- Consider the use of a portable HEPA air filtration unit while the patient is actively undergoing, and immediately following, an aerosol-generating procedure.
 - Select a HEPA air filtration unit based on its Clean Air Delivery Rate (CADR). The CADR is an established performance standard defined by the Association of Home Appliance Manufacturers and reports the system's cubic feet per minute (CFM) rating under as-used conditions. The higher the CADR, the faster the air cleaner will work to remove aerosols from the air.
 - Rather than just relying on the building's HVAC system capacity, use a HEPA air filtration unit to reduce aerosol concentrations in the room and increase the effectiveness of the turnover time.
 - Place the HEPA unit near the patient's chair, but not behind the OHCP. Ensure the OHCP are not positioned between the unit and the patient's mouth. Position the unit to ensure that it does not pull air into or past the breathing zone of the OHCP. The use of these units will reduce particle count (including droplets) in the room and will reduce the amount of turnover time, rather than just relying on the building HVAC system capacity.
- Consider the use of upper-room ultraviolet germicidal irradiation (UVGI) as an adjunct to higher ventilation and air cleaning rates.¹⁵
- Patient placement
 - Ideally, dental treatment should be provided in individual patient operatories whenever possible.
 - For dental facilities with open floor plans, to prevent the spread of pathogens there should be:
 - At least 6 feet of space between patient chairs.
 - Physical barriers placed between patient chairs. Easy-to-clean floor-to-ceiling barriers enhance effectiveness

- of portable HEPA air filtration systems (verify that extending barriers to ceiling will not interfere with fire sprinkler systems).
- If possible, operatories should be oriented parallel to the direction of airflow.
- Where feasible, consider patient orientation carefully, placing the patient's head near the return air vents, away from pedestrian corridors, and towards the rear wall for vestibule-type office layouts.
- Patient volume
 - Ensure to account for the time required to clean and disinfect operatories between patients when calculating your daily patient volume.
 - Once the patient has left the room, OHCP (including environmental services personnel) should refrain from entering the vacated room used to treat **suspected or confirmed patients** with COVID-19 until sufficient time has elapsed for enough air changes¹⁶ to remove potentially infectious particles. After this time has elapsed, the room should undergo appropriate cleaning and surface disinfection before it is returned to routine use.
 - Parameters to consider in determining the time necessary to remove potentially infectious particles include: room air flow rate; use of HEPA air filtration devices; length of aerosol-generating procedures; and use of isolation and high-volume evacuation devices.¹⁷

Hygiene Considerations

Ensure disciplined hand hygiene protocols are followed by office personnel.²

- Accomplish hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE, including gloves. Hand hygiene after removing PPE is particularly important to remove any pathogens that might have been transferred to bare hands during the removal process.

- Use and alcohol-based hand rub (ABHR) with 60-95% alcohol or wash hands with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water before using an ABHR.
- Ensure hand hygiene supplies are readily available to all OHCP in every care location.

Universal Source Control

Ensure office personnel practice appropriate source control protocols to reduce the risk of patient and office personnel exposure to SARS-CoV-2.²

- OHCP should wear a face mask or cloth face covering **at all times** while they are in the dental setting, **including in breakrooms or other spaces where they might encounter co-workers.**
 - If available, surgical masks are preferred over cloth face coverings for OHCP; surgical masks offer both source control and protection for the wearer against exposure to splashes and sprays of infectious material from others.
 - Cloth face coverings are not PPE and are NOT an acceptable substitute for an N95 or higher efficiency respirator or surgical facemask if more than source control is required for patient management.
 - Respirators with an exhalation valve are not currently recommended for source control, as they allow unfiltered exhaled breath to escape. If only a respirator with an exhalation valve is available and source control is needed, the exhalation valve should be covered with a facemask that does not interfere with the respirator fit.
 - OHCP whose job duties do not require PPE (such as clerical personnel) should continue to wear their cloth face covering for source control while in the dental office setting.
 - Other OHCP (such as dentists, dental hygienists, dental assistants) may wear their cloth face covering when they are not engaged in direct patient care activities, and then switch to a respirator or a surgical mask when PPE is required.
 - OHCP should remove their respirator or surgical mask and put on their cloth face

covering when leaving the facility at the end of their shift.

- OHCP should be instructed to avoid touching or adjusting their mask or cloth face covering; if touching or adjusting occurs, the OHCP should perform hand hygiene immediately before and after.
- Facemasks and cloth face coverings can become saturated with respiratory secretions and OHCP should take steps to prevent self-contamination:
 - OHCP should change facemasks and coverings if they become soiled, damp, or difficult to breathe through.
 - Cloth face coverings should be laundered daily and when soiled.
 - OHCP should perform hand hygiene immediately before and after any contact with the facemask or cloth face covering.
 - All OHCP should be trained about when, how, and where cloth face coverings can be used, including frequency of laundering, guidance on when to replace them, circumstances when they can be worn in the facility, and the importance of hand hygiene to prevent contamination.

