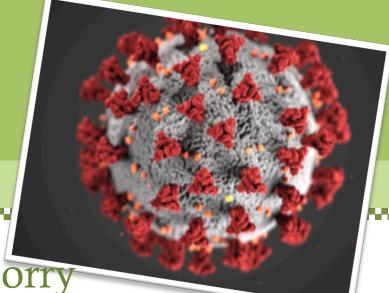


IPS Covid Guide

Basic Safety and handling Protocol issued by the Indian Prosthodontic Society

An Indian Prosthodontic Society Initiative



Stay Safe Than Sorry

Dear IPS Member,

We are going through one of the worst phases of human crisis in the recent times with the COVID-19 pandemic that has gripped the world over . The dental professionals have always been exposed to various pathogens like HIV, Hepatitis B, Tuberculosis etc. and we have been trained on basic infection control protocols to prevent these cross-infection. The Covid-19 virus varies from all the above by having a very high Human to Human transmission rate and relatively long incubation period which ranges from 2 to 14 days with median duration being 5 days. Transmission from asymptomatic COVID-19 carriers is also possible. Aerosol and fomite transmission is plausible. Some strains can be present in saliva for as long as 29 days. It is also of concern that till date no specific treatment or vaccine is available against Covid-19 and hence it is of paramount importance that we have certain protocols maintained in our practices for our own safety as well as the safety of our patients, family and society.

INDIAN PROSTHODONTIC SOCIETY hereby has formulated and compiled certain basic guidelines for its fellow members for their safety and protection and we hope this will contribute for our esteemed members to Stay Safe and Be Safe.

The basic safety protocols are here in addressed under the following headings:

PERSONAL CARE

PATIENT CARE

CLINIC AND OPERATORY CARE

LABORATORY CARE

Personal Care Protocol

Whenever possible DO NOT carry out any aerosol generating procedures (Air rotor /Ultrasonic scaler) untill there is containment of the spread.

- 1. All asymptomatic treatments/elective procedures should be deferred.
- 2. Proper donning and doffing protocols of PPE(Personal Protective Equipment)-Please refer to the attached schematic instruction. The discarded PPE should be disposed of without causing any contamination.
 - a. Gown: Make it mandatory to wear a full cover gown that cover from neck to knee, arms to end of wrist and wraps on to the back (should be disposable).
 - b. Mask or respirators: 1. Triple layer surgical mask. 2. N-95 Respirator (Preferable)

 It is advisable to recheck if the mask is fitting the face and below the chin snugly and is fastened in the middle of the head and the neck securely. If there is a respirator attached check the filter's patency.
 - c. Goggles and Face Shield: Place it over the face and eye after proper disinfecting the goggles/face shield.
 - d. Gloves: Nitrile / Surgical grade gloves should be preferred. Avoid using the non-sterile "examination gloves".

*Whenever possible two pair of gloves are to be worn, the inner pair should be of a different color, so as to notice easily any inadvertent tears on the outer pair of gloves. Glove should be worn so as to extend to cover the wrist of the gown.

WHO does not recommend using an alcohol based hand sanitizer when wearing gloves.

- 3. Any treatments generating splatter/aerosol to be done with complete disposable PPE for all who are operating and assisting. Rubber dam isolation should be made mandatory.
- 4. After every splatter related /aerosol generating treatment strict fumigation is to be done.
- 5. Water reservoir of the dental chair can be added with 2.5% sodium hypochlorite or 0.5% hydrogen peroxide.
- 6. Fees should be encouraged to be paid by Digital routes.
- 7. It can be conveyed beforehand or even better is to put up a notice saying that due to added precautions, PPEs are being used for the patient's safety which will result in added costs; treatment for each procedure would increase by 10 to 15% etc. This information thus provided will build a confidence in the patients that dental clinics are barriers to the spread of infection, as opposed to a source.
- 8. Undergo periodic personal health assessment and immediately go under self-quarantine should you develop any symptoms and inform the authorities.

