COVID-19: Managing Infection Risks During In-Person Dental Care

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Royal College of
Dental Surgeons of Ontario

INTRODUCTION

Without careful planning and appropriate guidance, dental offices are at a high risk for spreading COVID-19 given the aerosol generating nature of dental procedures, the proximity of the operating field to the upper respiratory tract, and the number of patients seen per day. Dentists returning to any degree of in-person care must comply with the direction of government and the College to maintain the safety of patients and staff, and to not contribute to the transmission of COVID-19.

A Staged Approach to Return to Practice

For the duration of the COVID-19 crisis, dentists' ability to provide in-person care will take place in one of 3 stages:

Stage 1:

At the height of community transmission, in-person dental care is restricted to emergency and urgent care only. In Stage 1, non-emergency and non-urgent care may only be provided remotely (i.e., via teledentistry).

Stage 2:

As community transmission declines, dentists will be permitted to provide an expanded list of in-person services (essential care only is permitted in-person), with enhanced precautions.

Stage 3:

When community transmission has been significantly mitigated, dentists will enter the 'new normal' in which in-person care is provided with reduced precautions.

The 3 stages described above are not static: over time, dentists may move forwards or backwards between stages as community transmission ebbs and flows.

At the present time, dentists in Ontario are in Stage 2. According to Directive 2 from the Chief Medical Officer of Health, in-person care must be limited to essential care only. (See the 'Providing Care' section for more detail)

Non-essential and elective services must only be provided remotely, via teledentistry in accordance with the College's guidance.

Guidance is Evidence-Informed

The guidance contained in this document has been informed by current best practices and the best available evidence. Where professional consensus is lacking or the available evidence is unclear, the College's guidance takes a precautionary approach that prioritizes the safety and well-being of patients, staff, the broader public, and dentists.

As Ontario's landscape evolves and as updated evidence becomes available, the College will update the guidance contained in this document.

The College is Acting in Partnership

Responding to the COVID-19 pandemic is a multi-stakeholder effort involving not only this College but a broad spectrum of partners throughout the healthcare landscape, including the Ontario Dental Association, other health regulatory bodies, academic researchers, municipal, provincial, and federal governments, and front line health care workers, among many others.

The role and mandate of the College is to regulate the profession of dentistry in the public interest. As a result, the College's guidance is focused primarily on ensuring public protection. Broader systems issues, including how and when to open the Ontario economy, whether and how to restrict services, and the supply chain of personal protective equipment (PPE) are not within the College's mandate or authority to address.

Additional Resources

This document should be read in conjunction with related RCDSO Guidance Documents and Standards of Practice.

The College's guidance is written to align with the positions and direction of the Chief Medical Officer of Health, federal guidance, and the provincial Government.

Additional applicable resources include:

- RCDSO: Definitions for emergency, urgent and non-essential care
- RCDSO: COVID-19 FAQs.
- RCDSO: Guidance for the Use of Teledentistry.
- RCDSO: Infection Prevention and Control Standard of Practice.

PRINCIPLES

The following principles form the foundation for this guidance:

1. Dentists have a professional, legal, and ethical responsibility to provide care in a manner that is both safe and effective.
2. The health and safety of patients, the public, and practitioners is the top priority. All protocols for treatment and support will put safety first.
3. The College's guidance to dentists is informed by the direction provided by the Chief Medical Officer of Health, the Minister of Health, and others.
4. Patients need continuity of care. Patients of record must have access to their dentist for guidance, support, and referral, where needed.
5. Patient access to oral healthcare must be balanced with the risks of spreading COVID-19.
6. Guidance is based on the best available evidence and data. In the absence of clear evidence, guidance will prioritize caution and safety.
7. Return to practice will occur in well-defined stages that balance a return to the "new normal' with the risks of spreading COVID-19, including the risks of a second wave of COVID-19.
8. The College will prioritize the use of teledentistry to assess risk and appropriately triage patient needs.

GUIDANCE

The guidance contained in this document will be updated in response to the evolving landscape, including changes to the rate of community transmission of COVID-19, the emergence of new evidence and best practices, and in response to new direction from the provincial government and the Chief Medical Officer of Health.

Dentists who have questions that are not addressed below are advised to review the College's COVID-19 FAQ and/or contact the College's Practice Advisory Service (PAS) at (416) 934-5614.

