



COVID-19 Standard Operating Procedures:
Nova Scotia Satellite Dental Clinics

Dalhousie University
Faculty of Dentistry

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The purpose of this document is to serve as a guide for facilities providing care to patients with dental emergencies during the COVID-19 pandemic. The information contained in this document are best practises based on the pertinent literature available at present.

Considerations When Contacting/Scheduling Patients With Dental Emergencies:

WHAT IS A DENTAL EMERGENCY?

- a. Odontogenic infections associated with intra-oral and/or extra-oral swelling that have not responded to antibiotics over the course of 2-3 days.
- b. Pain that can not be controlled with a course of antibiotics/analgesics.
- c. Orofacial trauma.
- d. Prolonged post-operative bleeding.

(Provincial Dental Board of Nova Scotia, 2020)

- **Dentists wishing to refer suspected or positive COVID-19 patients to the clinic must attempt to appropriately manage their patient pharmacologically prior to referral. If the patient fails pharmacologic treatment, the dentist should complete a referral form and either fax or email AND call the appropriate clinic to discuss the case. A radiograph should be sent with the referral form if possible.**

Central Zone (Halifax area, Eastern Shore, West Hants)		
<p>DAL GPR Fax: 902-494-7803 Email: dalgpr@dal.ca Tel: 902-494-4863</p>	<p>VG OMFS Fax: 902-473-6855 Email: OMFSbooking@nshealth.ca</p>	<p>IWK Tel: 902-470-8888</p>
<p>Citadel Oral Surgery <i>Dr. Joel Powell</i> <i>Dr. Marco Chiarot</i> 301-3480 Joseph Howe Dr. Halifax, NS Fax: 902-468-2306 Email: referrals@citadelsurgery.ca Tel: 902-442-9720</p>	<p>The Lakes Oral Maxillofacial Surgery <i>Dr. Lee Chamberlain</i> 3440 Hy. 2 Fall River, NS Fax: 902-576-5890 Email: drc@thelakeoralsurgery.ca Tel: 902-576-5253</p>	
Eastern Zone (Cape Breton, Guysborough and Antigonish areas)		
<p>Riverside Dental <i>Dr. Ray MacGillivray</i> <i>Dr. Mitchell Hanna</i> <i>Dr. Chris Baker</i> <i>Dr. Chris MacDonald</i> 1290 Kings Road Sydney River, NS Fax: 902-562-9888 Email: emergencies@mayflowerdentalgroup.com Tel: 902-562-9876</p>		

Western Zone (Annapolis Valley, South Shore and South West)	
<p>WKM Health Center</p> <p><i>Dr. Ian Ross</i></p> <p>121 Orchard Street Suite 120 Berwick, NS Fax: 902-538-1072 Email: ian@rossomfs.com Tel: 902-538-8041</p>	<p>Southwest Dental</p> <p><i>Dr. Michel Comeau</i> <i>Dr. Sukhdip Singh</i></p> <p>13 Second Street Yarmouth, NS Fax: 902-742-0179 Email: southwestdental@ns.aliantzinc.ca Tel: 902-742-0191</p>

See [http://pdbns.ca/uploads/publications/Emergency_Dental_Clinics - April 5%2C 2020 Single page.pdf](http://pdbns.ca/uploads/publications/Emergency_Dental_Clinics_-_April_5%2C_2020_Single_page.pdf) for Satellite clinics.

- Patients will have appointments booked by telephone.
 - Staff will assess whether they have their own dentist.
 - If patient has a community dentist, they should contact their dentist to arrange an appropriate referral.
- Patients with influenza-like illness (ILI) symptoms will not to be seen in the clinic. They are to be managed pharmacologically, unless life threatening (e.g. facial cellulitis).
- Screening questions for COVID-19 assessment in Nova Scotia include:
 - Do you have a fever greater than 38° Celsius (or signs of a fever)?
 - Do you have a new cough or a cough that is getting worse?
 - Do you have a sore throat?
 - Do you have a runny nose?
 - Do you have a headache?
 - If you answer YES to two or more, you should contact 811 for further assessment by a nurse.
 - Adapted from: <https://when-to-call-about-covid19.novascotia.ca/en> updated April 7, 2020.

