Govt. of Puducherry
Department of Health & Family Welfare Services
Puducherry

COVID-19 Guidelines
and
Management in Government Dental Health Care Settings

Puducherry

This document is prepared by COVID 19 core committee, Department of Health & Family Welfare services, Puducherry by utilising the documents of MOHFW – IPC guidelines, Dental council of India guidelines & others.
THE RECOMMENDATIONS ARE BASED ON CURRENT AVAILABLE EVIDENCE AND IS SUBJECT TO REVISION IN THE WAKE OF EMERGING INFORMATION OR EVIDENCE.
# Table of Contents

<table>
<thead>
<tr>
<th>S.No</th>
<th>Content</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Infection Prevention &amp; Control</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Personal Protective Equipment</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Dental Environment Disinfection</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Dental Procedures DO’S &amp; DONT’S</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>Bio Medical waste management</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Annexure</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>References</td>
<td>22</td>
</tr>
</tbody>
</table>
INTRODUCTION
Introduction:

The pandemic of COVID-19 originating from Wuhan, China, has become a major public health challenge around the world. Corona viruses are large group of viruses having a genetic material surrounded by an envelope having protein spikes giving a crown like appearance. The name “coronavirus” is derived from the Latin word corona meaning crown. COVID 19 virus infections recently identified in saliva of infected patients can play a vital role in human to human transmission. Dentists and other auxiliary dental health care professionals who perform aerosol generating procedures may unknowingly be providing dental care services to an undiagnosed COVID 19 infected individuals, especially when patients are in the incubation period, are unaware they are infected, or choose to conceal their infection are at a high risk of infection by inhalation of airborne particles and aerosols produced during these dental procedures.

Closing dental practices during the pandemic can reduce the number of affected individuals, but will increase the suffering of the individuals in need of urgent dental care. It will also increased the burden on hospitals emergency departments. Due to the characteristics of dental settings, the risk of cross infection may be high between dental practitioners and patients and strict and effective infection control protocols are urgently needed.

Epidemiology:

The first cluster of pneumonia like cases was reported on December 31\textsuperscript{st} 2019 in Wuhan, China in individuals who have visited the live animal market and it started spreading from the sick to their family members and health care workers. Causative organism identified as Novel Coronavirus on January 7\textsuperscript{th} 2020. On Jan 31\textsuperscript{st}, WHO announced “Public Health Emergency of International Concern”. It was renamed as “COVID 19” on February 11\textsuperscript{th}. WHO announced COVID 19 as a PANDEMIC on 11\textsuperscript{TH} March 2020. The first case in India was reported in 30\textsuperscript{th} January 2020.

Origin of COVID 19:

Initially, it was speculated that the SARS-CoV-2 virus jumped from bat to humans. But recent genomes study show first it must have leapt from bat to an intermediary species before it latched on to humans the phenomenon is known as “Spill over”. Another study indicates that a lineage of SARS-CoV-2 virus was circulating in humans before the disease outbreak.
**Routes of Transmission:**

Transmission is mostly via droplets. This requires relatively close contact, less than 6 feet. This is why it is recommended that we stay 1.5 metres away from each other in public places. Inanimate vector of disease, in particular phones, doorknobs, surfaces are a potential source for transmission, but not much is known about it.

It is safe to sanitise our hands after touching doorknobs, lift call buttons and counters in public places. Interpersonal transmission occurs mainly via respiratory droplets and contact transmission.
**Infectious period:**

Length of time an individual can transmit the infection to others is not known precisely, but possibly up to 10-14 days. The average number of new infections caused by a typical infectious person (human transmissibility range) (R0) is between 2.2 to 3.1. One infected individual on an average infects about 2.2 to 3.1 persons. By physical distancing, we can artificially reduce the actual transmissibility, thus slow the rate of infection.

**Symptoms:**

- Cough
- Fever
- Shortness of Breath

**Other symptoms:**

- Headache
- Sore throat
- Rhinorrhea

**Diagnosis:**

- Collection of specimens to test for SARS-CoV-2 from the upper respiratory tract (nasopharyngeal and oropharyngeal swab) is the preferred method for diagnosis.
- Reverse Transcriptase – Polymerised Chain Reaction (RT PCR) – based on genetic fingerprint is the standard testing method.

**Treatment option:**

- The potential drugs for treatment of COVID-19 are being investigated for safety and efficacy against SARS-CoV-2. Only supportive treatment and antiviral treatment are currently available.

