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Guidelines for Dental Professionals While Treating Dental Emergencies during the COVID-19 Pandemic to Curb Its Spread: A Review

Garg E[1,*], Sikri A[2], Bembi R[3], Sharma A[4], Kaur M[5] and Sikri J[6]

[1]*Consultant Oral and Maxillofacial Radiologist, India*

[2]*Associate Professor and Post Graduate Teacher, Department of Prosthodontics, Crown and Bridge and Oral Implantology, Bhojia Dental College & Hospital, Budh (Baddi), Teh. Baddi,Distt. Solan, Himachal Pradesh, India*

[3]*Senior Lecturer, Department of Oral Medicine and Radiology, JCD Dental College, Sirsa, Haryana, India*

[4]*Prosthodontist, India; Student (DDS) at University Of Alberta, Edmonton, Canada*

[5]*Assistant Professor, Department of Oral Medicine and Radiology, Dasmesh Institute of Research and Dental Sciences, Faridkot, Punjab, India*

[6]*Senior Lecturer, Department of Conservative Dentistry and Endodontics, Bhojia Dental College & Hospital, Budh (Baddi), Teh. Baddi, Distt. Solan, Himachal Pradesh, India*

[*]**Corresponding author:** Garg E, Consultant Oral and Maxillofacial Radiologist, India; E-mail: dreshugarg@gmail.com

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Abstract

The present outbreak of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and its associated 2019 coronavirus strain (COVID-19), has gripped the entire international community and constitutes a public health emergency all over the world. Despite taking great efforts globally to prevent its spread, the cases are still on surge because of the community spread pattern of this infection. Due to the characteristics of dental settings, the risk of cross infection can be high between patients and dental practitioners and posed significant challenges in the field of medical and dental sciences, in all affected countries. The role of dental professionals in preventing the transmission of COVID-19 is critically important as they constantly come in contact with oral fluids and this coronavirus (SARS-CoV-2) is abundantly present in nasopharyngeal and salivary secretions of affected patients, and its spread is predominantly thought to be respiratory droplet /contact with saliva. During this period of pandemic, while all routine dental procedures have been avoided in areas experiencing COVID-19 disease, but still the strict and effective infection control protocols are urgently needed for emergency needs delivered by teams provided with appropriate personal protective equipment (PPE). Moreover, ceasing dental care provision or lack of guidelines increase the nosocomial COVID-19 spread during such a period will amplify the burden on hospital's emergency departments already struggling with the pandemic. The aim of this article is to develop relevant guidelines based on our experience and knowledge for dental health care workers that should be followed while managing dental patients during the COVID-19 pandemic to prevent its spread and protect ourselves. All members of the dental team have a professional responsibility to keep themselves informed of current protocols and be attentive in updating themselves as recommendations are changing so quickly.

Keywords: Coronavirus; SARS-CoV-2; COVID-19; Dental professionals; Infection control; Pandemic; Guidelines; Protocols

Introduction

On December 31, 2019, China alerted WHO about several cases of unusual pneumonia in Wuhan (a port city of 11 million people