Using Personal Protective Equipment (PPE)

Ensure office personnel are trained to determine the proper selection and appropriate use of PPE to reduce the risk of patient and office personnel exposure to SARS-CoV-2.²

- Employers should select appropriate PPE and provide it to OHCP in accordance with Occupational Safety and Health Administration PPE standards (29 CFR 1910 Subpart I).¹⁸ OHCP must receive training on and demonstrate an understanding of:
 - when to use PPE;
 - what PPE is necessary;
 - how to properly don, use, and doff PPE in a manner to prevent self-contamination (Box A);¹⁹
 - how to properly dispose of or disinfect and maintain PPE;
 - the limitations of PPE.
- Dental facilities must ensure that any reusable PPE is properly cleaned,

decontaminated, and maintained after and between uses. Dental settings also should have policies and procedures describing a recommended sequence for safely donning and doffing PPE.

For OHCP working in facilities located in areas with no to minimal community transmission

- DHCP should continue to adhere to Standard Precautions (and Transmission-Based Precautions, if required based on the suspected diagnosis).
- OHCP should wear a surgical mask, eye protection (goggles, or **a face shield that covers the front and side of the face**), **a gown or protective clothing, and gloves** during procedures likely to generate splashing or spattering of blood or other body fluids. Protective eyewear with gaps between glasses and the face likely do not protect eyes from splashes and sprays.

For OHCP working in facilities located in areas with moderate to substantial community transmission

- DHCP working in facilities located in areas with moderate to substantial community transmission are more likely to encounter asymptomatic or pre-symptomatic patients with SARS-CoV-2 infection. If SARS-CoV-2 infection is not suspected in a patient presenting for care (based on symptom and exposure history), DHCP should follow Standard Precautions (and Transmission-Based Precautions, if required based on the suspected diagnosis).
- DHCP should implement the use of **universal eye protection** and wear eye protection in addition to their surgical mask to ensure the eyes, nose, and mouth are all protected from exposure to respiratory secretions during patient care encounters, including those where splashes and sprays are not anticipated.
- For aerosol-generating procedures, DHCP should use an N95 respirator²⁰ or a respirator that offers an equivalent or higher level of protection such as other disposable filtering facepiece respirators, PAPRs, or elastomeric respirators.²¹
 - Respirators should be used in the context of a respiratory protection program,

Box A. Suggested sequence for donning and doffing PPE:¹⁹

Before entering a patient room or care area:

1. Perform hand hygiene.
2. Put on a clean gown or protective clothing that covers personal clothing and skin (e.g., forearms) likely to be soiled with blood, saliva, or other potentially infectious materials.
 - Gowns and protective clothing should be changed if they become soiled.
3. Put on a surgical mask²³ or respirator.
 - Mask ties should be secured on the crown of the head (top tie) and the base of the neck (bottom tie). If the mask has loops, hook them appropriately around your ears.
 - Respirator straps should be placed on the crown of the head (top strap) and the base of the neck (bottom strap). Perform a user seal check each time you put on the respirator.
4. Put on eye protection.
 - Personal eyeglasses and contact lenses are NOT considered adequate eye protection.
5. Put on clean non-sterile gloves.
 - Gloves should be changed if they become torn or heavily contaminated.
6. Enter the patient room.

After completion of dental care:

1. Remove gloves.
2. Remove gown or protective clothing and discard the gown in a dedicated container for waste or linen.
 - Discard disposable gowns after each use.
 - Launder cloth gowns or protective clothing after each use.
3. Exit the patient room or care area.
4. Perform hand hygiene.
5. Remove eye protection.
 - Carefully remove eye protection by grabbing the strap and pulling upwards and away from head. Do not touch the front of the eye protection.
 - Clean and disinfect reusable eye protection according to manufacturer's reprocessing instructions prior to reuse.
 - Discard disposable eye protection after use.
6. Remove and discard surgical mask or respirator.
 - Do not touch the front of the respirator or mask.
 - Surgical mask: Carefully untie the mask (or unhook from the ears) and pull it away from the face without touching the front.
 - Respirator: Remove the bottom strap by touching only the strap and bring it carefully over the head. Grasp the top strap and bring it carefully over the head, and then pull the respirator away from the face without touching the front of the respirator.
7. Perform hand hygiene.

which includes medical evaluations, training, and fit testing.²²

- Respirators with exhalation valves should not be used for source control as unfiltered exhaled breath may compromise the sterile field during surgery. If only a respirator with exhalation valve is available and source

control is needed, the exhalation valve should be covered with a facemask that does not interfere with the respirator fit.