**Preventive measures:**

- Clean your hands often. Use soap and water, or an alcohol-based hand rub.
- Maintain a safe distance from anyone who is coughing or sneezing.
- Don’t touch your eyes, nose or mouth.
- Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
- Stay home Stay Safe.
- If you have a fever, cough and difficulty breathing, seek medical attention.
- Follow the directions of your local health authority.
Infection Prevention & Control
1. Personal Protection Protocol

A. Hand Hygiene:

Follow good hand hygiene practices. Keep hands away from face and limit the surfaces touched. Do not touch Eyes Mouth and Nose.

When to follow Hand Hygiene:

1. Before touching a patient
2. Before starting any aseptic procedures
3. After touching a patient
4. After body fluid exposure risk
5. After touching the patients surroundings

Hand washing Steps:  Wash your hands for minimum of 20 seconds.

B. Recommendation for Respiratory hygiene/Cough Etiquette in dental setting:

Cover nose and mouth during coughing or sneezing with tissue or flexed elbow for others. Perform hand hygiene after contact with respiratory secretions. Post signs at entrances with instructions to patients with symptoms of respiratory infection to

i) Cover their mouths/noses when coughing or sneezing.
ii) Use and dispose of tissues and masks.
iii) Perform hand hygiene after hands have been in contact with respiratory secretions.
C. Personal Protective Equipment (PPE)

- PPE includes shoe cover, gown, mask, eye protection & gloves.
- Shoe cover should always be worn before entering the patient care area.
- If gowns are not fluid resistant, use a waterproof apron for procedures with expected high fluid volumes that might penetrate the gown.
- Change gloves when torn or heavily contaminated

Donning and Doffing of Personal Protective Equipments (PPE)

Perform hand hygiene between steps if hands become contaminated and immediately after removing all PPE
2. Dental OPD / Dental Care Environment Disinfection:

- **Preparing 1% Sodium Hypochlorite solution**
  
  Volume Formula - \((C_1V_1 = C_2V_2)\)
  
  Consider 500ml of the regularly available 6 % Sodium Hypochlorite Solution (NaOCl)
  
  \(C_1 = 6\%; \ V_1 = 500ML\); \(C_2 = 1\%; \ V_2 = \) ?
  
  \(V_2 = \frac{6 \times 500}{1} = 3000ML\) (3l)
  
  Hence add 500ml of 6% sodium hypochlorite to 3l of water to make it 1% Sodium Hypochlorite.

- **Mopping protocol**

  Mopping should be done by 3 Bucket system: Dirty mop should be first put in Bucket No.1 (water) and then rinsed in Bucket No.2 (detergent solution) and then immersed in Bucket No. 3 containing prepared solution of Sodium hypochlorite (1% ) Mop liberally and keep wet for 5 to 10 minutes for optimum results.

- **Surface Disinfectant:**

  Environmental surfaces or objects contaminated with blood, other body fluids, secretions or excretions should be cleaned and disinfected using standard hospital detergents/disinfectants e.g. freshly prepared 1% Sodium Hypochlorite or 5% Lysol. Spray the surface with 0.5% to 1% solution of Sodium Hypochlorite. The contact period of the chemical with the surface should be min. of 30 Minutes or 70 % alcohol. Areas to be cleaned include dental chair, inspection lights and handles, hand control, trolleys in addition to cupboard doors, tables and other exposed surfaces distant from the dental chair. Use water diluted bleaching powder for cleaning spittoons in between every patients.
For infection control patients disposable single use covers can be used for inspection light handle, head rest and hand rests.

Note: Freshly prepared hypochlorite solutions are generally recommended (Use the Formula Given Above)

❖ **Fumigation:**

Fumigate the dental OPD every day using hydrogen peroxide 11% and 0.1% silver nitrate (eg. Baccishield) or benzalkonium chloride based non aldehyde disinfectant (eg. Mikrobac Forte) as per manufactures instruction.

❖ **Disinfection of instruments:**

Step 1: Dental instruments should be disinfected by using 1% Hypochlorite for one hour  
Step 2: Then wash it with soap and water  
Step 3: Double autoclave

❖ **Liquid spill management:**

   i) Promptly clean and decontaminate spills of blood and other potentially infectious materials.  
   ii) Cover spills of infected or potentially infected material on the floor with paper towel / blotting paper / newspaper.  
   iii) Pour 0.5% freshly prepared sodium hypochlorite. Leave for 30 minutes in contact  
   iv) Place all soiled absorbent material and contaminated swabs into a designated waste container.  
   v) Then clean the area with gauze or mop with water and detergent with gloved hands.