1. PREPARING THE OFFICE

Review of Personal Protective Equipment (PPE)

1. Prior to reopening the practice, dentists should take an inventory of personal protective equipment (PPE) and use this inventory to help inform the volume and scope of care that can be provided.

   a. Dentists should use PPE appropriately to prevent unnecessary use of limited supplies and other PPE resources (e.g., N95 respirators or the equivalent, as approved by Health Canada).
   b. N95 respirators (or the equivalent) should be reserved for situations where risks are highest, especially aerosol-generating procedures (AGPs).

General Staff Requirements

2. Dentists must meet with staff and thoroughly review and explain the guidance contained in this document as well as any new office policies and procedures.

3. Dentists must require staff to wear PPE as appropriate to their role (see Table 1 below).

4. Because clothing worn in the office can become contaminated with COVID-19, dentists and staff must change into office clothes (e.g. scrubs) and footwear immediately upon reporting to work.

   a. Clothes worn in the office must not be worn outside of the office (e.g., home), and should be laundered after every shift.
   b. Laundry bins/containers should be lined with a barrier (such as a garbage bag) to avoid cross-contamination during the storage and transportation process.

5. Dentists are advised to limit the number of staff in the practice at one time.

6. Dentists are advised to stagger shifts and lunch/coffee breaks when possible to support physical distancing.

7. Dentists must advise staff to conduct hand hygiene frequently by using an alcohol-based rub (ABHR) or soap and running water (especially before and after any contact with patients, after contact with high-touch surfaces or equipment, and after removing PPE).

8. Dentists must require staff to maintain physical distancing of at least of 2 meters except as required to provide patient care.

9. Dentists must require staff to self-monitor for any symptoms of COVID-19 (e.g., by using the COVID-19 screening questions developed by the Ontario Ministry of Health). Staff experiencing symptoms of COVID-19 must not return to work until after consulting with their physician and/or after they are symptom-free following 14 days of self-isolation.

Office Setup

10. Dentists should limit points of entry into the office (e.g., by designating a single entrance door).

11. Dentists must ensure that the office and operatories are clean and disinfected.

12. Dentists must shock their dental unit water lines if returning from an extended break in practice (contact the product manufacturer for product recommendations).

13. Dentists must ensure magazines, toys, and any other non-essential items are removed from office, reception area, and operatories.

14. Dentists should post signage in common areas (e.g., at the main entrance and in the waiting area) communicating relevant expectations for patients, including any requirements for:

    a. hand hygiene (e.g., a requirement to wash and/or sanitize hands upon entry to the practice);
    b. respiratory hygiene (e.g., a requirement to wear a mask within the practice); and
    c. physical distancing (e.g., a requirement to maintain a minimum distance of 2 meters, except as required for the provision of care).

15. Dentists must ensure the availability of 70-90% ABHR at all entry points to the office.

16. Dentists must ensure the availability of 70-90% ABHR at the reception area for use by staff.

17. Dentists are advised to consider installing physical barriers at key contact points to reduce the spread of droplets, including reception (e.g., a plexiglass shield).

Specific additional preparations for the delivery of aerosol-generating procedures (AGPs) can be found in Section 3: Aerosol-Generating Procedures.

2. PROVIDING DENTAL CARE

In the current Stage 2, in-person dental care is limited to essential care. Essential care will include emergency and urgent care, along with other procedures which in the dentist's professional judgement are necessary in order to minimize harm to patients and/or relieve pain and suffering.

Non-essential care must only be provided remotely (refer to the RCDSO's guidance on teledentistry).

Where dentists must provide in-person care, this must be done in accordance with the following guidance.

Scheduling Appointments

18 In order to schedule in-person appointment for assessment and/or treatment, dentists must ensure that they can meet the PPE and operatory requirements outlined in this document.

a. Since each office is arranged and functions differently, the College relies on the professional judgement of dentists and their staff to adjust their practice for the enhanced protection of others.

19 If a dentist is unable to meet the applicable PPE and operatory requirements, and the patient requires essential treatment, the patient must be referred to another available practitioner.

20 Dentists must ensure that appointments are scheduled and managed to avoid or limit direct, face-to-face interaction with others, including staff and other patients (for example, by staggering appointment times).

21 Dentists must ensure that patients are triaged and appointments are scheduled by phone (not in person or via walk-in).