PE Supply Optimization Strategies:

Major distributors in the United States have reported shortages of PPE, especially surgical masks and respirators. The anticipated timeline

for return to routine levels of PPE is not yet known. The CDC has developed a series of strategies or options to optimize supplies of PPE²⁴ in healthcare settings when there is limited supply, and a burn rate calculator²⁵ that provides information for healthcare facilities to plan and optimize the use of PPE for response to the COVID-19 pandemic. Optimization strategies are provided for gloves, gowns, facemasks, eye protection, and respirators.

These policies are only intended to remain in effect during times of shortages during the COVID-19 pandemic. OHCP should review this guidance carefully, as it is based on a set of tiered recommendations. Strategies should be implemented sequentially. Decisions by facilities to move to contingency and crisis capacity strategies are based on the following assumptions:

- Facilities understand their current PPE inventory and supply chain;
- Facilities understand their PPE utilization rate;
- Facilities are in communication with local healthcare coalitions and federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) regarding identification of additional supplies;
- Facilities have already implemented engineering and administrative control measures;
- Facilities have provided OHCP with required education and training, including having them demonstrate competency with donning and doffing, with any PPE ensemble that is used to perform job responsibilities, such as provision of patient care.

For example, extended use of facemasks and respirators should only be undertaken when the facility is at contingency or crisis capacity and has reasonably implemented all applicable administrative and engineering controls. Such controls include selectively canceling elective and non-urgent procedures and appointments for which PPE is typically used by OHCP. Extended use of PPE is not intended to encourage dental facilities to practice at a normal patient volume during a PPE shortage, but only to be implemented in the short-term

when other controls have been exhausted. Once the supply of PPE has increased, facilities should return to standard procedures.

Respirators that comply with international standards may be considered during times of known shortages. CDC has guidance entitled “Factors to Consider When Planning to Purchase Respirators from Another Country”²⁶ which includes a webinar and Assessments of International Respirators.

Environmental Infection Control

Ensure adequate environmental cleaning and disinfections protocols are consistently accomplished to reduce the risk of patient and office personnel exposure to SARS-CoV-2.²

- OHCP should ensure that environmental cleaning and disinfection procedures are performed in a disciplined and consistent manner after each patient.
 - Clean and disinfect the room and equipment according to the Guidelines for Infection Control in Dental Health-Care Settings – 2003.⁷
- Routine cleaning and disinfection procedures (e.g., using cleaners and water to clean surfaces before applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label) are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.
 - Refer to List N on the EPA website for EPA-registered disinfectants that have qualified under EPA’s emerging viral pathogens program for use against SARS-CoV-2.²⁷
- Alternative disinfection methods:
 - The efficacy of alternative disinfection methods, such as ultrasonic waves, high intensity UV radiation, and LED blue light against COVID-19 virus in the dental setting is unknown. The EPA does not routinely review the safety of such devices and cannot confirm whether, or under what circumstances, such products

might be effective against the spread of COVID-19.

- CDC does not recommend the use of sanitizing tunnels. There is no evidence regarding efficacy in reducing the spread of COVID-19 and the agents used in sanitizing tunnels could cause skin, eye, or respiratory irritation or damage.
- EPA only recommends use of the surface disinfectants identified on List N against SARS-CoV-2.²⁷
- Manage laundry and medical waste in accordance with routine policies and procedures.
 - The ADA recommends laundry should be either provided on-site or contracted.³

Sterilization and Disinfection of Patient-care Items

Ensure appropriate sterilization techniques are followed and monitored.²

- Sterilization protocols do not vary for respiratory pathogens. OHCP should perform routine cleaning, disinfection, and sterilization protocols, and follow the recommendations for Sterilization and Disinfection of Patient-Care Items present in the Guidelines for Infection Control in Dental Health Care Settings – 2003.⁷
- DHCP should follow the manufacturer's instructions for times and temperatures recommended for sterilization of specific dental devices.

Considerations for Additional Precautions or Strategies for Treating Patients with Suspected or Confirmed COVID-19

Have a protocol in place to manage the patient presenting for dental care with suspected or confirmed COVID-19 infection.²

- If a patient arrives at your facility and is suspected or confirmed to have COVID-19,

defer dental treatment and take the following actions:

- If the patient is not wearing a cloth face covering, provide them a facemask to cover his or her nose and mouth.
- If the patient is not acutely sick, advise them to return home and contact their primary care provider.
- If the patient is acutely sick (e.g., difficulty breathing), refer to the ER or call 911 as needed; inform referral facility of possible COVID-19 infection.
- If emergency dental care is determined to be medically necessary for a patient who has, or is suspected of having, COVID-19, OHCP should follow CDC's "Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings," including the use of PPE.²⁸
 - Dental treatment should be provided in an individual patient operatory with a closed door.
 - If possible, avoid aerosol-generating procedures (e.g., use of dental handpieces, air/water syringe, ultrasonic scalers).
 - If aerosol-generating procedures must be performed, take appropriate precautions.
 - OHCP in the room should wear an N95 or higher-level respirator, such as disposable filtering facepiece respirator, powered air-purifying respirator (PAPR), or elastomeric respirator, as well as eye protection (goggles or a full-face shield), gloves, and a gown.
 - Limit OHCP in the operatory to only those essential for patient care and procedure support. Visitors should not be present for the procedure.
 - Aerosol-generating procedures should ideally take place in an airborne infection isolation room (AIIR).
 - Consider scheduling the patient at the end of the day.
 - Do not schedule any other patients at that time.
- People with COVID-19 who have ended home isolation can receive dental care following Standard Precautions (Table 3).²⁹

Table 3. Decision Tree to Discontinue Home Isolation for Persons with Confirmed or Suspected COVID-19.²⁹

<p>Symptom-based Strategy</p>	<p>Persons with confirmed or suspected COVID-19 who have symptoms and were directed to care for themselves at home may discontinue home isolation when:</p> <ul style="list-style-type: none"> • At least 10 days have passed since symptoms first appeared, <i>and</i> • At least 1 day (24 hours) has passed since recovery defined as resolution of fever without the use of fever-reducing medications and improvement in symptoms, <i>and</i> • Other symptoms have improved. <p>Note: For persons who were asymptomatic throughout their infection may discontinue isolation 10 days since the date of their first positive viral diagnostic test.</p> <p>Note: Persons with severe illness may be infectious beyond 10 days, warranting isolation for up to 20 days. Consider consultation with an infectious disease expert.</p>
<p>Persons Who have NOT had COVID-19 Symptoms but Tested Positive and are Under Isolation</p>	
<p>Test-based Strategy</p>	<p>No longer recommended, but may be considered for persons who are severely immunocompromised, in consultation with an infectious disease expert.</p> <p>Criteria: Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥ 24 hours apart (total of two negative specimens)*</p>

*All test results should be final before isolation is ended. Testing guidance is based upon limited information and is subject to change as more information becomes available.

Considerations for Use of Test-based Strategies to Inform Patient Care

Consider a Test-based strategy to better inform patient care.

- In the context of COVID-19, asymptomatic patients are unlikely to be identified based on clinical signs and symptoms. In addition to the more stringent infection control measures discussed in this document (e.g., PPE selection, universal masking, environmental infection control measures), dental facilities may undertake pre-admission or pre-procedure testing for COVID-19 to further inform patient management.
- Limitations of this approach should be considered, including negative results from patients during their incubation period who could become infectious later, and false negative tests depending on the test method used. A recent study determined the most accurate time to test an infected patient is 3 days after onset of symptoms, which is typically 8 days after initial exposure.³⁰

Monitor and Manage Dental Health Care Personnel

Actively Monitor Oral Health Care Personnel.²

- Implement sick leave policies for OHCP that are flexible, non-punitive, and consistent with public health guidance.
- As part of routine practice, OHCP should be asked to regularly monitor themselves for fever and symptoms consistent with COVID-19 (Table 2).
 - OHCP should be reminded to stay home when they are ill and should receive no penalties when needing to stay home when ill or under quarantine.
 - If OHCP develop fever ($T \geq 100.0^\circ\text{F}$) or symptoms consistent with COVID-19 while at work, they should keep their cloth face covering or facemask on, inform their supervisor, and leave the workplace.

- Screen all OHCP at the beginning of their shift for fever and symptoms consistent with COVID-19. A useful tracking log is available from the ADA.³
 - Actively measure their temperature and document absence of symptoms consistent with COVID-19.
 - Clinical judgement should be used to guide testing of individuals in such situations.
 - Medical evaluation may be warranted for lower temperatures ($<100.0^\circ\text{F}$) or other symptoms based on assessment by occupational health personnel. For OHCP, fever is either measured temperature $\geq 100.0^\circ\text{F}$ or subjective fever. Note that fever may be intermittent or may not be present in some individuals, such as those who are elderly, immunosuppressed, or taking certain medications (e.g., NSAIDs).
- If OHCP experience a potential work exposure to COVID-19, follow CDC's Healthcare Personnel with Potential Exposure Guidance (Table 4).³¹
- If OHCP suspects they have COVID-19:
 - Do not come to work.
 - If OHCP are ill at work, have them keep their cloth face covering or facemask on and leave the workplace.
 - Notify their primary healthcare provider to determine whether medical evaluation is necessary.
 - OHCP with suspected COVID-19 should be prioritized for diagnostic testing.
 - Information about when OHCP with suspected or confirmed COVID-19 may return to work is summarized in Table 5.³²
- For information on work restrictions for health care personnel with underlying health conditions who may care for COVID-19 patients, see CDC's FAQ.³⁴