- Patients who are confirmed to have COVID-19 can receive emergency dental care if they have completed home isolation. Home isolation clearance is based on two strategies:
 - Non-test-based-strategy: At least 3 days (72 hours) have passed since recovery of symptoms and at least 7 days have passed since symptoms first occurred.
 - Recovery of symptoms includes resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms such as cough or shortness of breath.
 - Test-based-strategy:
 - Patients experiencing symptoms of COVID-19: Resolution of fever without the use of fever-reducing medications, improvement in respiratory symptoms, and negative results of two nasopharyngeal swab specimens collected at least ≥ 24 hours apart.
 - Patients asymptomatic for COVID-19: At least 7 days have passed since the date of the first positive COVID-19 diagnostic test and the patient has had no subsequent illness. (Centers for Disease Control and Prevention 2020).
- **There should only be one patient in the treatment facility at a time.**
- Operatories should be used in a rotating fashion between procedures to allow as much time as possible for aerosols to settle before disinfecting between treatments
 - *Amount of time required to wait after completion of AGP depends on room ventilation specifications. If you are unsure as to your operatory ventilation specifications, the recommendation is to allow 207 minutes for aerosols to settle before disinfecting the operatory. (Centers for Disease Control and Prevention 2003).*
- Patients should be reminded by phone when booking to remove all head and neck jewellery and any removable dental prostheses.
- Instruct patients to remain in their car or outside the facility upon arrival and contact the clinic via telephone to check-in. Review screening questions pertaining to the dental emergency and COVID-19 symptoms.

Triage:

- When patients arrive for their appointment they will call the clinic to check-in.
 - Staff answering the phone will confirm screening questions, remind the patient to remove all jewellery, removable partial dentures and leave bags in their car.
- Any non-essential escorts/family members are not welcome in the clinic.
- Triage team Personal Protective Equipment (PPE):
 - Level 1 mask, eye protection, gown, scrubs, gloves (see Table 1).
- Triage member will greet patient at the building entrance.
 - Confirm screening questions at door before entrance and redirect as required.
 - Record temperature, vitals, and provide H₂O₂ rinse (timed 30 seconds).
 - Provide necessary PPE to patients: Level 1 mask, hand sanitizer.
 - Triage staff to escort patient to clinic doors and pass off to operator.
 - **Triage to disinfect vitals monitor after each patient contact.**
- If panoramic radiograph required for patient:
 - Operator will bring patient directly to PAN room.
 - Operator should be wearing appropriate treatment specific PPE (see Table 1 and Figure 1).
- When no radiograph required, or after radiograph taken, resident to bring patient to assigned operatory/OR.

**** Patients should NOT be touching door handles**** – staff should be opening all doors for patient ± visitor.

Patient Care:

Aerosol generating procedures (AGPs) are procedures that can generate aerosols that consist of small droplet nuclei in high concentration and present a risk for airborne transmission of pathogens that would not otherwise be spread by the airborne route (e.g. coronavirus, influenza). Examples of AGPs in dentistry would include the use of a rotary dental handpiece (especially a high-speed handpiece) and the use of three-way air-water syringe.

Non-aerosol generating procedures (non-AGPs) are procedures with lower likelihood of generating aerosols. Examples of non-AGPs would be procedures such as a patient exam, suture removal, simple extraction, incision and drainage, temporary restoration (without use of handpiece or air water syringe) and taking a panoramic radiograph.

We strongly recommend not performing AGPs whenever possible. In the rare instance that a situation arises which requires an AGP, please refer to Table 1 to ensure the use of appropriate PPE. If you do not have the appropriate PPE available, do not perform the AGP.

Based on the literature available, some additional measures to consider when treating dental emergencies include the use of:

- Pre-treatment oral rinse (e.g. 1% hydrogen peroxide x 30 seconds).
- Rubber dam.
- High volume suction.
- Extra-oral diagnostic imaging (panoramic radiographs or CBCT) rather than intra oral imaging to minimize patient coughing.
- 4-handed dentistry is beneficial for controlling infection.