Key recommendations for PPE in Dental Settings

- 1. Proper selection and use of recommended PPE.
- 2. Wear gloves whenever there is potential for contact with blood, body fluids, mucous membranes, non-intact skin or contaminated equipment.
 - a. Do not wear the same pair of gloves for the care of more than one patient.
 - b. Do not wash gloves. Gloves cannot be reused.
 - c. Perform hand hygiene immediately after removing gloves.

Use N95 or higher-level respirator during emergency dental care for patients without COVID-19. Disposable respirators should be removed and discarded after exiting the operatory.

- 3. Wear protective clothing that covers skin and personal clothing during procedures or activities where contact with blood, saliva, or aerosol splatter is anticipated.
- 4. Reusable eye protection must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use.
- 5. Change gown if it becomes soiled. Remove and discard the gown in a dedicated container.

Types of PPE's

- 1. SHOE COVERS
- 2. CAP/HOOD
- 3. GLOVES
- 4. GOWNS/ APRONS
- MASKS AND RESPIRATORS
- GOGGLES
- **FACE SHIELDS**



SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific

1. GOWN

- · Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR How to wear- N95 Mask/Respirator

- 1. Hold N95 in cupped hand.
- 2. Place over nose mouth and chin
- 3. Fit nose piece over nose bridge.
- 4. Pull lower elastic first over head.
- 5. Next pull upper elastic over the head.
- 6. Adjust to fit
- 7. Perform a fit test
- Inhale: Mask should collapse.
- Exhale: Check for leakage around face









PPE: Face Protectors

Goggles

- Protects the eyes
- Should fit snuggly over and around the eves
- Personal glasses **NOT** a substitute for goggles

Face shields

- For protection of the facial area and associated mucous membranes from splashes, sprays, and spatter of body fluids.
- Face shields are generally not used alone, but in conjunction with a PPE





How to wear-Gloves

- Wear gloves LAST
- Select correct type and size
- Insert hands into gloves
- Extend gloves over isolation gown cuffs



Hand Hygiene is always the Final Step after removing and Disposing of PPE

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) Removing/Doffing gloves

- 1. Grasp outside edge near wrist
- 2. Peel away from hand, turning gloves inside out
- Hold in opposite gloved hand
 - Slide ungloved finger under the wrist of the remaining gloves
- Peel off from inside, creating a bag for both gloves
- Discard



Removing/Doffing goggles or face

- Grasp ear or head pieces with ungloved hands
- Lift away from face
- Place in designated receptacle for disposal.
- Perform hand hygiene



- 1. Unfasten ties
- Peel gown away from neck and shoulder
- Turn contaminated outside toward the inside
- Fold or roll into a bundle
- 5. Discard
- 6. Perform hand hygiene



Removing/Doffing a respirato

Never touch the outside of the mask

- Lift the bottom elastic over your head first
- Then lift off the top elastic
- Discard



Removing/Doffing mask

- Untie the tie, bottom first then top
- Remove from face holding by the strings only
- Perform hand hygiene

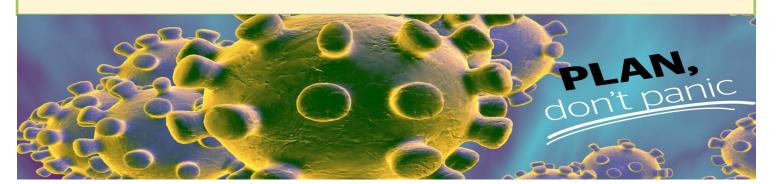




Patient Care Protocol

- 1. Strict written informed consent, screening and undertaking should be procured from all patients regarding Covid and other diseases in general. (Many standard consent forms are available online). Meticulous screening of even asymptomatic patients are important.
- 2. Keep in mind that the patient may not be giving a true picture of his/her history or he/she may be unaware of his/her condition. All patients must be considered a potential asymptomatic COVID 19 carrier.
- 3. Consider recently recovered patients also as a potential virus carriers for at least 30 days after the recovery confirmation by a laboratory test.
- 4. Maintenance of proper record, address, contact details are of paramount importance.
- 5. The clinic assistants should also be given proper protective equipment and should be trained in eliciting patient history as well as basic checkup preferably using a non-contact thermal scanner.
- 6. When the patient arrives at the Dental set up, he/she should be directed to the hand wash station situated **outside** the main entrance where he/she should carry out hand washing under the supervision of a designated hand wash assistant. It is advisable to have the patient cover his face with a mask and provided with a Protective gown including foot covers, before he/ she is taken to the reception.