Education and Training

Provide Education and Training.²

- Provide DHCP with job- or task-specific education and training on preventing transmission of infectious agents, including refresher training.
 - Training: Basic Expectations for Safe Care

Table 4. Guidance for Potential Occupational Exposure to SARS-CoV-2.³¹

Exposure	Personal Protective Equipment Used	Work Restrictions
OHCP who had prolonged ¹ close contact ² with a patient, visitor, or OHCP with confirmed COVID-19 ³	<ul style="list-style-type: none"> • OHCP not wearing a respirator or facemask⁴ • OHCP not wearing eye protection if the person with COVID-19 was not wearing a cloth face covering or facemask • OHCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure¹ 	<ul style="list-style-type: none"> • Exclude from work for 14 days after last exposure⁵ • Advise OHCP to monitor themselves for fever or symptoms consistent with COVID-19⁶ • Any OHCP who develop fever or symptoms consistent with COVID-19⁶ should immediately contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing.
OHCP other than those with exposure risk described above	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • No work restrictions • Follow all recommended infection prevention and control practices, including wearing a facemask for source control while at work, monitoring themselves for fever or symptoms consistent with COVID-19⁶ and not reporting to work when ill, and undergoing active screening for fever or symptoms consistent with COVID-19⁶ at the beginning of their shift.

Table 4. Continued.

Exposure	Personal Protective Equipment Used	Work Restrictions
		<ul style="list-style-type: none"> Any OHCP who develops fever or symptoms consistent with COVID-19⁶ should immediately self-isolate and contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing.

- Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Until more is known about transmission risks, it is reasonable to consider an exposure of 15 minutes or more as prolonged. However, any duration should be considered prolonged if the exposure occurred during performance of an aerosol generating procedure.
- Data are limited for the definition of close contact. For this guidance it is defined as: a) being within 6 feet of a person with confirmed COVID-19 or b) having unprotected direct contact with infectious secretions or excretions of the person with confirmed COVID-19.
- Determining the time period when the patient, visitor, or HCP with confirmed COVID-19 could have been infectious:
 - For individuals with confirmed COVID-19 who developed symptoms, consider the exposure window to be 2 days before symptom onset through the time period when the individual meets criteria for discontinuation of Transmission-Based Precautions.
 - For individuals with confirmed COVID-19 who never developed symptoms, determining the infectious period can be challenging. In these situations, collecting information about when the asymptomatic individual with COVID-19 may have been exposed could help inform the period when they were infectious.
 - In general, individuals with COVID-19 should be considered potentially infectious beginning 2 days after their exposure until they meet criteria for discontinuing Transmission-Based Precautions.
 - If the date of exposure cannot be determined, although the infectious period could be longer, it is reasonable to use a starting point of 2 days prior to the positive test through the time period when the individual meets criteria for discontinuation of Transmission-Based Precautions for contact tracing.
- While respirators confer a higher level of protection than facemasks and are recommended when caring for patients with COVID-19, facemasks still confer some level of protection to HCP, which was factored into this risk assessment. Cloth face coverings are not considered PPE because their capability to protect HCP is unknown.
- If staffing shortages occur, it might not be possible to exclude exposed HCP from work. For additional information and considerations refer to Strategies to Mitigating HCP Staffing Shortages.
- *For the purpose of this guidance, fever is defined as subjective fever (feeling feverish) or a measured temperature of 100.0°F (37.8°C) or higher. Note that fever may be intermittent or may not be present in some people, such as those who are elderly, immunocompromised, or taking certain fever-reducing medications.

Table 5. Return to Work Criteria for OHCP with Suspected or Confirmed COVID-19.³³

<p>Symptom-based Strategy</p>	<p>OHCP with mild to moderate illness who are not severely immunocompromised:</p> <ul style="list-style-type: none"> • At least 10 days have passed since symptoms first appeared <i>and</i> • At least 24 hours have passed since last fever without the use of fever-reducing medications <i>and</i> • Symptoms (e.g., cough, shortness of breath) have improved <p>Note: For OHCP who are not severely immunocompromised and who were asymptomatic throughout their infection may return to work when at least 10 days have passed since the date of their first positive viral diagnostic test.</p> <p>OHCP with severe to critical illness who are severely immunocompromised:</p> <ul style="list-style-type: none"> • At least 20 days have passed since symptoms first appeared <i>and</i> • At least 24 hours have passed since last fever without the use of fever-reducing medications <i>and</i> • Symptoms (e.g., cough, shortness of breath) have improved <p>Note: For OHCP who are severely immunocompromised but who were asymptomatic throughout their infection may return to work when at least 20 days have passed since the date of their first positive viral diagnostic test.</p>
<p>Test-based Strategy</p>	<p>No longer recommended, but may be considered for some OHCP, such as a severely immunocompromised provider, in consultation with an infectious disease expert if there is concern the OHCP may be infectious for more than 20 days.</p> <p>Criteria for OCHCP who is symptomatic:</p> <ul style="list-style-type: none"> • Resolution of fever without the use of fever-reducing medications <i>and</i> • Improvement in symptoms (e.g., cough, shortness of breath), <i>and</i> • Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens) <p>Criteria for OCHCP who is asymptomatic:</p> <ul style="list-style-type: none"> • Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens)