Should I wear an N95 respirator when providing care to a patient with suspect or probable/confirmed COVID-19?

*N95 respirators are **ONLY** required for AGPs. Staff performing AGPs **must be fit-tested and educated in proper donning and doffing of PPE.***

Please refer to Figure 2 for an example of clinic flow of patients and treatment/staff areas. See Table 1 and Figures 1 and 3 for appropriate PPE. See Appendix 1 for donning and doffing PPE checklists. These are intended to be posted in the PPE room and used as a safety checklist between the two operators prior to seeing the patient.

All emergency treatment could create an aerosol. This can be minimized by using rubber dam and high-volume suction for pulpectomy. For extractions use surgical drill only when necessary and do not irrigate simultaneously.

Post-operative Care:

- Every patient seen should be called two days later to assess:
 - Post-operative recovery
 - Review if any COVID-19 symptoms have since developed (Centers for Disease Control and Prevention 2020).
- Follow up letter to referring dentist will be sent after completion of treatment.

Record Keeping:

- **Dentist must record names of all people that had direct contact with the patient for negative/suspected/positive COVID-19 patients (triage, resident, staff, etc.).**
- Records should include a detailed discussion regarding risks, benefits, and alternatives of treatment. As patients may be asymptomatic carriers of COVID-19 in an attempt to minimize AGPs simple extractions should be favoured over endodontic treatment. Clinical judgement should be used.
- Verbal consent will be obtained from patients and recorded in the chart.

Cleaning Schedule:

- Staff should be doffing after providing direct patient treatment and re-donning appropriate PPE to clean/disinfect rooms. See Table 1 and Appendix 1 for appropriate PPE.

Patient areas:

- Disinfected after the treatment is over and the patient has left.
 - **MUST wait the appropriate time interval after an AGP prior to disinfection**
 - *Amount of time required to wait after completion of AGP depends on room ventilation specifications. If you are unsure as to your operatory ventilation specifications, the recommendation is to allow 207 minutes for aerosols to settle before disinfecting the operatory. (Centers for Disease Control and Prevention 2003).*
- All surfaces (including floors, door handles etc.) MUST be disinfected after each patient encounter (to be completed by dentists).

Laundry:

- Different laundry bins for scrubs and lab coats should exist.
- Scrubs should stay in the clinic and not be taken home by the staff.
- Appropriate PPE for laundering garments should include:
 - Gloves, disposable apron (DHSC et al. 2020).
- When laundry services are not available (DHSC et al. 2020):
 - Scrubs and lab coats should be laundered separately from household linen.
 - The load should not exceed HALF of the machine capacity.
 - Scrubs and lab coats should be washed with the maximum temperature tolerated by the fabric.

Garbage:

- Waste from suspected or positive COVID-19 patient treatment areas is not considered biohazardous. All waste can be discarded in a normal fashion.

Important quotes:

“Dentists should take strict personal protection measures and avoid or minimize operations that can produce droplets or aerosols. The 4-handed technique is beneficial for controlling infection. The use of saliva ejectors with low or high volume can reduce the production of droplets and aerosols” (Kohn et al. 2003; Li et al. 2004; Samaranayake and Peiris 2004).

Note: After treatment, environmental cleaning and disinfection procedures were followed. Alternatively, patients could be treated in an isolated and well-ventilated room or positive pressured rooms if available for suspected cases with COVID-19.

“It was reported that dental practice should be postponed at least 1 month for convalescing patients with SARS” (Samaranayake and Peiris 2004). It is unknown yet whether the same suggestion should be recommended for patients with COVID-19.

Additional notes:

Ultimate decision as to what constitutes emergency treatment, and who would benefit from said treatment, lies on clinical decision making of the dentist.

Gowns/lab coats **MUST** be full sleeved with elasticized cuffs that are put in laundry immediately after treatment.

Staff should be screened for signs and symptoms of COVID-19, including temperature when they arrive each day (Centers for Disease Control and Prevention 2020).

