

Infection prevention and control during oral and dental healthcare when coronavirus disease (COVID-19) is suspected



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Introduction

This guidance is for infection prevention and control (IPC) in oral and dental healthcare settings when coronavirus disease (COVID-19) is suspected. It is adapted from WHO's interim guidance for infection prevention and control during health care when severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is suspected,^{1, 2} based on current knowledge of the situation in Wuhan, China and its global spread.

This guidance is intended for oral healthcare service providers (OHSPs). These include dentists, dental hygienists, dental assistants, dental laboratory technicians, students, trainees and non-clinical staff.

Principles of infection prevention and control strategies associated with oral health care with suspected COVID-19

IPC strategies to prevent or limit infection transmission in oral healthcare settings include the following:

1. Early recognition and source control
2. Application of standard precautions for all healthcare providers and patients
3. Implementation of empirical additional precautions (droplet, contact and airborne precautions) for suspected cases
4. Administrative controls
5. Environmental and engineering controls.

1. Early recognition and source control

Clinical triage, including early recognition and immediate placement of patients in a separate area from other patients (source control) is an essential measure for rapid identification and appropriate isolation and care of patients with suspected COVID-19. To facilitate early identification of suspect cases, oral healthcare facilities should:

- encourage OHSPs to adopt a high level of clinical suspicion;
- introduce a screening questionnaire (history of travel to any country or Indian state that has reported COVID-19 cases); and
- put up posters in public areas reminding symptomatic patients to alert OHSPs during their visit.

Promotion of hand hygiene and respiratory hygiene are essential preventive measures and include "cough etiquette". **Suspected COVID-19 patients should be referred to a nearby designated hospital with isolation facilities**, along with appropriate intimation to the designated officials in the Health Department.

2. Application of standard precautions for all patients

Standard precautions include: hand and respiratory hygiene; use of personal protective equipment (PPE) depending on risk; prevention of needle-stick or sharps injury; safe waste management; environmental cleaning and sterilization of patient-care equipment, instruments and linen.

Ensure the following hand and respiratory hygiene measures:

- use eye/facial protection, i.e. goggles or a face shield;
- use a clean, non-sterile, long-sleeved fluid resistant gown;
- use gloves;
- cover nose and mouth while coughing or sneezing with tissue or flexed elbow;
- discard the tissue as per Biomedical Waste Management Rules 2016, amended 2018;³
- perform hand hygiene before and after each patient contact; and
- provide a medical mask (triple layer) to patients with suspected COVID-19.

OHSPs should apply WHO's My 5 Moments for Hand Hygiene approach (for dental care, see page 3) before touching a patient, before any clean or aseptic procedure is performed, after exposure to body fluid, after touching a patient and after touching a patient's surroundings.

- Hand hygiene includes cleansing hands either with an alcohol-based hand rub (ABHR) or with soap and water;
- Alcohol-based hand rubs are preferred if hands are not visibly soiled;
- Wash hands with soap and water when they are visibly soiled.

Personal protective equipment (PPE). Rational, correct² and consistent use of available PPE and appropriate hand hygiene⁴ also helps to reduce the spread of the pathogens. PPE effectiveness depends on adequate and regular supplies, adequate staff training, proper hand hygiene and specifically appropriate human behaviour.²

Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly. Thorough cleaning of environmental surfaces with water and detergent and applying commonly used hospital level disinfectants⁵ (such as sodium hypochlorite) is effective and sufficient. Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.²

3. Implementation of additional empirical precautions for suspected COVID-19 infections

3.1 Contact and droplet precautions for suspected COVID-19 infection

- In addition to standard precautions, all individuals, including family members, visitors and OHSPs should adhere to contact and droplet precautions.
- Use a medical mask (triple layered) or N95 respirator of recommended specifications.^{2,6}
- Use either single use disposable or dedicated instruments, e.g. mouth mirror, probe, tweezer, etc. Clean, disinfect and sterilize the instruments between each patient use.
- Refrain from touching eyes, nose or mouth with potentially contaminated hands.⁷
- Apply a triple-layered medical mask to the patient.
- Routinely clean and disinfect patient-contact surfaces.
- Limit the number of OHSPs, family members and visitors in contact with a patient with suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.
- Maintain a record of all persons entering the dental operator, including all staff and visitors.

3.2 Airborne precautions for aerosol-generating procedures for suspected COVID-19 infection

Some aerosol generating procedures have been associated with increased risk of transmission of coronaviruses (SARS-CoV and MERS-CoV) such as oral prophylaxis, restoration of teeth, crown and bridge preparation, etc.

The following should be ensured by OHSPs performing aerosol-generating procedures:^{2,6,8,9,10,11,12}

- use a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2 or equivalent;
- when putting on a disposable particulate respirator, always perform the seal-check.⁶ Note that if the wearer has facial hair (beard), it can prevent a proper respirator fit;⁶
- use face and eye protection, i.e. goggles and a face shield;
- wear a clean, non-sterile, long-sleeved gown and gloves;
- if gowns are not fluid resistant, use a waterproof apron for procedures with expected high fluid volumes that might penetrate the gown;²
- use high vacuum suction tips along with saliva ejectors;
- perform all oral health procedures in an adequately ventilated room, i.e. at least natural ventilation with at least 160 l/s/patient air flow or negative pressure rooms with at least 12 air changes per hour (ACH) and controlled direction of air flow when using mechanical ventilation;
- limit the number of persons present in the room to the absolute minimum required for the patient's care and support.