- Ensure that DHCP are educated, trained, and have practiced the appropriate use of PPE prior to caring for a patient, including attention to correct use of PPE and prevention of contamination of clothing, skin, and the environment during the process of removing such equipment.
 - Using PPE
 - Healthcare Respiratory Protection Resources Training

Summary

The ongoing COVID-19 pandemic presents unique challenges to the dental profession and its mission to provide dental care to the public in a safe manner. Dental settings have unique

characteristics that warrant specific infection control considerations to guide the safe delivery of dental care during the COVID-19 pandemic. The CDC recently introduced interim guidelines for OHCPs to deliver non-emergent dental care during the COVID-19 pandemic. While the interim guidelines do incur significant additional requirements on the outpatient dental care delivery model, they reasonably maximize aerosol mitigation. Finally, the CDC stresses that as new information regarding SARS-CoV-2 becomes available, the guidance will be updated and OHCPs should regularly consult their state dental boards and state or local health departments regarding practice requirements specific to their jurisdictions.

Course Test Preview

To receive Continuing Education credit for this course, you must complete the online test. Please go to: www.dentalcare.com/en-us/professional-education/ce-courses/ce647/test

- 1. Features of the SARS-CoV-2 virus that collectively challenge current infection control protocols for the OHCP include all of the following, EXCEPT for one. Which one is the exception?**
 - A. The virus is highly contagious.
 - B. The primary mechanism of spread is via mucosal exposure to respiratory droplets produced when an infected person coughs, sneezes, or speaks.
 - C. As this is novel virus to humans there is little, if any, natural herd immunity.
 - D. Asymptomatic spread is considered unlikely.
- 2. Airborne (aerosol) transmission of the SARS-CoV-2 virus is unlikely and person to person spread over long distances (> 6 feet) is considered unlikely.**
 - A. The first part of the statement is true, but the second part is false.
 - B. The first part of the statement is false, but the second part is true.
 - C. Both parts of the statement are true.
 - D. Both parts of the statement are false.
- 3. All of the following dental procedures are associated with increased occupational risk for SARS-CoV-2 infection, EXCEPT for one. Which one is the exception?**
 - A. The use of rotary handpieces.
 - B. The use of high-volume suction.
 - C. The use ultrasonic scalers.
 - D. The use of air-water syringes.
- 4. The interim CDC guidelines to address the delivery of non-emergent dental care during the COVID-19 pandemic are proscriptive in nature and designed to maximize aerosol mitigation in the outpatient dental setting.**
 - A. The first part of the statement is true, but the second part is false.
 - B. The first part of the statement is false, but the second part is true.
 - C. Both parts of the statement are true.
 - D. Both parts of the statement are false.
- 5. The interim CDC guidelines to address the delivery of non-emergent dental care during the COVID-19 pandemic are only recommended when there has been documented transmission of SARS-CoV-2 in the community.**
 - A. True
 - B. False
- 6. Appropriate patient management considerations during the COVID-19 pandemic include all of the following, EXCEPT for one. Which one is the exception?**
 - A. Prescreen all patients for symptoms of COVID-19.
 - B. Prioritize non-emergent dental care for the patient who reports COVID-19 symptoms.
 - C. Limit the number of accompanying visitors.
 - D. Screen all who accompany the patient to the appointment.