22 Prior to scheduling an appointment, dentists must ensure that patients are screened for COVID-19 using the COVID-19 screening questions developed by the Ontario Ministry of Health.

a. Patients who screen positive for COVID-19 should contact their primary care provider or Telehealth Ontario at 1-866-797-0000 to determine next steps.
b. In addition, COVID-19 is a designated disease of public health significance and as such, under the Health Protection and Promotion Act, a dentist must make a report to the medical officer of health of the health unit in which the professional services are provided.[1]

[1] Section 25 (1)(2) of the *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7; O.Reg. 135/18, enacted under the *Health Protection and Promotion Act*, section 1, Table, item 18.1.

23 Dentists must record the results of the patient's screening in the patient's record (a written notation summarizing the conversation and screening results is sufficient for record keeping purposes).

Patient Arrival Protocol

24 Prior to permitting entry to the office, dentists should ask patients about the presence of symptoms associated with COVID-19.

a. Dentists should purchase a non-contact infrared thermometer and assess patients' temperatures prior to permitting entry to the office.
b. If a patient reports or exhibits symptoms of COVID-19, dentists must defer the appointment until the patient has consulted with their physician and/or after they are symptom-free following 14 days of self-isolation.

25 Dentists must require patients and visitors to wear their own mask at all times while in the office except during the provision of care (e.g., a procedural/surgical mask, cloth covering, or other appropriate face covering).

a. Patients who arrive without a mask must be provided one by staff prior to entering the office or be required to schedule a new appointment.

26 Dentists should require individuals accompanying a patient to wait outside the practice unless absolutely required (e.g., a parent accompanying a young child or a patient who requires accommodation).

27 Dentists must require patients (and guests) to perform hand hygiene with either 70-90% ABHR or soap and running water upon initial entry to the office.

28 Dentists should minimize patient contact with all surfaces.

29 Except as needed when providing care, a physical distance of at least 2 meters should be enforced between all people in the office.

During Dental Care

30 Dentists must ensure that all clinical staff wear PPE that is appropriate for the anticipated procedure or activity (see Table 1).

Table 1: Required Personal Protective Equipment (PPE) by Setting and Procedure/Activity

SETTING	PROCEDURE/ACTIVITY	TYPE OF PPE
Operatory or other treatment area	Non-aerosol generating procedures (NAGPs)	• ASTM level 2 or 3 procedure/surgical mask • Gloves • Eye protection OR face shield
	Aerosol generating procedures (AGPs)	• N95 respirator (fit-tested, seal-checked), or the equivalent, as approved by Health Canada • Gloves • Eye protection AND face shield • Protective gown
	Cleaning and disinfection of operatory or other treatment area	• ASTM level 1 procedure mask • Gloves • Eye protection
Reprocessing area	Reprocessing of reusable instruments	• ASTM level 2 or 3 procedure/surgical mask • Heavy duty utility-gloves • Eye protection or face shield • Protective gown
Reception area	Reception duties	• ASTM level 1 procedure mask OR physical barrier • Maintain physical distancing
Common and staff areas	Administrative and other tasks	• ASTM level 1 procedure mask OR maintain physical distancing

31 Dentists must ensure that clinical staff are trained in and use proper donning and doffing procedures for PPE (e.g., review Public Health Ontario's Recommended Steps for Putting on and Taking Off Personal Protective Equipment).

32 While the College acknowledges the lack of documented evidence, dentists should require patients to rinse with 1% - 1.5% hydrogen peroxide or 1% providone-iodine for 60 seconds prior to examination of the oral cavity, as this may help decrease oral pathogens.

33 Dentists should minimize the use of intra-oral radiographs and consider using extra-oral radiographs, when possible.

34 Dentists must ensure that operatories are cleaned and disinfected between each patient appointment.

Patient Departure Protocol

35 Dentists should request that patients disinfect with 70-90% ABHR before leaving the dental practice.

36 Patients should be asked to tell office staff if they experience any symptoms of COVID-19 within 14 days of their appointment.

End of Day Sanitization

37 Dentists must ensure the general office housekeeping, including cleaning and disinfection of high-touch surfaces, occurs at least twice per day (e.g., door knobs, hand rails, counters, and the arms of chairs).

a. As a reminder, operatories must be cleaned and disinfected between each patient appointment.

3. AEROSOL-GENERATING PROCEDURES (AGPS)

When a patient undergoes an aerosol-generating procedure (AGP), high concentrations of droplets smaller than 5 µm (droplet nuclei) are generated that may remain suspended in the air for significant periods of time, move with air currents, and come in contact with others. This creates a risk for opportunistic airborne transmission of COVID-19, even if the virus is not otherwise able to spread by the airborne route. While there is no conclusive evidence at this time that opportunistic airborne transmission of COVID-19 occurs after AGPs, the College has adopted a precautionary approach that prioritizes safety.