- For an example, please see:
http://policy.nshealth.ca/Site_Published/covid19/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=77686

Masks:

- In accordance with recommendations of the CDC and NSHA, **ALL staff** in a patient care area should wear a mask.
- One procedure mask per shift will be distributed to team members.
- The mask should be removed whenever a staff member is taking a break, eating a meal, or using the restroom. Social distancing (2 metres) **MUST** be maintained at all times when not wearing a mask.
- The mask should be removed prior to patient care. The appropriate level mask for the procedure will be donned at that time.
- The mask should be stored in a safe place in a clean, dry paper bag (labeled with your name). The bag should be discarded after each use.
- Masks are to be discarded when:
 - Visibly soiled.
 - It makes direct contact with a patient.
 - It becomes so moist/humid that its integrity is affected
 - If the mask is directly exposed to respiratory droplets (saliva/cough/sneeze).
 - If you touch the mask accidentally with visibly soiled hands, it should be replaced.
- Meticulous hand hygiene should occur before and after removing your mask and before putting the mask back on the face.

Doffing (removing) mask:

- Remove your mask by handling the elastic ear loops, store the mask face-side up on a clean surface or within a clean paper bag. Then wash your hands.

Donning (putting on) the mask again:

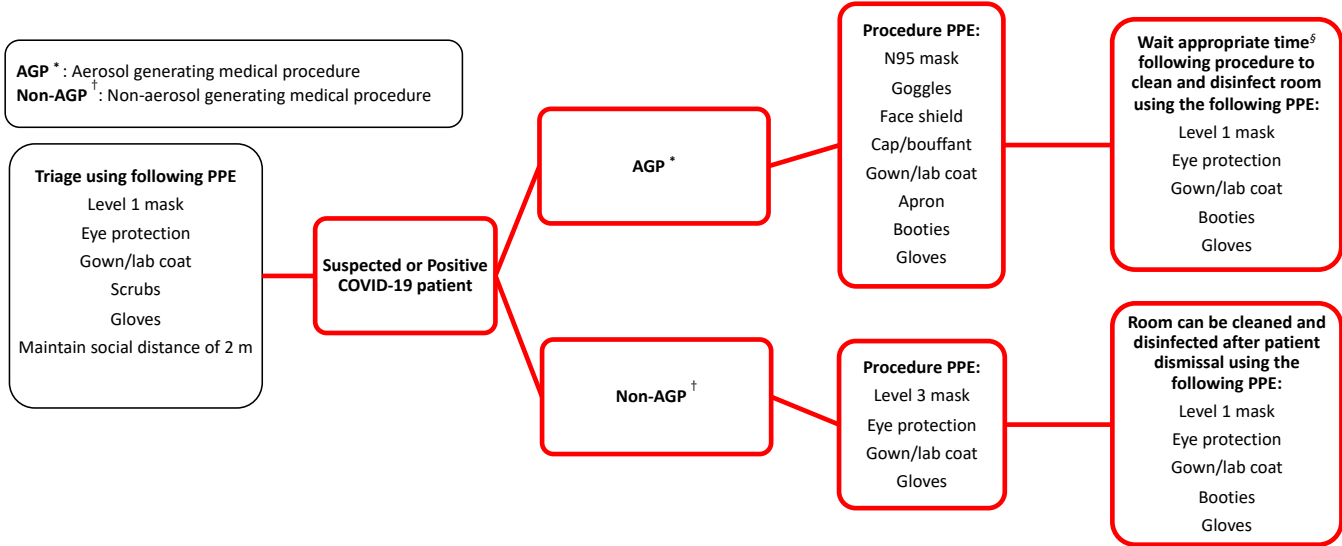
- Wash your hands. Replace the mask on your face carefully, handling it with the elastic ear loops as much as possible. Discard the bag. Wash your hands after donning the mask. Wipe off the clean area where your mask was placed with a disinfectant wipe.

