Appendix A: Nursing Care and Management of a Patient with Mild COVID 19 Symptoms

This document outlines the care plan when providing care for a patient experiencing **mild COVID 19 symptoms** - fever, chills, cough, fatigue, aches and pains, congestion, runny nose, diarrhea and sore throat.

Ensure you practice proper hand hygiene and wear appropriate PPE.

Monitor and record Vital Signs BID, assess for changes, abnormal results or worsening of symptoms

- temperature
- heart rate
- respiratory rate
- blood pressure
- SpO2

Assess general appearance

When assessing respiratory status specifically assess for:

- SOB, at rest, when speaking or with exertion
- persistent pain or pressure in the chest
- bluish lips or face

Nutrition and hydration :

- Monitor nutrition and hydration (Is the patient eating and drinking well? Are they voiding & going to the bathroom regularly?)
- Monitor patient's own use of over the counter medications (i.e. Tylenol for fever and prescribed medications)

If you assess any of the following:

- SaO2 <95 on Room Air
- Increased work of breathing as assessed above
- increased respiratory rate
- increased heart rate > 110 bpm

  OR
- Any abnormal vital signs or worsening of any symptoms

Notify the physician immediately.

Appendix B: Nursing Care and Management of a patient with Moderate COVID 19 Symptoms

This document outlines the care plan for a patient experiencing **moderate COVID 19 symptoms** - fever, chills, cough, fatigue, aches and pains, congestion, and may have chest tightness or pain, feeling SOB, persistent fever, poor fluid intake.

Ensure you practice proper hand hygiene and wear appropriate PPE.

Monitor and record **Vital Signs q4h**, assess for changes, abnormal results or worsening of symptoms:

- temperature
- heart rate
- respiratory rate
- blood pressure
- SpO2
- auscultation of the chest at least once daily

Initiate oxygen therapy to maintain SpO2 >93%:

- Start with 2 L/min by nasal cannula or mask and titrate to a max of 5 L/min.

Complete a general assessment including mental health:

- Assess for new confusion or drowsiness

When assessing respiratory status specifically assess for:

- SOB, at rest, when speaking or with exertion
- Persistent pain or pressure in the chest
- Bluish lips or face

Nutrition and hydration:

- Monitor nutritional status (i.e. are they eating and drinking sufficiently? Record fluid intake and output and monitor bowel functioning).

Pharmacist to review medications on admission to the unit.

If you assess any of the following:

- respiratory rate > 25/min
- SpO2 <93 on NP 5L/min
- increased heart rate > 130 bpm
- increased work of breathing as assessed above
- change in orientation, confusion (for example, GCS <13)

  OR
- a NEWS 2 score of ≥5 (see Appendix F, G, and H)

Notify the physician immediately. Consider emergent transfer to outside hospital.

Appendix C: Community acquired pneumonia (CAP)

Adult outpatients: The CRB-65 (please see in notes/references) does not require any blood work & is used easily in an office setting to identify patients who may require hospital admission. Recommended to check pneumococcal vaccine status when patients are diagnosed with CAP.

<table>
<tr><th>Infection</th><th>Regimen</th><th>Usual Duration</th><th>Notes/References</th></tr>
<tr><td>CAP, mild to moderate OUTPATIENT without comorbidity/ modifying factors

Check pneumococcal vaccine status</td><td>1st line: Amoxicillin 1 g TID
2nd line: doxycycline 100 mg BID ;
Azithromycin 500 mg daily on first day then 250 mg daily x 4 days or 500 mg daily x 3 days;
Clarithromycin 500 mg BID</td><td rowspan="3">5-14 days
Depends on various factors such as clinical presentation, comorbidities, age, and drug selected.
Patients should be treated for a minimum of 5 days, be afebrile for 48-72 hours, and otherwise clinically stable before discontinuing therapy.
Exception: azithromycin</td><td rowspan="3">Review antibiotics prescribed for any type of infection in the previous 3 months; if significant exposure to particular antibiotic class, consider selecting an alternate class.

Comorbidity/modifying factors: hospitalization in the past 3 months and/or chronic heart, lung, liver or renal disease, diabetes mellitus, alcoholism, malignancies, asplenia, immunosuppression, age>65 years

Consider using a macrolide in patients where atypical organisms are suspected (e.g., more severe illness, positive urine antigen test, or during summer months for Legionella) or in the case of severe penicillin allergy.

** In regions with a high rate (>25%) of macrolide resistant S. pneumoniae, consider use of alternative agents, including those patients without comorbidities.

Fluoroquinolones (FQ) should be reserved for treatment failures, comorbidities with recent antibiotic use, allergies or documented infections with highly drug-resistant pneumococci or Legionella due to concerns over rapid emergence of FQ-resistant pneumococci and C. difficile-associated disease.