4. Implementing administrative controls²

Administrative controls and policies that apply to prevention and control of transmission of COVID-19 infections include: establishment of sustainable IPC infrastructures and activities; training of OHSPs; education of patients' caregivers; policies on early recognition of respiratory infection potentially due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); prevention of overcrowding, especially in the waiting areas; provision and use of regular supplies; IPC policies and procedures for all facets of oral healthcare service provisions, with emphasis on surveillance of acute respiratory infection potentially due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) among OHSPs and the importance of seeking medical and oral health care; and monitoring of OHSP compliance, along with mechanisms for improvement as needed.

5. Environmental and engineering controls

These include basic oral healthcare facility infrastructures.⁸ These controls address ensuring adequate environmental ventilation⁴ in all areas within a healthcare facility (including dental operatories) as well as adequate environmental cleaning.

Precautions for patient impressions, models and prostheses in patients diagnosed with COVID-19 at a later stage

All specimens – dental impressions, models and prostheses – collected for fabrication at dental laboratories should be regarded as potentially infectious, and OHSPs who collect, or transport specimens, should adhere rigorously to standard precautions to minimize the possibility of exposure to pathogens.

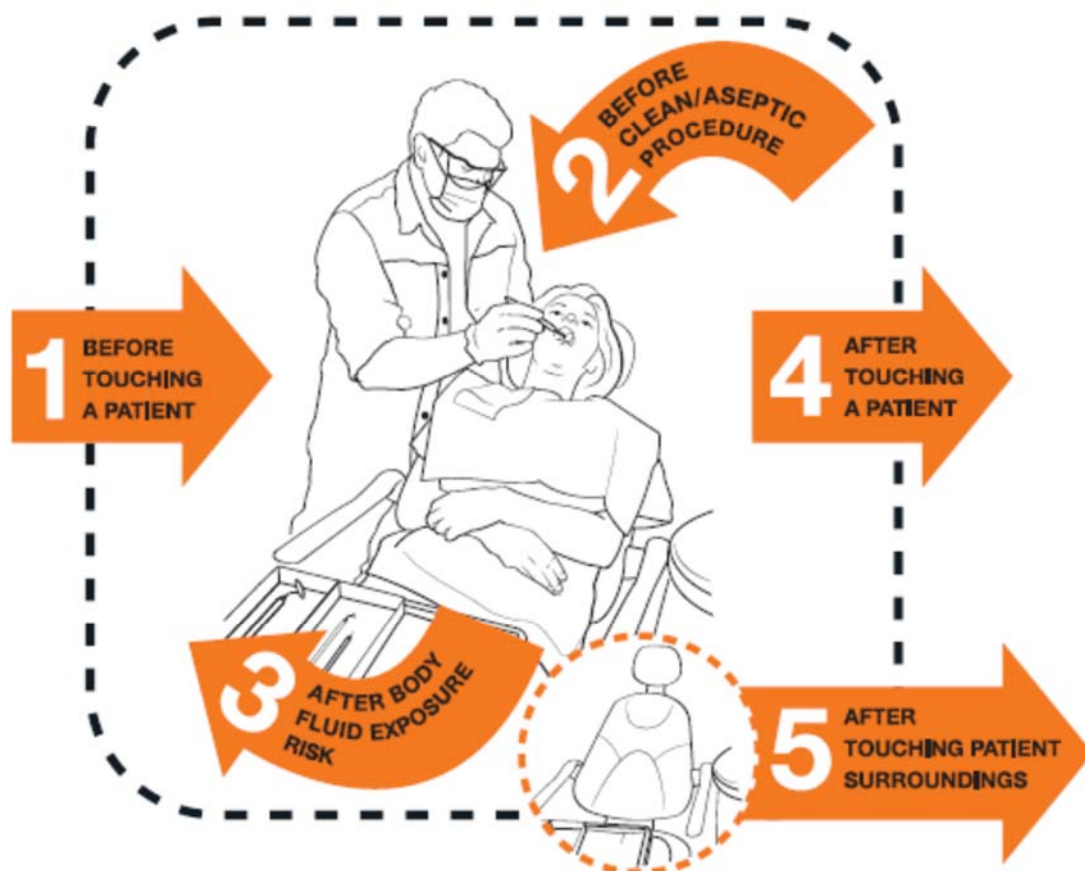
- Ensure that all OHSPs who collect specimens use appropriate PPE (eye and face protection, long-sleeved gown and gloves).
- If the specimen is collected under aerosol generating procedure, personnel should wear a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2 or equivalent.
- Ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures.
- Place specimens for transport in leakproof specimen bags (secondary container) that have a separate sealable pocket for the specimen, i.e. a plastic biohazard specimen bag, with the patient's label on the specimen container (primary container) and a clearly written dental laboratory request form.
- Ensure that oral healthcare laboratories adhere to appropriate biosafety practices.

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Your 5 Moments for Hand Hygiene

Dental Care



1 BEFORE TOUCHING A PATIENT	WHEN? Clean your hands before touching a patient. WHY? To protect the patient against harmful germs carried on your hands.
2 BEFORE CLEAN/ASEPTIC PROCEDURE	WHEN? Clean your hands immediately before performing a clean/aseptic procedure. WHY? To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3 AFTER BODY FLUID EXPOSURE RISK	WHEN? Clean your hands immediately after a procedure involving exposure risk to body fluids (and after glove removal). WHY? To protect yourself and the environment from harmful patient germs.
4 AFTER TOUCHING A PATIENT	WHEN? Clean your hands after touching the patient at the end of the encounter or when the encounter is interrupted. WHY? To protect yourself and the environment from harmful patient germs.
5 AFTER TOUCHING PATIENT SURROUNDINGS	WHEN? Clean your hands after touching any object or furniture in the patient surroundings when a specific zone is temporarily and exclusively dedicated to a patient - even if the patient has not been touched. WHY? To protect yourself and the environment from harmful patient germs.



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