7. **Appropriate upon arrival patient management considerations during the COVID-19 pandemic include all of the following, EXCEPT for one. Which one is the exception?**
- A. Ensure the patient and anyone accompanying them is wearing a face covering.
 - B. Screen all patients and those accompanying them for symptoms of COVID-19.
 - C. Determine the temperature of the patient and those accompanying them.
 - D. Do not treat any patient with an elevated temperature.
8. **Even with appropriate screening, inadvertent treatment of a dental patient who is later confirmed to have COVID-19 may occur. For such situations, the patient should be asked to inform the dental office if they develop symptoms or are diagnosed with COVID-19 within ____ days following the dental appointment.**
- A. 2 days
 - B. 4 days
 - C. 7 days
 - D. 14 days
9. **Appropriate actions to reduce the risk of SARS-CoV-2 exposure in the dental facility include all of the following, EXCEPT for one. Which one is the exception?**
- A. Post visual alert icons (e.g., signs, posters) at the entrance and other conspicuous areas (e.g., waiting areas, elevators, break rooms) to provide instructions (in appropriate languages) about when and how to perform hand hygiene and how to practice proper respiratory hygiene and cough etiquette.
 - B. Restrict supplies for hand hygiene, respiratory hygiene and cough etiquette in the bathroom to avoid cross-contamination. Frequently re-stock as necessary.
 - C. Install physical barriers (e.g., glass or plastic windows) at reception areas to limit close contact between office personnel and potentially infectious patients.
 - D. Ensure office waiting room / reception area allows for appropriate social distancing.
10. **The Environmental Protection Agency minimum standard for safe drinking water is _____.**
- A. <250 CFU/mL
 - B. <500 CFU/mL
 - C. <750 CFU/mL
 - D. <1000 CFU/mL
11. **Appropriate work practice considerations to minimize aerosol-based exposure to SARS-CoV-2 include all of the following, EXCEPT for one. Which one is the exception?**
- A. Maximize efficiency by treating two to three patients concurrently.
 - B. If aerosol generating procedures are necessary, use four-handed dentistry, high evacuation suction and dental dams.
 - C. If possible, avoid the use of handpieces, ultrasonic scalers, and the air-water syringe.
 - D. Consider the use of a preprocedural mouth rinse.
12. **Appropriate engineering controls actions to minimize exposure to SARS-CoV-2 include all of the following, EXCEPT for one. Which one is the exception?**
- A. Consult with an HVAC professional to, if possible, safely increase the filtration capacity of dental facility HVAC system.
 - B. Consult with an HVAC professional to, if possible, increase the percentage of outside air supplied through the HVAC system.
 - C. Keep the bathroom fan off during work hours.
 - D. Incorporate the use of portable HEPA filter during patient care to help remove aerosols from the air.

- 13. Appropriate patient placement activities to minimize exposure to SARS-CoV-2 include all of the following, EXCEPT for one. Which one is the exception?**
- A. Use of individual patient operatories.
 - B. For open floor plans, establish at least 6 feet between chairs.
 - C. If possible, orient operatories parallel to the direction of room airflow.
 - D. Where feasible, orient the patient's head as far away from the return vent as possible.
- 14. After dismissing the patient, factors that determine the amount of time one should wait before disinfecting the room include all of the following, EXCEPT for one. Which one is the exception?**
- A. Use of N95 respirator
 - B. Room air flow rate
 - C. Use of HEPA air filtration devices
 - D. Use of high of isolation and high-volume evacuation devices
- 15. When accomplishing hand hygiene, one may use an ABHR with of 40 - 95% alcohol or wash with soap and water for at least 45 seconds.**
- A. The first part of the statement is true, but the second part is false.
 - B. The first part of the statement is false, but the second part is true.
 - C. Both parts of the statement are true.
 - D. Both parts of the statement are false.
- 16. All of the following statements pertaining to source control measures are true, EXCEPT for one. Which one is the exception?**
- A. A cloth face covering represents the minimum level of PPE available for use in the dental care setting.
 - B. If available, surgical masks are preferred over cloth face covering for OHCP.
 - C. Personnel not involved with the delivery of direct patient care (e.g., front desk receptionist, back office accountant) should wear a cloth face covering while in the dental office setting.
 - D. OHCP should perform hand hygiene immediately after touching their cloth facing covering.
- 17. Employers should select appropriate PPE for use in the dental setting in accordance with _____ PPE standards.**
- A. American Dental Association (ADA)
 - B. Centers for Disease Control and Prevention (CDC)
 - C. Occupational Safety and Health Administration (OSHA)
 - D. Local District Dental Society
- 18. For procedures likely to produce splashing or spattering of blood or other body fluids, OHCP should wear, at a minimum, all of the following, EXCEPT for one. Which one is the exception?**
- A. Surgical mask
 - B. Shoe covering
 - C. Eye protection
 - D. Gloves
- 19. For procedures likely to produce aerosols all of the following are acceptable PPE, EXCEPT for one. Which one is the exception?**
- A. Surgical mask
 - B. N95 respirator
 - C. Elastomeric respirator
 - D. PAPR