- At the reception patient's temperature must be recorded by using non-contact thermometer. The minimum distance of "6 feet" is to be maintained between the reception and the patient. The reception staff must consist of a Dentist along with the receptionist. The Prosthodontist must ensure that he/she performs a telephonic conversation with respect to all the patients prior to the patient reporting to the dental clinic which includes a brief medical history. He/she must ensure that as far as possible, all dental visits of the patient are strictly by appointment only. If dental prosthetic treatment can be delayed, provide patients with detailed home care instructions and any appropriate pharmacologic intervention. Ibuprofen should be avoided whenever pharmacologic management of pain is required. If the patient is afebrile (temperature < 100.4°F) and otherwise without symptoms consistent with COVID-19, then emergency dental care may be provided using appropriate engineering controls, work practices, and infection control practices. The Prosthodontist should defer all elective treatment procedures like Crowns, Bridges, Veneers, Inlays, Onlays, removable and complete dentures, Implant prosthodontics etc. and handle only emergency and basic procedures.
- 8 After making the patient scrub their hands using hand sanitizer or soap, ask them to keep their hands in their pockets or without touching anywhere till they proceed to sit on the dental chair.
- 9 The patient must be made to do a pre-procedural mouth rinse using Betadine or 1% Hydrogen peroxide/ 2% w/v Povidone-Iodine mouth wash for at least 15 seconds, just before treatment is initiated and also after the procedure is over.
- 10 Patients should also be covered with a full length drape with their hands tucked in and a head cap and goggles and the immediate extra oral area may be wiped with Betadine solution or a disposable disinfectant face wipe before commencing the procedure.
- 11 Rubber dams must be made mandatory, along with adequate training of its usage will form the best barrier to prevent aerosol formation.
- 12 After the patient gets off the dental chair, the assistant must ensure that all surfaces with which the patient or aerosolized particles may have come in contact are sprayed with surface disinfectant and wiped clean. The PPE is to be disposed of as per laid down protocols on completion of the treatment of each and every patient.
- 13 Encourage minimal follow-up visits.
- 14 Encourage and educate the patients to pay the fees by Digital routes.
- 15 Do not hesitate to report the patient's condition to health authorities, should you find anything untoward during his/her visit.
- 16 High vacuum extra oral suctions used in conjunction with high speed saliva ejectors, should be mandatory to minimize aerosol dissemination.
- 17 Intraoral imaging should be restricted and extra oral radiographs should be utilized to reduce the excessive salivation and gag reflex associated with intraoral radiographs.
- 18 Patients using Removable Prosthesis should be given additional hygiene recommendations and recommendations for disinfection of the prosthesis ,specially if a patient using prosthesis develops Covid infection the use of the prosthesis must be discontinued as the prosthesis can be source of spread.



Get Your Clinic Ready for Coronavirus Disease 2019 (COVID-19)

A new respiratory disease—coronavirus disease 2019 (COVID-19)—may impact your community.

Get ready! Steps you take to prepare your clinic for flu can also help protect your patients and healthcare workers from COVID-19:

Before Patients Arrive



Prepare the clinic.

- Know which of your patients are at higher risk of adverse outcomes from COVID-19.
- Consider and plan for providing more telemedicine appointments.
- Know how to contact your health department.
- Stay connected with your health department to know about COVID-19 in your community. Step up precautions when the virus is spreading in your community.
- Assess and restock supplies now and on a regular schedule.

Communicate with patients.

- Ask patients about symptoms during reminder calls.
- Consider rescheduling non-urgent appointments.
- Post signs at entrances and in waiting areas about prevention actions.



Prepare the waiting area and patient rooms.

- Provide supplies—tissues, alcohol-based hand rub, soap at sinks, and trash cans.
- Place chairs 3–6 feet apart, when possible.
 Use barriers (like screens), if possible.
- If your office has toys, reading materials, or other communal objects, remove them or clean them regularly.