38 Dentists should avoid AGPs whenever possible and use the lowest aerosol-generating options when necessary.

a. Aerosols may be generated by high-speed, low-speed and other rotary handpieces, ultrasonic and other similar devices, and air-water syringes.

Preparing the Operatory for Aerosol-Generating Procedures

39 Dentists must minimize the contents of all operatories in which AGPs may be performed, including unnecessary equipment, supplies, plants, and artwork.

40 AGPs must be performed in an operatory that is capable of containing aerosol. This requires floor-to-ceiling walls and a door (or other barrier) that must remain closed during and after such procedures. Temporary walls and doors are permitted, provided they create an area to contain aerosols and are constructed of materials that can withstand repeated cleaning and disinfection.

Use of PPE During Aerosol-Generating Procedures

41 When performing AGPs, dentists must ensure that care is provided using enhanced PPE precautions for all clinical staff, including:

a. fit-tested and seal-checked N95 respirators (or the equivalent, as approved by Health Canada),
b. gloves,
c. eye protection and face shields, and
d. protective gowns.

42 Dentists must ensure that clinical staff are trained in and use proper donning and doffing procedures for PPE (dentists are advised to review Public Health Ontario's Recommended Steps for Putting on and Taking Off Personal Protective Equipment).

Mitigating High Risk Aerosols

43 If possible, dentists should use a rubber dam with high-volume suction to minimize aerosols and possible exposure to infectious agents.

Clearing the Air of Aerosol (Fallow Time)

Following an AGP, the operatory must be left empty (with the door closed) to permit the clearance and/or settling of aerosols.

The length of time that the operatory must be left empty (the fallow time) is determined by the air changes per hour (ACH). The aim is to achieve 99.9% removal of airborne contaminants (see Table 2).

Table 2: Time Required for Removal or Settling of Aerosols by Air Changes per Hour (ACH)

AIR CHANGES PER HOUR (ACH)	TIME REQUIRED FOR REMOVAL OR SETTLING OF AEROSOLS IN MINUTES (99.9% EFFICIENCY)
2	207
4	104
6	69
8	52
10	41
12	35
15	28
20	21
50	8

Adapted from: Centers for Disease Control and Prevent, Guidelines for Environmental Infection Control in Health-Care Facilities (2003): Table B.1. Air changes/hour (ACH) and time required for airborne-contaminant removal by efficiency. Available at: https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1

44 Dentists should consult an HVAC professional to assess the existing HVAC system and calculate the actual ACH for the dental practice. Dentists may use the actual ACH to calculate a fallow time using Table 2.

a. Dentists should retain copies of any documentation supporting the HVAC assessment and any need for engineering controls.

Options to improve ACH (and further reduce the fallow time) may be explored, including:

b. Consulting an HVAC professional to determine whether changes to the existing HVAC system are possible to improve ACH for the dental practice.
c. If changes to the existing HVAC system are not possible or adequate, dentists may consider the use of an in-operatory air cleaner (e.g. HEPA filtration) to increase the effective air changes per hour (eACH) for a specific operatory.
d. If an in-operatory air cleaner (e.g. HEPA filtration) will be used to increase the effective air changes per hour (eACH) for a specific operatory, the HVAC professional must also take into account several additional factors, including:
    i. any structural changes that may be necessary to contain the spread of aerosols (e.g., the addition of floor to ceiling walls or barriers),
    ii. the type of unit being considered (e.g. fixed versus portable),
    iii. the cubic feet of the operatory and airflow rate of the unit, and
    iv. the optimal placement and operation of the unit.

45 If dentists have not had the rate of air changes for their office confirmed by an HVAC professional, dentists must assume a rate of 2 air changes per hour and adhere to a minimum fallow time of 3 hours following an AGP.

Cleaning and Disinfection Following Aerosol-Generating Procedures

46 Following AGPs, cleaning and disinfection of the operatory must only be undertaken following the necessary fallow period.

47 Following the appropriate fallow period, dentists must ensure that operatories (including all clinical contact surfaces and equipment) are cleaned and disinfected prior to treating a new patient. Cleaning and disinfection must be undertaken using appropriate hospital-grade low-level disinfectant (i.e. has a DIN from Health Canada).

4. COVID-19 EXPOSURE IN THE PRACTICE

48 In the event of suspected exposure to COVID-19, staff must immediately self-isolate and contact their primary care provider or local public health unit for further guidance.