



## COVID 19 and Special Care Dentistry: A Narrative Review

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### ABSTRACT

The COVID 19 outbreak has been declared a pandemic by the world health organisation. The healthcare sector was overburdened and overstretched with the number of patient increasing and requiring health services. The worst-hit population always are the people with special needs, whether it is children, pregnant females or the geriatric population. The need for the emergency kind of health services was so inflated that the other special population which required them equally as those patients with the COVID 19 suffered a lot. Dentistry was not an exception, and even that is also one of the important components of the health care delivery system and people requiring oral health care needs were also more. Those undergoing dental treatments would not have completed the treatment, and this would have resulted in various complications. In this situation, some dental emergency guidelines have been released by Centres for Disease Control (CDC) for the urgent dental care those requiring special care dentistry during the COVID 19 pandemic. Children with special care needs were considered more vulnerable to oral diseases; hence priority should have been given to them for dental treatments moreover in the future also more aggressive preventive measures should be taken in order to maintain oral hygiene and prevent many oral diseases. Guardians/caregivers should be made aware and motivated to maintain the oral health of children with special health care needs. This review mainly focuses on the prevention and management of oral diseases in children's with special care needs.



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### INTRODUCTION

COVID 19 is a highly infectious disease which causes respiratory illness. The outbreak started in December 2019 in Wuhan province, China that gradually spread all over the world within a short period of time (WHO, 2020). The rapid spread of this virus made "WHO" to announce it as Public Health Emergency of International Concern on 31<sup>st</sup> January 2020 and pandemic on 11<sup>th</sup> February 2020 (W.H.O., 2020; W H O, 2020). This respiratory illness has the same symptoms as that of an of the flue which includes dry cough, fever and fatigability are the most common symptoms of novel corona virus, but almost 80% of affected population area symp-

tomatic (WHO, 2020). To curb this pandemic spread of COVID 19, very strict measures have been taken all over the world which includes lockdown, social distancing and quarantine of suspected cases that do not show any signs and symptoms but have travelled from one place to another, they have to be in quarantine for 14 days (MoHFW, 2020).

In India, the lockdown was declared by the government on 25<sup>th</sup> March 2020 to prevent further spread of disease (MHA, 2020). COVID 19 has measurably affected dental and medical care in every part of the world. According to DCI guidelines, as the risk is high for transmission during dental treatment, therefore only emergency dental treatment will be performed to minimize the chances for exposure (DCI, 2020). This has however changed the considerations and total approach towards dental treatment to reduce the transmission of infection from one person to another as the route of transmission is mainly through droplet aerosol or by contact with the patient (WHO, Q&A, 2020).

According to "American academy of paediatric dentistry", special care needs is defined as "Special health care needs include any physical, developmental, mental, sensory, behavioural, cognitive, or emotional impairment or limiting condition that requires medical management, health care intervention, and/or use of specialized services or programs. The condition may be congenital, developmental, or acquired through disease, trauma, or environmental cause and may impose limitations in performing daily self-maintenance activities or substantial limitations in major life activity.

Health care for individuals with special needs requires specialized knowledge, as well as increased awareness and attention, adaptation, and accommodative measures beyond what are considered routine."Children with special needs and disabilities such as downs syndrome, cleft lip and palate, seizure disorders, cerebral palsy or any other developmental anomalies are at higher risk of oral health problems as they depend on caregivers/parents to achieve and maintain good oral health (AAPD, 2012). Usually, they have poor oral hygiene which may give rise to certain dental problems such as, tooth ache, swollen gums, bleeding from gums etc. which requires treatment (Radhika et al., 2015; Gallagher and Scambler, 2012). So this review focuses on preventive aspect and emergency care in special care dentistry in the COVID-19 pandemic.

### Preventive Aspect of Special Care Dentistry

It is said that "prevention is better than cure", so prevention of oral disease and infection is the crucial step in the oral care of the person with

special care needs, especially in a situation like COVID-19 pandemic. Effective prevention measures should be taken into consideration from the earliest age (Bhambal et al., 2011). The children with special care need adult help to brush their teeth thoroughly (Health and Safety Notes, 1950). Commercially available oral cleaning aids for the ease of maintaining oral health, for example, toothbrush handles and brush heads (modified) and powered toothbrushes help carers with oral hygiene routines. Appliances, such as occlusal splints can be used to help control drooling and to protect teeth from bruxism in a patient with special care needs (Nunn and Gorman, 2010).

Good nutritious food, for example, green leafy vegetables, lentils. Avoid sugar-containing foods and drinks such as cakes, pastries, candies and soda that can cause cavities (Health and Safety Notes, 1950). Sticky consistency food item retains around the teeth and in the high-vaulted palate for a long period of time. Parents/caregivers should be made aware; this is likely to occur and guide them to clean old food residues from more inaccessible places (Nunn and Gorman, 2010). Fluoride can be used to reduce cavities, so brush teeth using a pea-sized amount of fluoridated toothpaste twice daily, and use of chlorhexidine mouthwash to maintain oral hygiene and to prevent dental caries has been suggested (Gallagher and Scambler, 2012). Milk bottle with added sugar should not be left in the mouth while the child is sleeping to prevent early childhood caries (Health and Safety Notes, 1950).