in the central Hubei province) caused by an unknown virus [1-3]. Predominant potentially affected individuals worked at the city's Huanan Seafood Wholesale Market, which was shut down on January 1, 2020. As many health experts worked hard to identify the virus amid growing alarm, the number of infections exceeded 40. On January 8, 2020, a newly discovered virus was named as novel coronavirus 2019 officially by WHO and announced as the causative pathogen of disease COVID-19 (co- corona, vi-virus, d-disease, 2019-outbreak year) by the Chinese Centre for Disease Control and Prevention [2-4]. Coronavirus Study Group (CSG) of the International Committee proposed to name this new coronavirus as SARS-CoV-2, both issued on 11 February 2020. The Chinese scientists rapidly isolated a SARS-CoV-2 from a patient within a short time on 7 January 2020 and came out to genome sequencing of the SARS-CoV-2. However, there is no evidence so far that the origin of SARS-CoV-2 was from the seafood market. Rather, bats are the natural reservoir of a wide variety of CoVs, including SARS-CoV-like and MERS-CoV-like virus. Upon virus genome sequencing, the COVID-19 was analysed throughout the genome to Bat CoV RaTG13 and showed 96.2% overall genome sequence identity, suggesting that bat CoV and human SARS-CoV-2 might share the same ancestor, although bats are not available for sale in this seafood market. Besides, protein sequences alignment and phylogenetic analysis showed that similar residues of receptor were observed in many species, which provided more possibility of alternative intermediate hosts, such as turtles, pangolin and snacks [4,5]. Outside mainland China, the first confirmed case of coronavirus was observed on January 20, 2020 in Japan, Thailand and South Korea. On January 21, 2020 the first case in US was identified in Washington State. Also authorities in United States, Nepal, France, Australia, Malaysia, Singapore, South Korea, Vietnam and Taiwan confirmed cases over the following days. On January 30, 2020, the World Health Organization (WHO) announced that this outbreak had constituted a public health emergency of international concern [6,7]. On March 11, 2020 WHO declared COVID-19 a pandemic, pointing to the over 118,000 cases of the coronavirus illness in over 110 countries and territories around the world and the sustained risk of future global spread. As of 29 April 2020, COVID-19 has been recognized in over 213 countries, areas or territories, with a total of over 30, 24,059 confirmed cases and over 208,112 deaths. Studies estimated the basic reproduction number (R0) of SARS-CoV-2 to be around 2.2, or even more (range from 1.4 to 6.5), and familial clusters of pneumonia outbreaks add to evidence of the epidemic COVID-19 steadily growing by human-to-human transmission [8,9]. Currently, our understanding about the transmission of COVID-19 are still to be determined. Based on findings of genetic and epidemiologic research, it seems that the COVID-19 outbreak started with a single animal-to-human transmission, followed by sustained human-to-human spread. It is now believed that its interpersonal transmission (droplets while talking, sneezing, coughing or direct contact with mucous membrane) occurs mainly between family members, including relatives and friends who intimately contacted with patients or incubation carriers. Transmission between healthcare workers occurred in 3.8% of COVID-19 patients, issued by the National Health Commission of China on 14 February 2020 [10-12]. By contrast, the transmission of SARS-CoV and MERS-CoV is reported to occur mainly through nosocomial transmission. Infections of healthcare workers in 33–42% of SARS cases and transmission between patients (62–79%) was the most common route of infection in MERS-CoV cases. Direct contact with intermediate host animals or consumption of wild animals was suspected to be the other main route of SARS-CoV-2 transmission. In addition, there may be risk of fecal-oral transmission, as researchers have identified SARS-CoV-2 in the stool of patients from China and the United States [10]. However, whether SARS-CoV-2 can be spread through vertical transmission (from mothers to their new-borns) is yet to be confirmed [13]. All Dental settings invariably carry high risk of COVID-19 infection due to unique characteristics and specificity of its procedures, which involves face-to-face communication with patients, frequent exposure to saliva, blood, and other body fluids, handling of sharp instruments and use of equipment's such ultrasonic scalers, air-water syringes and air turbine handpieces [14]. While dealing with dental patients, transmission of virus possibly by any of the following routes: firstly, through inhalation of airborne microorganisms that can remain suspended in the air for longer periods, secondly, through direct or accidental contact with blood, oral fluids, or other COVID 19 affected patient materials, thirdly, contact of conjunctival, nasal or oral fluids with droplets and aerosols containing microorganisms generated from an infected persons and propelled a short distance by coughing and talking without a mask, and last but not the least by an indirect contact with contaminated instruments and/or environmental surfaces. Moreover, aerosol transmission of SARS-CoV-2 is also plausible as the virus can remain viable and infectious in aerosols for at least three hours and on surfaces for days. Transmission from asymptomatic COVID-19 carriers' possibility was also reported [14-17]. Considering that COVID-19 was recently identified in saliva of infected patients, and this outbreak is a reminder that dental and other health professionals must always be diligent in protecting against the spread of contagious disease, and it provides a chance to determine if a non-invasive saliva diagnostic for COVID-19 could assist in detecting such viruses and reducing its spread [18]. The exact incubation period is not known. Based on current epidemiological investigation, it is presumed to be between 1–14 days after exposure, with numerous cases occurring within 5 days after exposure, however, up to 24 days was also