Adapted from: Nova Scotia Health Authority, 2020a; Nova Scotia Health Authority, 2020b

Setting	Staff or Patients	Procedure/Activity	Type of PPE
Patient room	Dentists	Aerosol generating procedures (AGP)	N95 mask Goggles Face shield Cap/bouffant Gown/lab coat Film gown/apron Booties Gloves
		Providing direct care (Non-AGP)	Level 3 mask Eye protection (Goggles or face shield) Gown/lab coat Gloves
	Disinfecting treatment rooms	AGP: Wait to disinfect: <i>See cleaning schedule above.</i> [§]	Level 1 mask Eye protection Gown/lab coat
		Non-AGP: No wait time required	Booties Gloves
	Visitors	No visitors in room during AGP	Level 1 mask
Other areas of patient transit (e.g., wards, corridors)	All staff	Any activity that does not involve contact with COVID-19 patients	No PPE required
Triage	Triage	Preliminary screening (hydrogen peroxide rinse, provide level 1 mask, hand sanitizer, vitals)	Level 1 mask Eye protection Gown/lab coat Scrubs Gloves Maintain spatial distance of at least 2 m.
	Patient with respiratory symptoms	Any	Provide level 1 mask. If mask not tolerated, patient to hold tissue over mouth. Maintain spatial distance of at least 2 m.
	Patients without respiratory symptoms	Any	No PPE required

[§] Amount of time required to wait after completion of AGP depends on room ventilation specifications. If you are unsure as to your operatory ventilation specifications, the recommendation is to allow 207 minutes for aerosols to settle before disinfecting the operatory. (Centers for Disease Control and Prevention 2003)

Minimum Personal Protective Equipment (PPE) for Direct Patient Contact:



[§] Amount of time required to wait after completion of AGP depends on room ventilation specifications. If you are unsure as to your operatory ventilation specifications, the recommendation is to allow 207 minutes for aerosols to settle before disinfecting the operatory. (Centers for Disease Control and Prevention 2003)

Figure 1: Workflow for selecting appropriate personal protective equipment for direct patient contact. (Adapted from Meng et al. 2020; Peng et al. 2020; Provincial Dental Board of Nova Scotia 2020; World Health Organization 2020)