When Patients Arrive



- Place staff at the entrance to ask patients about their symptoms.
 - Provide symptomatic patients with tissues or facemasks to cover mouth and nose.
 - Limit non-patient visitors.

Separate sick patients with symptoms.



- Allow patients to wait outside or in the car if they are medically able.
- Create separate spaces in waiting areas for sick and well patients.
- Place sick patients in a private room as quickly as possible.

After Patients are Assessed



- After patients leave, clean frequently touched surfaces using EPA-registered disinfectants—counters, beds, seating.
- Provide at-home care instructions to patients with respiratory symptoms.
 Consider telehealth options for follow up.
- Notify your health department of patients with COVID-19 symptoms.



Train and prepare your staff now

- Ensure that clinical staff know the right ways to put on, use, and take off PPE safely.
- Recognize the symptoms of COVID-19— fever, cough, shortness of breath.
- Implement procedures to quickly triage and separate sick patients.
- Emphasize hand hygiene and cough etiquette for everyone.
- Ask staff to stay home if they are sick.
- Send staff home if they develop symptoms while at work.



Sample posters that you may display outside your practice

please see the front desk immediately.

If you have these symptoms

Patients with COVID-19 may have these symptoms:



We may ask you to wear a mask or use tissues to cover your cough, and offer you a separate space to wait.

Thank you for helping us protect other patients and staff.



For more information: cdc.gov/COVID19

Please read before entering.

IF YOU HAVE





Please call our office before coming inside. Clinic Phone #

The clinic staff may ask you to wear a mask or use tissues to cover your cough.

Thank you for helping us keep our patients and staff safe.



For more information: www.cdc.gov/COVID19

Clinic and Operatory Protocol

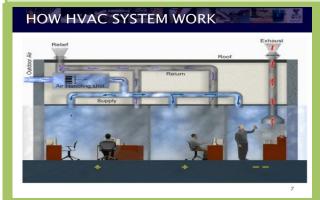
- 1. All the clinical and auxiliary staff should be provided proper PPE and should be trained in sterilization and infection-control protocols.
- 2. With respect to the dental personnel a specified work flow is required to be maintained while in the sterile zone. For efficient work flow, a separate screening, donning and doffing room should be designated. Donning & doffing should be regularly practiced as improper donning/doffing will lead to cross-contamination.
- 3. It is preferable to work with minimal staff or use a rotation of your existing staff.
- 4. A hand sanitizer or facility to scrub hands with soap and water along with instructions should be made available **outside** the clinic just before the patient is to enter the reception or waiting area, it is also advisable to have the patient cover his face with a mask before he/ she talks to the receptionist. The patient may also be instructed to strictly keep the foot wear outside and may be requested to wear a disposable foot cover and gown as soon as he/ she enter the clinic. (As already mentioned in the patient care)
- 5. Covid related disinfection and personal care protocol might be displayed using posters or audio video means in your clinic for the patients benefit.
- 6. Strictly practice according to appointments and see that there no patients crowding in your waiting area, and that they are seated following the social distancing pattern. The seating arrangement may be re-arranged so as to have a distance of at least six feet between each chairs. The backrest of every alternate chair may be posted a sticker saying OCCUPIED.
- 7. Fumigation with a quaternary ammonium compound must be performed every day, to ensure that all low contact areas are also disinfected in the waiting area as well as the operatory.
- 8. Minimize use of Air Conditioners and restrict its use while aerosol generating procedures are underway. Regular cleaning of its filters should be done. During fumigation/fogging let the AC on so as to let the fumigant reach its filters. It is preferable to revamp the **HVAC system** in the clinic and to adhere to the newer developed guidelines on the same to help address Covid concerns especially so to suck out contaminate air and push in fresh air so that the airborne particles may be shunted out in a clinical environment (fig below) The clinic should also be equipped with a superior quality high vacuum suction and to prevent splatter preferably and **Extraoral suction system** (Fig)
- 9. Hand pieces, burs, diagnostic instruments, etc., have to be stringently autoclaved, in sealed pouches. Overlooked practices such as scrubbing the hand piece with a disinfectant and working on multiple patients at a time must be avoided under all circumstances. Used burs should be soaked in a proper disinfectant solution after scrubbing prior to autoclaving. When ever possible dispose the burs after single use. Scrubbing the diagnostic instruments and hand instruments in a concentrated soap solution for 20 seconds prior to autoclaving may be a good practice as soap is one of the best antiviral means.
- 10. IMPRESSIONS should be thoroughly disinfected before pouring or sending to the laboratory as a standard protocol(Septodent spray, Cidex-Glutaraldehyde).