reported in some studies. And the COVID-19 is contagious during the latency period. It is highly transmissible in humans, especially in the elderly and individuals with underlying medical problems. The median age of patients is 47–59 years, and 41.9 45.7% of patients were females [1,4,19,20]. A recent study led by Prof. Nan-Shan Zhong's team, by sampling 1099 laboratory-confirmed cases, found that the common clinical manifestations included fever (88.7%), cough (67.8%), fatigue (38.1%), sputum production (33.4%), dyspnea (18.6%), sore throat (13.9%), and headache (13.6%). In addition, a part of patients manifested gastrointestinal symptoms, with diarrhea (3.8%), vomiting (5.0%), reduced sense of smell and abnormal taste sensation. Fever and cough were the dominant symptoms whereas upper respiratory symptoms and gastrointestinal symptoms were rare, suggesting the differences in viral tropism as compared with SARS-CoV, MERS-CoV, and influenza. The elderly and those with underlying disorders (i.e., hypertension, chronic obstructive pulmonary disease, diabetes, cardiovascular disease, immunological disease) developed rapidly into acute respiratory distress syndrome, septic shock, metabolic acidosis hard to correct and coagulation dysfunction, even leading to the death [21,22]. However, on the other hand in April 2020 it is noticeable that, about 80% of the cases have only mild symptoms that resemble flulike symptoms and seasonal allergies, which might lead to an increased number of undiagnosed cases. These asymptomatic patients can act as "carriers" and also serve as reservoir for re-emergence of infection [20]. While the mild COVID-19 cases do not require specific care, and usually symptomatic treatment and home isolation are enough. Oxygen therapy is the major intervention for patients with severe cases. Critical cases management on the other hand is case dependent and will usually need intensive care. Even after patient recovery, recusancy during the convalescence period was reported. This is plausible since the presence of some virus strains in saliva for as long as 29 days have been reported in the literature.

Guidelines for practicing dentistry during Covid-19 pandemic

During current scenario of COVID-19 pandemic, following universal infection control measures are of utmost importance with extreme vigilance and championing required by all. However, given the high transmissibility of the disease and considering that routine dental procedures usually generate aerosols; during this period of pandemic, alterations to dental treatment should be considered to maintain a healthy environment for the patients and the dental team. To date, it has been six weeks since COVID-19 outbreak was declared as a pandemic by WHO; yet most of the dental schools, dental offices, regulatory and advisory bodies still do not have a clear vision about the worldwide impact this pandemic can have on dental services. It is true that many primary and secondary dental services have been suspended globally in all the affected parts, with many countries providing telephone-based triage systems to identify those patients requiring urgent or emergency intervention. Closing dental practices during the pandemic can reduce the number of affected individuals, but definitely will increase the suffering of the individuals in need of urgent dental care. It will also incense the burden on hospitals emergency departments. This calls for the creation of standard guidelines for dental management during COVID-19 pandemic and/or local epidemic outbreaks [23-25]. Therefore, purpose of writing this article is to introduce the essential knowledge about COVID-19 and nosocomial infection and provide recommended management protocols for entire dental fraternity and patients in potentially affected areas based upon our experience and relevant guidelines and research. Thus, during this period of pandemic, every patient should be considered as potentially infected by this virus, and all dental practices need to review their infection control policies, engineering controls, and supplies.

Tele screening /Triaging/ Tele Consultation

Our primary goal as dental health care workers is to use telecommunication technology to triage patients and conduct problem-focused evaluations to limit dental office visits to emergency care only. This can facilitate providing advice and performing triage. It can also facilitate whether planning for in-person interactions necessary or not. However, this action will drastically limit the interpersonal contact, the waiting time of patients in dental cabinets and, in general, the conditions predisposing patients to be infected. The three most pertinent questions for initial screening should include any exposure to a person with known or suspected COVID-19 infection, any recent travel history to an area with high incidence of COVID-19/ abroad or presence of any symptoms of febrile respiratory illness such as fever or cough. A positive response to either of the three questions should raise initial concern, and elective dental care/ nonemergency dental procedures should be deferred for at least 2 weeks (Note: As mentioned previously, the incubation period for SARS-CoV-2 can range from 1–24 days).

These patients should be encouraged to engage in self-quarantine and contact their primary dental practitioner by telephone or email [24-26].