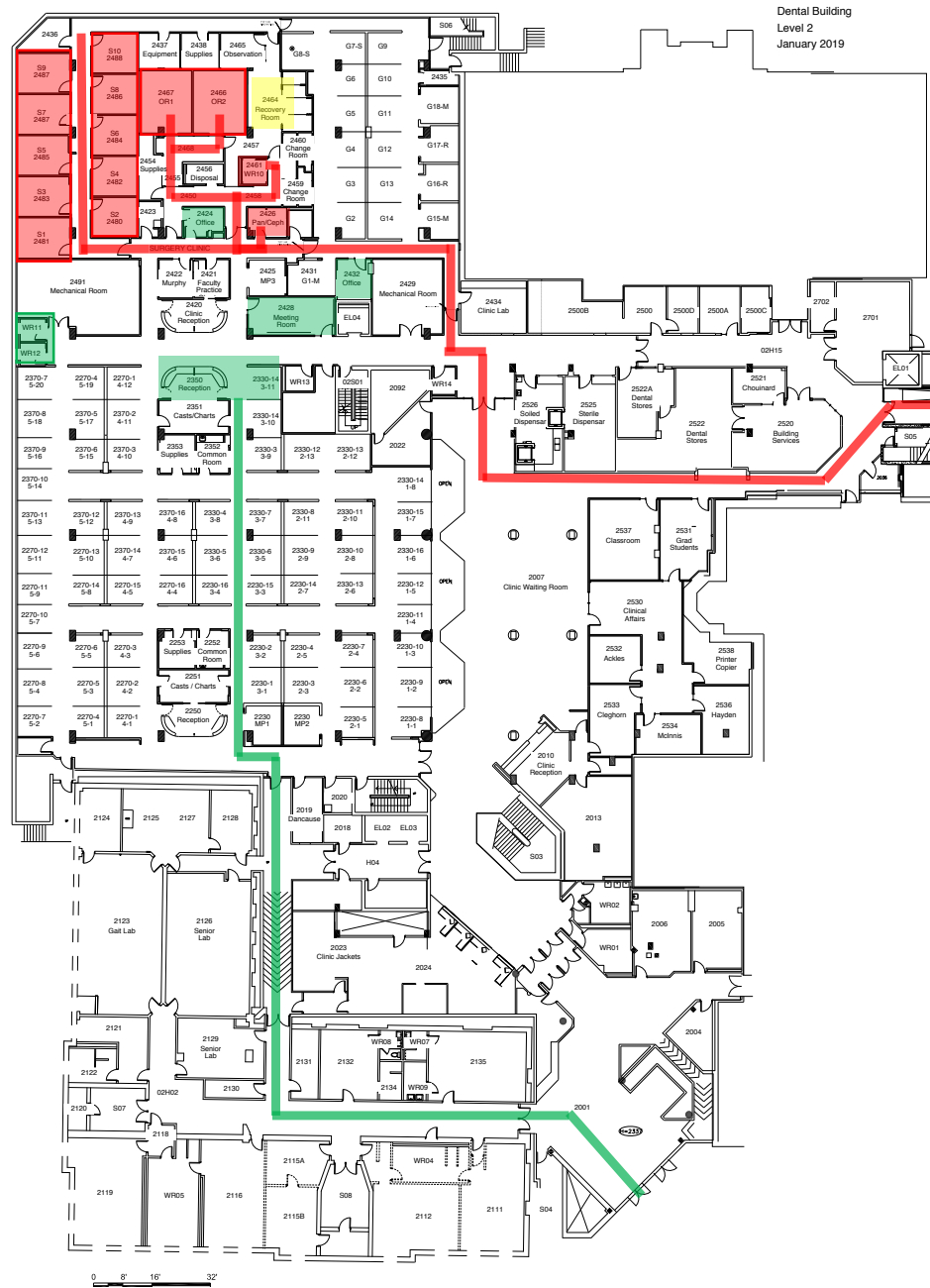
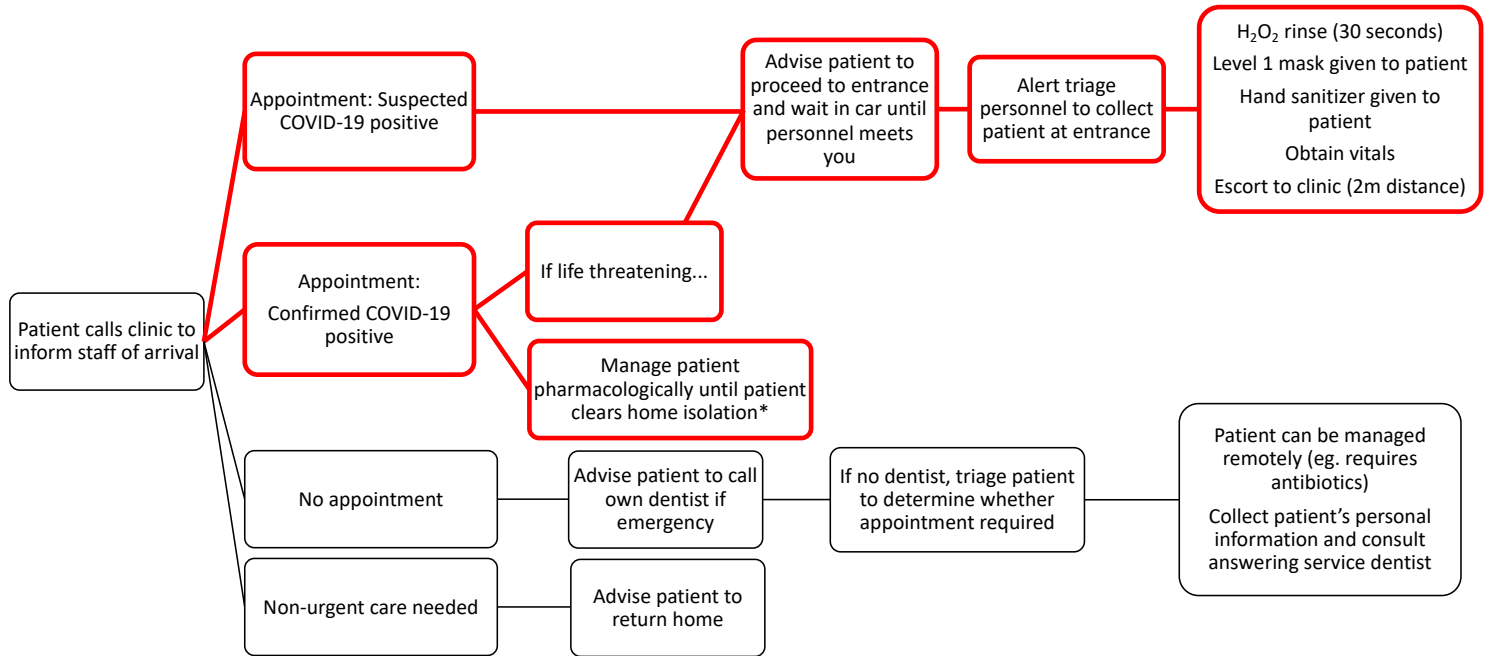