### Dental Emergencies in Special Care

Following is the list of dental emergencies that can arise as a result of poor oral hygiene among special healthcare needs children.

Severe tooth ache which is unbearable and does not respond to self-care or medication.

1. Orofacial pain due to any medical condition or of unknown aetiology.
2. Severe periodontal problems which cause tooth movement and difficulty in mastication.
3. Avulsion of the permanent tooth.
4. Displaced crown or restoration.
5. Dental trauma.
6. Orofacial swellings.

### Emergency Treatment for Special Care

The outbreak of COVID-19 has placed health professionals at risk, and there are some guidelines which

have to be followed to minimize the transmission through contact and dental procedures (Ge, 2020).

The CDC's Guidelines for Infection Control in Dental Healthcare Settings states that, if the patient is COVID 19 positive, all non-emergency dental procedures should be avoided until the patient is no longer contagious with the airborne transmitted diseases (CDC, 2020).

According to IDA guidelines to avoid chances of exposure, one should strictly follow the steps such as taking a detailed travel and health history, screening, use of PPE by the doctors as well as by patients, use of surface disinfectant and taking contact details and address of all patients treated (DCI, 2020; IDA, 2020).

The COVID-19 pandemic is certainly posing the extreme challenge that special care dental services ever had to face, but we can learn from this situation and benefit from this challenge (Dziedzic, 2020).

There is some general advice which has to be followed. Only emergency dental problems should be considered. At least two clinicians must be involved in the decision-making process for the treatment protocols, if possible. Aerosol generating procedures (AGP) should not be done to prevent the spread of the virus, unless necessary, where there is no other option (Gallagher and Scambler, 2012).

### Emergency care

Teleconsultation and teletriage- Initial consultation can be done over the telephone to know the condition of the patient and also to know whether he/she is the suspected case of COVID-19. The patient should be asked about his recent travel history, any contact with a person suspected of COVID-19 and presence of any signs and symptoms indicating towards COVID-19 infection.

Pharmacological management, analgesics and antibiotics can be given in a patient with non-emergency situations or if the patient is confirmed case of COVID-19.

In case of emergency, if the medications do not resolve the symptoms of chief complaint, the patient can be called at the clinic by prior appointment only (IDA, 2020). When a patient comes to the clinic:

1. Medical history form, COVID 19 screening form, emergency assessment form has to be filled by the patient (IDA, 2020; Ather et al., 2020).
2. The patient should be provided with a mask and sanitizer, and their temperature should be measured using a sterile or non-contact forehead thermometer (Shamszadeh et al., 2020).

### Emergency procedures

1. The access to anaesthesia is not possible as providers are cancelling all elective procedures, and this will include dental treatment under general anaesthesia (IDA, 2020). In emergency cases, try to use regional anaesthesia.
2. The dentist should follow standard protocols before starting any treatment which includes the use of personal protective equipment and hand hygiene practices (CDC, 2020; W.H.O., 2020).
3. Extraoral radiography like panoramic and cone-beam computed tomography are preferred over intra-oral radiographic imaging to avoid cough or gag reflex (Ather et al., 2020).
4. Use high vacuum suction to minimize water splatter; use of rubber-dam to reduce salivary contamination, minimum use of the ultrasonic instrument and high-speed handpiece to reduce the generation of aerosol, use of atraumatic restorative procedures can be performed that eliminates the use of handpieces (Ather et al., 2020; Shamszadeh et al., 2020).
5. Periodic fumigation, the spacing of appointments to allow sufficient time for sterilization and disinfection protocols to be followed in the dental office, use of single-use equipment and materials as possible, appropriate sterilization of reusable items/equipment, disinfection of water lines will minimize the risk of transmission of the virus (Ather et al., 2020; Shamszadeh et al., 2020).
6. While examining the patient, additional aspects of precautionary measures to perform various procedures and to disinfect the surgical field were discussed (Nimbalkar et al., 2020)
7. Some drugs can be used to treat COVID 19 and should be tested by some clinical Trials (Reche et al., 2020).
8. The quarantine will be very helpful until the right vaccines and drugs are available (Patel et al., 2020).

### CONCLUSION

Implementation of preventive protocols should be prioritized for the person with special healthcare needs and disabilities. Through proper diet and brushing, oral hygiene can be improved that can eliminate future emergencies. Pharmacological

management can be done in emergencies that do not need immediate intervention and can be relieved with the former treatment. Also, to minimize the risk during this outbreak, dental professionals should follow appropriate guidelines given by authorities which can help to prevent the spread of the virus.

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