Patient Evaluation and Cohorting

All patients should visit dental clinic only after telecommunication with doctor. It is crucial for dentists to refine preventative strategies to avoid the spread of COVID-19 infection by focusing on current guidelines at every stage of contact with

patient during dental consultation or treatment. Every dental patient along with accompanying individuals, as well as entire dental fraternity must wear surgical mask and follow proper respiratory hygiene measures, such as covering the mouth and nose with a tissue before coughing and sneezing before entering the main gate of the dental office/school/institution.25-26Upon arrival in dental office, entire dental staff as well as patients first sanitize their hands with 70% isopropyl alcohol properly in reception area and advised to follow instructions written on notice board. After that, they should complete a detailed medical history form, COVID-19 screening questionnaire and assessment of a true emergency questionnaire (Fig 2 and Fig 3). As a health care provider this is our duty to help the government of India in contact tracing so maintaining record of every person visiting to our health care facility. All dental clinics are recommended to establish precheck triages to measure and intercept the temperature of every staff and patient as a routine procedure using a noncontact forehead thermometer or with cameras having infrared thermal sensors before entering the operatory areas.27,28 Patients who present with fever and/or respiratory disease symptoms should have elective dental care postponed for at least 2 weeks as discussed above and for emergency cases, infection control protocols to be followed to curb spread of infection. Potentially life-threatening conditions include: uncontrolled bleeding, severe uncontrolled dental pain, diffuse soft tissue swelling, intra/extra oral swelling compromises airway, trauma involving face/ facial bones, severe trismus, non-healing ulcers, dry socket, abscess, malignancies or other abnormal growths (soft/ hard tissue) in orofacial region. As the Indian Penal Code put Doctor-Patient relation under Consumer Protection Act for us being health care providers we have to protect ourselves from virus as well as medico-legal issues. Although informed consent about any procedure is still mandatory an additional COVID-19 consent to be procured and kept in records [24-28] (Figure 1) (Table 1,2).

Every person present in waiting/ reception area, patient counselling room, patient preparatory area as well in in scrub area should wear work clothes, disposable surgical masks and caps. However, in sterilization and treatment areas, PPE is provided including disposable N 95 masks, gloves, gowns, cap, shoe covers and googles or face shield. The Red Isolation area should be designed for the suspected COVID-19/ COVID positive patients or recovering (less than 1 month after discharge from hospital) patients. Separate entry and exit gates for such patients. The staff also enters from a separate gate in the isolation area and this area is disinfected as soon as the patient leaves. All the dental staff should wear surgical mask and gloves all the time in the dental set-up except while eating (best precaution is to avoid eating in dental set up). Hand hygiene has been considered as most critical measure for reducing the risk of transmission amongst individuals. Recent studies reveal that SARS-CoV-2 can persist on surfaces for few hours or up to several days, depending upon the type of surface, the temperature, or the humidity of the environment. This reinforces the need for maintaining hand hygiene and the importance of thorough disinfection of all surfaces within the dental settings. Preferred mode of payment during should be digital non-contact methods like UPI, NEFT, and GOOGLE PAY etc. Most important is to keep currency handling to bare minimum. However, other most important point is to appoint the patient with procedure involving generation of aerosols at the end of the day.

Effective Infection Control Protocols Worldwide

In order to limit nosocomial spread of infection, The School and Hospital of Stomatology, Wuhan University has shared its some experiences and based on our knowledge and experience following measures should be followed in entire dental set up.

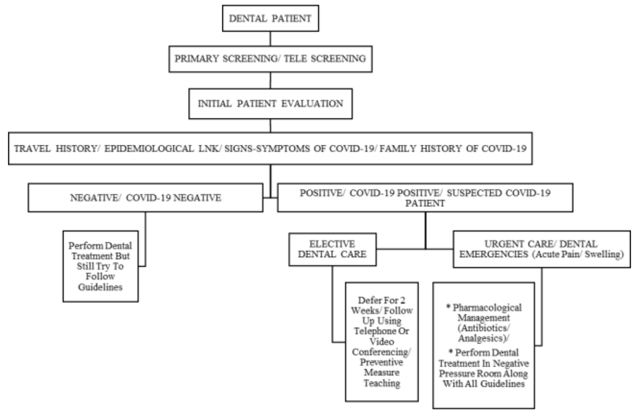


Figure 1: *Algorithm for Clinical Decision Making for COVID-19 and Dental Management.*