Figure 2: Example map of Dalhousie COVID-19 emergency clinic. In attempt to minimize exposure, minimal crossover between staff and patient areas should be planned out. The red line indicates the route for patients. Red clinic is for suspected or positive COVID-19 patients. The yellow area indicates the PPE room. Green indicates the clean resting areas and walkways for staff only. Make reference to Table 1 for appropriate PPE in these areas.

Flow of Triageing Patients who Phone:



* For definition of home isolation clearance refer to: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html>

Figure 4: Workflow of triaging patients in the Dalhousie COVID-19 emergency clinic. (Adapted from Meng et al. 2020; Peng et al. 2020; Provincial Dental Board of Nova Scotia 2020; World Health Organization 2020; Centers for Disease Control and Prevention 2020)

Appendix 1. Checklists for donning and doffing PPE.

DENTISTS

PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

Non-aerosol generating procedures:

- Level 3 mask
- Eye protection (Goggles or face shield)
- Gown/lab coat
- Gloves

*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

DENTISTS

PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

Aerosol generating procedures:

- N95 mask
- Goggles
- Face shield
- Cap/bouffant
- Gown/lab coat
- Film gown/apron
- Booties
- Gloves

*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

TRIAGE

PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

- Level 1 mask
- Eye protection
- Gown/lab coat
- Scrubs
- Gloves
- Maintain spatial distance of at least 2 m

*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

DISINFECTING OPERATING ROOMS

PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

WAIT APPROPRIATE TIME AFTER COMPLETION OF AGP[§]

- Level 1 mask
- Eye protection
- Gown/lab coat
- Booties
- Gloves

[§] Amount of time required to wait after completion of AGP depends on room ventilation specifications. If you are unsure as to your operatory ventilation specifications, the recommendation is to allow 207 minutes for aerosols to settle before disinfecting the operatory. (Centers for Disease Control and Prevention 2003)