**Additional precaution:**

   i. Provide separate triage area for seating with social distancing and routinely clean and disinfect patient contact surfaces.  
   ii. Perform procedures in an adequately ventilated room  
   iii. Limit the number of persons present in the room to the absolute minimum required.  
   iv. Refrain from touching eyes, nose or mouth with potentially contaminated hands.  
   v. Limit the number of HCWs, family members and visitors in contact with a patient.  
   vi. Maintain a record of all persons entering the patient’s room including all staff and visitors.
vii. Adjacent dental chair should be positioned six feet apart

viii. Any extra fomite bearing articles like watches, bags, books are not allowed in the OPD

ix. Use of mobile phones in the patient treatment room is not recommended.

Evaluation of Patients:

- Dental clinics are recommended to establish **precheck triages** to segregate patients by taking detailed travel, symptoms and contact history using questionnaire enclosed below.
- The Health worker should maintain a record or register of the questionnaire which is enclosed at Dental Out Patient Departments for all patients.
- Symptomatic or suspected patients are referred to COVID19 hospital and the report is sent to IDSP.
- **Patient from Containment zones are referred to the COVID Hospital.**
- **AAROGYA SETU APP to be mandatorily installed by all patients (With Smart Phones) visiting the dental OPD**

**QUESTIONNAIRE:**

<table>
<thead>
<tr>
<th>Question</th>
<th>YES / NO</th>
</tr>
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<tbody>
<tr>
<td>1. NAME :</td>
<td></td>
</tr>
<tr>
<td>2. AGE/ GENDER :</td>
<td></td>
</tr>
<tr>
<td>3. ADDRESS :</td>
<td></td>
</tr>
<tr>
<td>4. OCCUPATION</td>
<td></td>
</tr>
<tr>
<td>5. ARE YOU FROM CONTAINMENT ZONE / COVID HOTSPOTS:</td>
<td>YES / NO</td>
</tr>
<tr>
<td>IF YES :</td>
<td>RED / ORANGE</td>
</tr>
<tr>
<td>6. ANY MEDICAL HISTORY :</td>
<td></td>
</tr>
<tr>
<td>7. RECENT HISTORY OF TRAVEL : YES / NO (International/ National/ Interstate COVID Hotspot places)</td>
<td></td>
</tr>
<tr>
<td>8. IF YES MENTION PLACE:</td>
<td></td>
</tr>
<tr>
<td>9. RECENT HISTORY OF RESPIRATORY ILLNESS : YES/ NO</td>
<td></td>
</tr>
<tr>
<td>10. CURRENT SYMPTOMS OF RESPIRATORY ILLNESS :</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEVER/ COUGH/BREATHING DIFFICULT</td>
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## Treatments Undertaken:

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’T’s</th>
</tr>
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<tbody>
<tr>
<td>❖ Dental extraction for severe Pulpitis, Cellulitis, Ludwigs Angina, Periodontitis</td>
<td>❖ Scaling</td>
</tr>
<tr>
<td>❖ Trauma</td>
<td>❖ Root canal</td>
</tr>
<tr>
<td>Soft Tissue Injuries: Suturing Dentoalveolar Fracture-Inter Dental Wiring Fractured Zygoma</td>
<td>❖ Removable prosthesis</td>
</tr>
<tr>
<td>❖ Filling can be done by using hand excavation instruments for pulp capping and IRM restoration</td>
<td>❖ Fixed prosthesis</td>
</tr>
<tr>
<td>❖ ,Panaromic X-Ray and CBCT</td>
<td>❖ Aesthetic dentistry/composite restoration</td>
</tr>
</tbody>
</table>

### PATIENT PRECAUTION DURING AND AFTER DENTAL TREATMENT ON THE CHAIR

1. Classify patients into emergency and non-emergency dental care and plan well before initiating any dental procedures.
2. Primary care dental triage should focus on the provision of the three As:
   - a. Advice
   - b. Analgesics prescribed
   - c. Antimicrobials (where appropriate) prescribed
3. Patients should be advised that elective treatment options are severely restricted and to call back in 48-72 hours if their dental symptoms have not resolved.
4. Ask patient to rinse the mouth with 1% hydrogen peroxide followed by 0.2% povidine iodine or Chlorhexidine mouthwash for 1 minute
5. Autoclave hand piece for every patient
6. In between patients – cleaning and sanitizing surfaces.
7. It is recommended that NSAIDS in combination with acetaminophen can still be used for management of pulpal and periapical related dental pain and intraoral swelling.