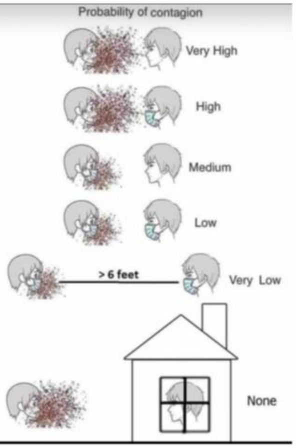


Figure 2: *Operatory area.*

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 type of PPE.

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
- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

3. GOGGLES OR FACE SHIELD
- Place over face and eyes and adjust to fit

4. GLOVES
- Extend to cover wrist of isolation gown

USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION
- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

CDC

Figure 3: *Sequence for putting on personal protective equipment.*

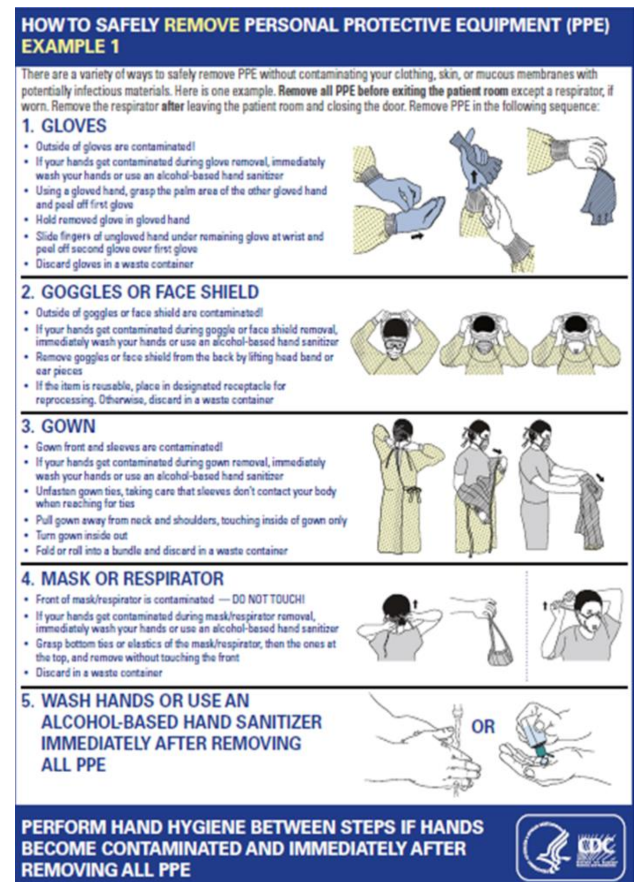


Figure 4: *How to safely remove personal Protective equipment.*

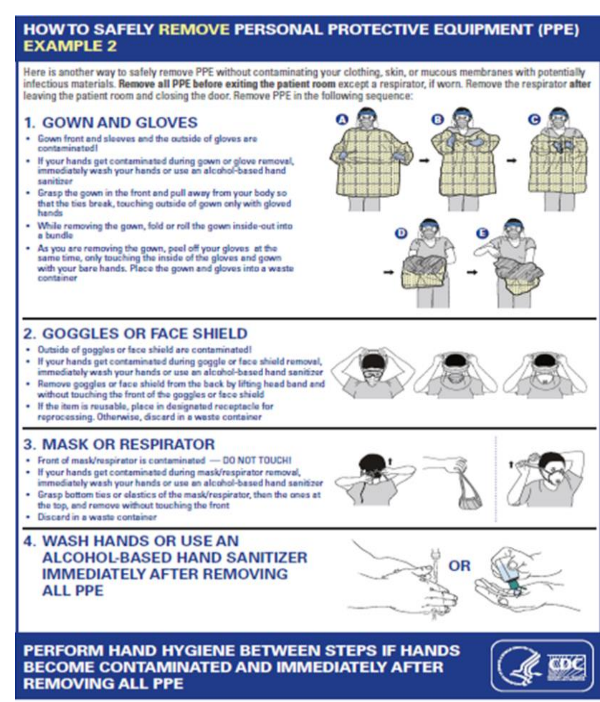


Figure 5: *Perform hand Hygiene between steps if hands become contaminated and immediately after removing all PPE.*