- 20. Elements of a respiratory protection program for respirator use include all of the following EXCEPT for one. Which one is the exception?**
- A. Medical evaluations
 - B. Fit testing
 - C. Training
 - D. HBV Vaccination
- 21. Which of the following steps represent the proper order for donning PPE?**
- A. Perform hand hygiene, put on gown or protective clothing, put on eye protection, put on surgical mask or respirator, put on gloves.
 - B. Perform hand hygiene, put on gown or protective clothing, put on surgical mask or respirator, put on eye protection, put on gloves.
 - C. Perform hand hygiene, put on gown or protective clothing, put on gloves, put on surgical mask or respirator, put on eye protection.
 - D. Perform hand hygiene, put on gloves, put on gown or protective clothing, put on surgical mask or respirator, put on eye protection.
- 22. Which of the following steps represents the proper order for doffing PPE?**
- A. Remove gloves, remove gown or protective clothing, exit treatment room, perform hand hygiene, remove eye protection, remove surgical mask or respirator.
 - B. Exit the treatment room, remove gloves, remove gown or protective clothing, perform hand hygiene, remove eye protection, remove surgical mask or respirator.
 - C. Remove gloves, remove gown or protective clothing, exit treatment room, perform hand hygiene, remove surgical mask or respirator, remove eye protection.
 - D. Remove gown or protective clothing, remove gloves, remove eye protection, exit treatment room, perform hand hygiene, remove surgical mask or respirator.
- 23. All of the following statements pertaining to Supply Optimization Strategies are true, EXCEPT for one. Which one is the exception?**
- A. Optimization strategies are provided to address potential shortages of gloves, gowns, facemasks, eye protection and respirator.
 - B. The strategies should be implemented sequentially.
 - C. Optimization strategies may necessitate the deferral of non-urgent care.
 - D. Extended use of PPE is encouraged to maintain normal patient volume.
- 24. EPA-registered disinfectants have qualified under the EPA's emerging viral pathogen program for use against SARS-CoV-2 are listed in List ____ on the EPA website.**
- A. C
 - B. L
 - C. N
 - D. Q
- 25. Sterilization protocols in the field of dentistry have been modified to address the COVID-19 pandemic and the Guidelines for Infections Control in Dental Health Care Settings – 2003 is no longer applicable.**
- A. The first part of the statement is true, but the second part is false.
 - B. The first part of the statement is false, but the second part is true.
 - C. Both parts of the statement are true.
 - D. Both parts of the statement are false.

26. Mr. Jones is scheduled for delivery of new crowns for #s 6-11. Upon arrival, he advises your receptionist that he was just informed that he tested positive for COVID-19 but he has never experienced any symptoms. Your most appropriate course of action is to _____.
- A. refer him to his physician on an urgent basis.
 - B. send him home and advise him to contact his primary care provider.
 - C. refer to the ER.
 - D. call EMS for transport to the ER.
27. Ideally, a patient with confirmed COVID-19 infection should undergo necessary dental care in _____.
- A. a single-room operator using a surgical mask and full-face shield.
 - B. an airborne infection isolation room (AIIR) using a surgical mask and full-face shield.
 - C. a single-room operator using an N95 respirator or higher-level respirator.
 - D. an airborne infection isolation room (AIIR) using an N95 respirator or higher-level respirator.
28. Mr. Smith calls your office to cancel his appointment for a filling and confides that he was just informed he tested positive for COVID-19. He states he has no symptoms and then asks you when he can be re-scheduled. Provided he remains asymptomatic, you would advise him _____.
- A. to wait until at least 5 days have passed since the date of his first positive COVID-19 diagnostic test.
 - B. to wait until he has negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥ 24 hours apart (total of two negative specimens).
 - C. that you can see him tomorrow since he is asymptomatic.
 - D. to wait until at least 10 days have passed since the date of his first positive COVID-19 diagnostic test.
29. Current evidence reveals the most accurate time to test an infected patient is _____ days after the onset of symptoms, which is typically _____ days after initial exposure to SARS-CoV-2.
- A. 8, 3
 - B. 3, 8
 - C. 3, 14
 - D. 1, 2
30. All of the following statements pertaining to monitoring dental office personnel are true, EXCEPT for one. Which one is the exception?
- A. OHCP should be reminded to stay home if they are ill.
 - B. All personnel should be screened for COVID-19 symptoms and actively checked for fever ($T > 100.0^{\circ}\text{F}$) at the beginning of the work shift.
 - C. Personnel screening results should be documented in and retained in a daily tracking log.
 - D. If a dental staff member develops a fever during the workday, they should be allowed to finish their shift.

31. A patient you treated yesterday (initial examination) calls today to inform you she just learned she tested positive for COVID-19. Your exposure would be classified as prolonged if you were with the patient for ____ minutes or more.
- A. 15
 - B. 25
 - C. 35
 - D. 55
32. Return to work criteria for symptomatic OHCP with confirmed COVID-19 are most often determined by _____.
- A. a symptom-based strategy
 - B. a test-based strategy
 - C. a time-based strategy
 - D. B and C

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Additional Resources

- No Additional Resources Available.

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Since joining the faculty in 2002, Dr. Huber has been teaching both pre-doctoral and graduate dental students at the UT Health School of Dentistry. In 2014, he was awarded the UTHSCSA Presidential Teaching Excellence Award. He is a Past President of the American Academy of Oral Medicine and is a member of the dentalcare.com Advisory Board. Dr. Huber has spoken before many local, state, and national professional organizations. He has published over 90 journal articles, book chapters, and online postings.

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