*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

LAUNDRY

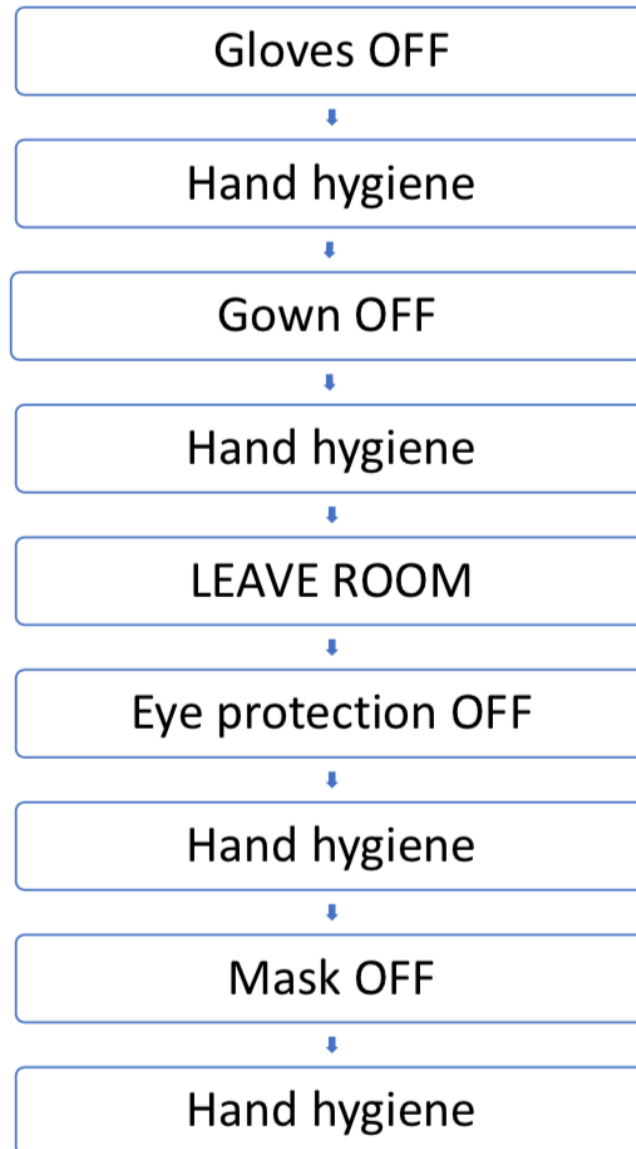
PPE CHECKLIST FOR LAUNDERING OF GARMENTS USED DURING TREATMENT OF COVID-19 POSITIVE PATIENTS:

- Gloves
- Disposable apron

*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

DOFFING PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

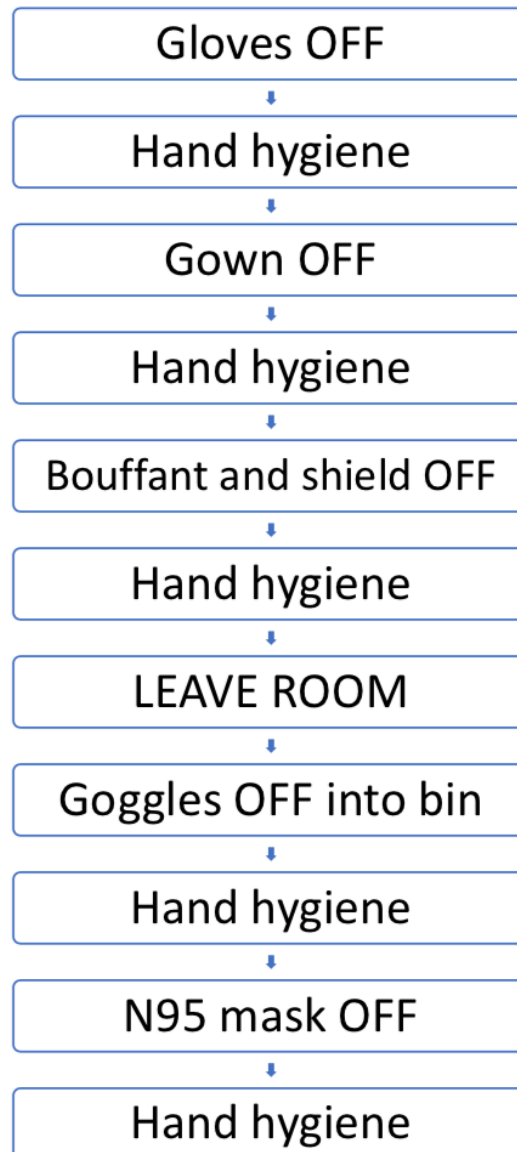
Following a non-aerosol generating procedure:



*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

DOFFING PPE CHECKLIST FOR SUSPECTED/POSITIVE COVID-19 PATIENTS:

Following an aerosol generating procedure:



*if any questions please review <https://vimeo.com/397525490> or consult clinic nurse

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Provincial Dental Board of Nova Scotia. "COVID-19 Dental Emergency Protocol." (2020)Print.

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