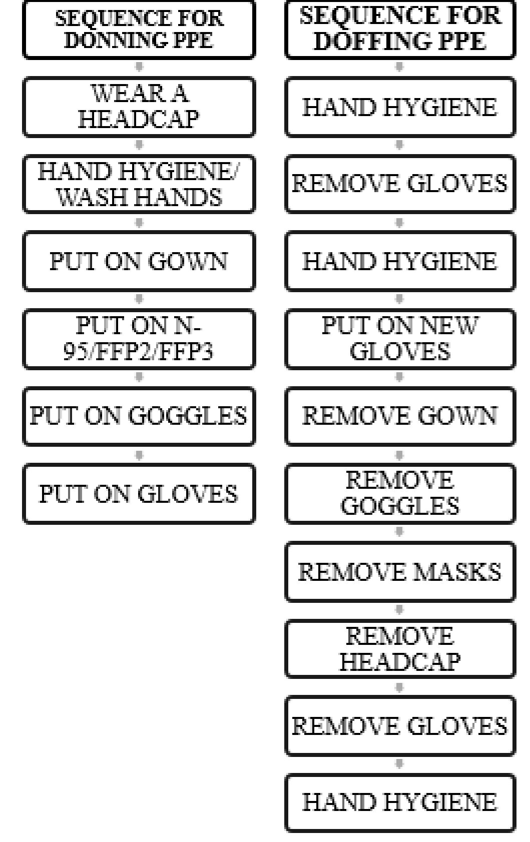


Figure 6: *Showing donning and doffing Of PPE.*

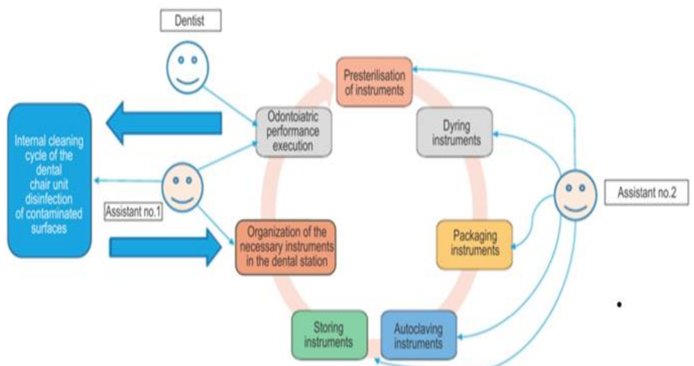


Figure 7: *Cavicide.*

Table 1: *COVID-19 Screening Questionnaire*.

COVID-19 SCREENING QUESTIONNAIRE	YES	NO
1. Have you or any of your family member have symptoms of Respiratory illness in last 45 days? (Cough/ Fever/ Sore Throat/ Breathlessness/ Running Nose/ Others)		
2. Have you or any of your family member have traveled to any of these locations (National/ Foreign/ Social Gatherings) in last 45 days? - By Road/ Rail/Seaways /Air		
3. Have you or any of your family member had history of contact with a Laboratory confirmed COVID-19 cases in last 45 days.		
4. Are you a health care provider?		
5. Have you or any of your family member had history of contact with a COVID-19 biological material.		
6. Urgent Dental Need Question (Do you have uncontrolled Dental/0ral pain; infection/ swelling/ bleeding or trauma to oral cavity?)		
7. Any other necessary information?		

Table 2: *Assessment of a true emergency questionnaire.*

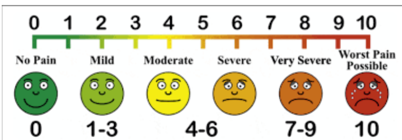
1. Are you in pain? ***Yes*** *or* ***No***
2. What is your level of pain on a scale of 0-10?.. 
3. When did the pain begin?
4. Do you have a dental abscess (Are your gums and/or face swollen?) ***Yes*** *or* ***No*** If ***Yes***, when did you first notice the swelling?
5. Do you have a fever? ***Yes*** *or* ***No***
6. Are you having any trouble swallowing? ***Yes*** *or* ***No***
7. Are you having any trouble opening your mouth? ***Yes*** *or* ***No***
8. Did you experience any trauma? ***Yes*** *or* ***No*** Please describe the trauma…………………………………………………………………