Alginate -0.5% Sodium Hypochlorite or iodophors

Zinc-oxide eugenol impression paste-2% Glutaraldehyde or Chlorine compounds

Rubber-base impression materials -2% Glutaraldehyde or Cidex.

- 11. It is preferable to move to digital dentistry with the use of Intra oral scanners for digital impressions, Digital extra oral radiography etc. so that there is minimal transfer and use of materials in and out of the mouth.
- 12. The patients may be educated at the reception regarding the PPE kits that are being used for the patients safety as well as that of the operator and of the minimal additional charges that may result from its use.







Sterilization and Disinfection of Patient Care Items and Devices

Use single-use devices for one patient only and dispose of appropriately. Cleaning, disinfection and sterilization of dental equipment, Patient-care items (e.g., dental instruments, devices, and equipment) should be categorized as critical, semi-critical, or noncritical, depending on the potential risk for infection associated with their intended use.

- Critical items, such as surgical instruments and Implant drills periodontal scalers, are those used to penetrate soft tissue or bone. They have the greatest risk of transmitting infection and should always be sterilized using heat.
- Semi-critical items (e.g., mouth mirrors, tooth preparation burs, composite condensers and plastic instruments, cement carriers, reusable dental impression trays) are those that come in contact with mucous membranes or non-intact skin (e.g., exposed skin that is chapped, abraded, or has dermatitis). These items have a lower risk of transmission. Because the majority of semi-critical items in dentistry are heat-tolerant, they should also be sterilized using heat. If a semi-critical item is heat-sensitive, replace it with a heat-tolerant or disposable alternative. If none are available, it should, at a minimum, be processed using high-level disinfection.

Note: Dental hand pieces and associated attachments, including low-speed motors and reusable metallic hand instruments, should always be heat sterilized between patients. Although these devices are considered semi-critical, studies have shown that their internal surfaces can become contaminated with patient materials during use. If these devices are not properly cleaned and heat sterilized, the next patient may be exposed to potentially infectious materials. It is also under stood that the Covid 19 Virus can survive on metal for up to two weeks or more

Digital radiography sensors are also considered semi-critical and should be protected with a Food and Drug Administration (FDA)-cleared barrier to reduce contamination during use, followed by cleaning and heat-sterilization or high-level disinfection between patients. If the item cannot tolerate these procedures then, at a minimum, protect with an FDA-cleared barrier. In addition, clean and disinfect with an Environmental Protection Agency (EPA)-registered hospital disinfectant with intermediate-level (i.e., tuberculocidal claim) activity between patients. Because these items vary by manufacturer and their ability to be sterilized or high-level disinfected also vary, refer to manufacturer instructions for reprocessing.

• Noncritical patient-care items (e.g., radiograph head/cone, blood pressure cuff, face-bow) are those that only contact intact skin. These items pose the least risk of transmission of infection. In the majority of cases, cleaning, or if visibly soiled, cleaning followed by disinfection with an EPA-registered hospital disinfectant is adequate. Protecting these surfaces with disposable barriers might be a preferred alternative.

Guidelines for re-use of personal protective equipment - N95 mask

Protocol for Decontamination of coveralls and N95 Respirators (reference : guidelines AIIMS Delhi)

Segregation

All used coveralls and N 95 respirators should be deposited in to separate RED bins with cover. Keep them locked room until taken for reprocessing

Reprocessing Requirements

- -Designated rooms for decontamination
- -Hydrogen Peroxide vapor (HPV)generator+ cloth clips +cloth lines +curtain lines with hooks for N 95
- -11% commercially available stabilized Hydrogen Peroxide (eg. Bacccishield)

PROCEDURE

N 95 masks can be clipped by hooks on cloth lines keeping half foot distance between each masks so are the cover all.— Ensure that HPV generator is plugged in and in position at 45 degree angle Exit the room and take off the gloves and gowns and discord the same in bins Perform hand hygiene Start the HPV generator cycle and let the room be sealed for two hours after the cycle finishes. Open the room after two hours and Aerate by switching on ceiling fans for 4 hours. Staff should wear the fresh PPE to collect the decontaminated PPE and they should be folded and moved to adjacent room which is already fumigated N 95 masks should be collected and placed in a separate box and sealed with the name of the single user.