### NOTE:
Whenever pharmacologic management of pain is required, Ibuprofen should be avoided in suspected and confirmed COVID-19 cases (Day, 2020).
3. Bio Medical Waste Management:

Bio medical waste generated must be segregated at source and discarded as per biomedical waste management Rules 2016 (Amendment 2018, 2019)
Annexures
Annexure -I

Case definitions:

**Suspect case:**
A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath), AND a history of travel to or residence in a location reporting community transmission of COVID-19 disease during the 14 days prior to symptom onset.

OR
A patient with any acute respiratory illness AND having been in contact with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to symptom onset;

OR
A patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath; AND requiring hospitalization) AND in the absence of an alternative diagnosis that fully explains the clinical presentation.

**Probable case**
A suspect case for whom testing for the COVID-19 virus is inconclusive. a. Inconclusive being the result of the test reported by the laboratory.

OR
A suspect case for whom testing could not be performed for any reason.

**Confirmed case**
A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

*As per recent WHO and MoHFW guidelines
Contact

High risk contact: – A contact is a person who experienced any one of the following exposures during the 2 days before and the 14 days after the onset of symptoms of a probable or confirmed case:

- Touched body fluids of the confirmed case (respiratory tract secretions, blood, vomit, saliva, urine, faeces)

- Staying in the same close environment of a COVID-19 patient (including workplace, classroom, household, gatherings) for 15 minutes or more and at a distance of less than 2 metres without any precautions.

- Travelling together in close proximity (1 m) with a COVID-19 patient in any kind of conveyance.

- A contact in an aircraft sitting within two seats (in any direction) of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated (if severity of symptoms or movement of the case indicate more extensive exposure, passengers seated in the entire section or all passengers on the aircraft may be considered close contacts).
**Low risk contact**

- Healthcare workers (not including laboratory workers, who have taken recommended infection control precautions) including the use of appropriate PPE, during the following exposures to the confirmed case.
  - Direct contact with the case (as defined above) or their body fluids.
  - Present in the same room when an aerosol generating procedure is undertaken on the case.
  - Passengers on an aircraft sitting beyond two seats (in any direction) of a confirmed case.
  - Any individual who has shared a closed space with a confirmed case for longer than two hours, but following risk assessment, does not meet the definition of a high risk contact.

**Containment zone:**

The containment zone will be decided by COVID task force based on the extent of cases/contacts listed and mapped by them. From the residence of the case, the PHC in which residing with adjoining PHCs to be earmarked. This area is known as Containment Zone. If required, based on the mapping of contacts and cases, the containment zone will be refined.

**Buffer Zone:**

Another 2 Km from the periphery of the containment zone is known as Buffer Zone.

* As per recent WHO and MoHFW guidelines.
ANNEXURE – II

DECLARATION OF CONSENT

I ……………………………………………………….. have come to this …………..Dental OPD for my dental treatment. If I happen to be an asymptomatic carrier or an undiagnosed patient with COVID-19 disease, I suspect it may endanger the doctors and their supporting staff. It is my duty and responsibility to take appropriate precautions and follow the protocols prescribed by them. I also know and understand that I may already be an asymptomatic carrier/undiagnosed COVID-19 positive patient and may get infected in due course of time after my visit to dental OPD and I will not hold the doctors or the staff responsible for any future diagnosis of COVID-19 for me or my accompanying person.

The doctor reserves the right to Treat/Defer/Refer me accordingly.

The above terms and conditions have been read by me/have been explained to me in my native language to my complete satisfaction. I agree to all terms and conditions mentioned above. I verify, confirm and agree to be held accountable, regarding the details given by me which are true to the best of my knowledge.

Signature of Patient/Parent/Guardian …………………………………...
References
REFERENCE

1. Detailed Guidelines for Infection Prevention Control for suspected cases of 2019-nCoV Acute Respiratory Disease-MINISTRY OF HEALTH AND FAMILY WELFARE


3. IDA_Recommendations_for_Dental_Professionals_on_the_Coronavirus_Threat


5. Summary of infection prevention practice in dental settings_Basic expectation for safe care_centre for disease control_2016s

6. Guidelines for dental care provision during the COVID-19 pandemic