Table 3: *Dental Procedures Which Can Be Performed With Minimum/ No Aerosol Production.*

TREATMENT PROCEDURES	SCOPE	ADVISORY
Management of Carious lesions not involving pulp.	1. Selective caries removal 2. SDF application 3. SMART	Using sharp excavators, slow speed drill and GIC/RMGIC restoration To arrest carious lesions in geriatric and pediatric patients SDF application to arrest lesion followed by GIC restoration
Minimally invasive pulp therapy	1. Partial pulpotomies 2. Full pulpotomies 3. Root canal treatment	Traumatic exposures, Iatrogenic exposures. Irreversible pulpitis, Traumatic and Iatrogenic exposures. Necrotic pulp; Periapical lesion. CaOH2 dressing; Delay obturation.
Post endodontic restorations	1. Monoblocking 2. SS Crown 3. Preformed esthetic crown	Bonded composite restoration with cuspal coverage For badly destroyed molars Long term esthetic provisional restorations
Bonded restorations for replacement of missing anterior teeth	1. Maryland bridge 2. Fibre reinforced composite bridge 3. Lithium disilicate bonded bridge	Metal wings, ceramic pontic Lab fabricated or chairside fabrication using restorative composite resin Lab fabricated for highly esthetic restorations
Prosthodontics	1. Impressions 2. Removable dentures 3. Management of existing FPDs	Chemical disinfection of impressions and wax rims Partial and Complete dentures, Essix appliances/Flippers. Cementation or bonding of restorations following usual protocol
Esthetic dentistry	1. Direct composite veneers 2. Diastema closure 3. Class 4 build ups 4. Multiple teeth composite resin build ups (FMR)	Free hand or using indices made from wax ups Free hand with palatal index Free hand with palatal index Transparent silicone index and injection moulding technique
Periodontics	1. Scaling 2. Periodontal surgery	Only hand instrumentation Following conventional protocols
Radiology	1. Panaromic xrays 2. IOPA 3. CBCT	Preferable 3 layers of disposable barriers Selected cases
Oral Surgery	1. Exodontia 2. Abscess drainage 3. Disimpactions	Sectioningwith micromotor drills; fine tipped elevators Following conventional protocols Bone drilling to be avoided. Chisel/Mallet technique. Refer to specialist
Implant Dentistry	1. Implant placement surgery 2. Immediate placements 3. Crestal sinus lifts 4. Ridge expansion 5. Ridge augmentation	Slow speed drilling protocol without saline for soft bone. Dense bone cases to be avoided Atraumatic technique followed by slow speed Osteotomy dills. Using concave ossteotomes Bone expansion screws, convex ossteotomes Following conventional protocols. No harvesting autogeneous bone.
Orthodontics	1. Changing wires and ligatures 2. Bonding orthodontic attachments 3. Interproximal Reduction 4. Debonding 5. Placement of microimplants	Extreme caution to prevent laceration Wash etchant with water in syringe and gently use chip blower to dry Use IPR strips Delay debonding Avoid irrigation, use moist gauze to maintain field of vision

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Waiting Area/ Reception Area Guidelines

Patients waiting area to be spacious and additional increase in distance between chairs following the norms of social distancing (As per the Centers for Disease Control and Prevention guidelines, individuals with suspected COVID-19 infection should be seated in a separate, well-ventilated waiting area at least 6 feet from unaffected patients seeking care or they may be advised to wait in their cars); remove all amenities that involve high touch (magazines/newspaper/ other reading materials/ coffee or tea service); usage of disposable glasses instead of steel utensils for water; consistent disinfection of waiting area/ front desk counter space/ areas that are constantly touched like door knobs, tables, handles, chairs etc. throughout open hours; availability of sanitizers and masks and try to avoid/ minimize the use of cell phones during working hours (use plastic sheets to cover cell phones that should be disposed daily). Also, pens record books and appointment books to be kept in a closed formalin chamber to keep it free from any contaminants. In addition, try to reduce number of staff all times (members can follow a rotation positioning to avoid unnecessary exposure) (Figure 2).