Laboratory Protocol

- 1. The laboratory technician should at best discontinue all services that require direct patient contact until this pandemic has passed.
- 2. When working in the lab it should be strictly with minimal staff required for the work.
- 3. Laboratory personnel should be adorned with full PPE attire as is worn by the clinical staff.
- 4. There is evidence to suggest that there is a risk of transmission of COVID-19 from dental impressions, casts or dental prosthesis or appliances. Also the virus can stay active on various surfaces in the lab including plastic and cardboard for several hours to steel for a few days. So it is of paramount importance that these should be thoroughly disinfected prior to handling both at the clinic or operatory, on acceptance of the work at the lab and prior to delivery.
- 5. Labs need to use disinfectants containing virucidal agents that are effective against enveloped viruses, which also apply to coronaviruses including COVID-19. The active ingredients for these agents can include Hydrogen peroxide; Sodium hypochlorite; Isopropyl alcohol among others. The use of soap should be thought of as an adjunct along with the other agents.
- 6. In case of spray, sprinkle the product directly on the surface you are disinfecting. In case of wipe soaked with disinfectant, it is important to wipe thoroughly the surface to be disinfected. In both cases it is essential ensuring that the whole surface to be disinfected has been covered. It is better to let the disinfectant evaporate as opposed to removing it with a wet cloth unless otherwise indicated. Ensure disinfection of models, casts, trays, articulators with at least 70 % isopropyl alcohol based solutions.
- For disinfection of tables/ platforms, floors and sinks preferably use a sodium hypochlorite based solution.
- 8. All lab personnel without exception should observe the proper infection control protocols, including wearing Personal Protective Equipment that includes mask, gloves, protective eyewear, and protective garment.
- 9. The protective garment, mask and eyewear that is worn in the lab needs to be left in the lab itself and not taken out of the lab. This has to be cleaned/washed, disinfected each day and stored in lab itself and those that are to be discarded be done through proper channel.
- 10. Hand sanitizers are to be placed at vantage points within the lab and to be used routinely when not wearing gloves. Handle all lab equipment as well as clinic transfers including casts or impressions strictly using gloves.
- 11. Hands need to be washed thoroughly with soap and water after every case and avoid touching the face while in lab. Washing hands is critical to practicing standard precautions.
- 12. All technicians or lab personnel need to practice social distancing in their place of work or seating as much as possible and maintain a distance of at least 6 feet from each other.
- 13. If the delivery/ pick up person who picks up the impression from the dentist is part of lab, then he needs to follow strict hygiene protocols. He should always be wearing mask and gloves when traveling. The delivery person should not enter the lab if possible and should hand over the impression or model to the receiver at the entrance. All packets containing the models etc. need to be disposed off with utmost care and then the material subjected to disinfection procedures.
- 14. Strictly instruct all staff to stay home if they develop any of the following symptoms-cough, fever, cold symptoms including nasal congestion and runny nose, breathing distress and all the staff should be checked periodically for symptoms of Covid-19.
- 15. While using the trimmers and buff other than using the PPE see that the flints or fragments are sucked out using a high vacuum suction.
- 16. Encourage the clinics to move to digital platform and use of intra oral scanners instead of regular impressions whenever possible.
- 17. All dental prosthesis coming in and going out of the lab should be thoroughly disinfected
- 18. Ensure regular fumigation of the dental laboratory.

We encourage each and every one of you to constantly update yourself on the latest guidelines and protocol as published by authoritative organizations and bodies like the WHO, Ministry Of Health Government of India, Dental Council of India and other competent sources.

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