Operatory Area Guidelines

Operatory area should be spacious with windows/vents for air circulation; only equipment/material to be used at the point of time to be kept outside; remove all text books and models; cover all fomite bearing surfaces like x-ray viewer, computers, pulseoxymeters, micro motor, scaling unit with plastic sheets; all the bins with respective biomedical colour coding to be filled with diluted sodium hypochlorite; also all surfaces of dental chair to be disinfected with appropriate disinfectant (70% alcohol/ 0.5% hydrogen peroxide/ 0.1% sodium hypochlorite) after OPD of every patient; six handed dentistry (3 staff to be present in operatory with complete PPE- 2 staff to perform procedure and one to act as runner and to help maintain disinfection protocol); preoperative antimicrobial mouth rinse could reduce the number of microbes in the oral cavity and use of rubber dams and saliva ejectors with high volume can also reduce the production of droplets and aerosols. In addition, other alternatives to reduce spread during this outbreak is to avoid taking intra-oral radiographs, instead go for extra-oral dental radiographs such as panoramic radiography (OPG) or Cone Bean Computed Tomography (CBCT). The positioning of patients on dental chairs are in such a way so that they are at a distance from operator's face; use of one PPE per patient; careful handling of sharp instruments; use resorbable sutures to eliminate the need for a follow up appointment and try to use disposable (single-use) devices such as mouth mirror, syringes, and blood pressure cuff to prevent cross contamination. In this time of public health crisis, endodontic practices can dilute the sodium hypochlorite irrigant solution to 1% concentration, to extend the supplies without compromising on treatment outcome. All the dental procedures which can be performed with minimum aerosol/ no aerosol production are discussed in Table 3 [26-29] (Table 3).

Table 1: Dental Procedures Which Can Be Performed With Minimum/ No Aerosol Production

Changing Area Guidelines: proper provision of hand hygiene to be present in changing area illustrates Centre for Disease Control and prevention guidelines for putting and removing PPE [26].

Sterilization Area Guidelines: All instruments to be immersed in sodium hypochlorite- detergent solution for 24 hours and then transferred to ultra-sonic cleaner next day. All instruments used in the mouth/ penetrating tissue must have been sterilized or must be single-use/disposable. Hand pieces, nose cones, contra-angles, low speed motors, adapters and all other dental instruments must be autoclaved before use in oral cavity. Sterilization and disinfection cycle of dental instruments and dental office (Figure 3-7).

At the end of the day, clean all operatory items and surfaces by wearing heavy-duty, nitrile rubber gloves and using cavicide disinfectant. This includes entire furniture, walls, dental chair, unit pedestal and arms, power module and light post. Wipe all the smooth surfaces with a paper towel and the irregular surfaces with a clean hand brush or denture brush. In order to permit adequate floor cleaning by the housekeeping staff, hoses must not be left on the floor, the chair must be raised to its highest position, and the foot controller placed on a paper towel on the seat. Proper disposal of biomedical waste management should be done by using yellow, red, white and blue bins.

Conclusion

Everyone all over the world are trying, praying, and playing their role best in controlling this COVID-19 pandemic faced globally. Once we are over, the active spread and containing the infection our world as we know, it will never be same again specially in regards to the dental fraternity and their patients. As COVID-19 has altered the lifestyle all over the globe even we as dental professionals have to alter our protocols for protection of our patients, to prevent spread of COVID-19 and protect ourselves. Dental teams must ensure they remain updated in their understanding of local, regional, and national guidance in a climate of uncertainty and frequent change to optimise safety for dental care providers and patients. Dentists who treat children during this pandemic should enact universal infection control procedures to the highest standard and champion this behaviour through their teams. Health care workers also provide adequate training to their staff to promote many levels of screening and preventive measures, allowing dental care to be provided while mitigating the spread of this novel infection. In nutshell, the

significant limitation of clinical and surgical activities in the dental sector has represented a very impactful measure on the economy of the sector. Nevertheless, this drastic intervention has made it possible to protect the health and safety of citizens and contain the expansion of the coronavirus. Therefore, the policies and measure packages adopted by governments are addressed to all dental associations, stating clear guidelines to prevent and to control COVID -19 infection in oral diagnosis and treatment in daily practice until a vaccine or a drug becomes available.

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