CRB-65
Criteria | Points
Confusion: new onset based on a specific mental test, or disorientation to person, place or time | 1
Respiratory rate ≥30 breaths/minute | 1
Low Blood pressure: SBP <90mmHg or DBP ≤60mmHg | 1
Age ≥ 65 years | 1
Score | Risk of Mortality | Suggested Management
0 | < 2% | • Outpatient
1-2 | ~9% | • Consider hospital admission
≥ 3 | >19% | • Hospital admission
If a recent urea is available, may use CURB-65 where BUN >7mmol/L = 1 point.</td></tr>
<tr><td>CAP, mild to moderate OUTPATIENT with comorbidity/ modifying factors

Check pneumococcal vaccine status</td><td>1st line: Any one of the beta-lactam agents in COLUMN A plus one of the agents listed on COLUMN B
<table><tr><th>COLUMN A</th><th>COLUMN B</th></tr><tr><td>Amoxicillin-clavulanate 875mg BID</td><td>Doxycycline 100 mg BID</td></tr><tr><td>Cefuroxime axetil 500 mg BID</td><td>Azithromycin 500 mg daily on first day then 250 mg daily x 4 days</td></tr><tr><td>Cefprozil 500 mg BID</td><td>Clarithromycin 500 mg BID</td></tr></table>2nd line/if beta-lactam allergic: Levofloxacin 750 mg once daily x 5 days; Moxifloxacin 400 mg once daily x 5 days</td></tr>
<tr><td>CAP, mild to moderate OUTPATIENT with comorbidity/modifying factors – suspected aspiration[a].

Check pneumococcal vaccine status</td><td>1st line: Amoxicillin-clavulanate 875 mg BID; Clindamycin 300 to 450 mg QID</td></tr>
</table>

[a] *Anaerobic coverage is indicated in the classic aspiration pleuropulmonary syndrome in patients with a history of loss of consciousness because of alcohol/drug overdose or after seizures in patients with concomitant gingival disease or esophageal motility disorders. Consider aspiration pneumonia in patients with difficulties swallowing who show clinical signs of a lower respiratory tract infection*

CAP = Community-acquired pneumonia

Adapted from: Anti-infective Review Panel. Anti-infective guidelines for community-acquired infections. Toronto: MUMS Health Clearinghouse; 2019; *Rx Files Antibiotics and Common Infections. Stewardship, Effectiveness, Safety and Clinical Pearls. October 2016.*

Resources:

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Appendix D: COVID-19 CPTG Statement on Dexamethasone

Ad-hoc COVID-19 Clinical Pharmacology Task Group Statement on Dexamethasone

CPTG Meeting Date: June 26, 2020

POLICY QUESTION:

The Public Health Agency of Canada (PHAC) asked the *Ad-hoc* COVID-19 Clinical Pharmacology Task Group (CPTG) for advice on whether known and potential benefits of dexamethasone outweigh known and potential risks in the treatment of hospitalized COVID-19 patients receiving oxygen support.

BACKGROUND:

- As of June 24, 2020, 14 clinical trials were registered worldwide to investigate dexamethasone as a treatment for COVID-19; none of these had treatment sites in Canada [1]. The largest study to date is the UK-based RECOVERY trial, a large randomized controlled trial testing different investigational COVID-19 therapies in hospitalized patients, including low-dose dexamethasone treatment.
- Numerous observational/retrospective studies have reported mixed clinical outcomes associated with corticosteroid treatment of COVID-19 patients. However, this may be due to the stage of disease at time of treatment.
- When given during early stage COVID-19 disease, which is associated with logarithmic replication of SARS-CoV-2, anti-inflammatory properties of corticosteroids may damper the antiviral response. This is supported by evidence of delayed viral clearance when treating SARS-CoV-2 infection [2] as well as SARS-CoV-1 infection [3].
- Corticosteroid administration during later-stage COVID-19 infection, which can be characterized by increased oxygen requirement/ICU admittance, may be beneficial in counteracting the dysregulated immune response associated with COVID-19 induced cytokine storm syndrome/acute respiratory distress syndrome (ARDS). This is supported by observational data that showed lower rates of mortality in COVID-19 patients with ARDS who received methylprednisolone [4].
- Use of corticosteroids in ARDS (all causes) is controversial [5-11].

Clinical Evidence of Efficacy to Date:

- On June 22, 2020, Horby et al. released a preliminary report of clinical findings from the dexamethasone treatment arm of the RECOVERY trial on a pre-print website without peer review, one arm of many investigational treatment arms from the RECOVERY trial, a large randomized controlled multi-centre trial conducted at 176 NHS hospitals in the UK (n=2,104 randomized to dexamethasone; n=4,321 patients randomized to receive standard of care) [12].
    - Inclusion criteria: Hospitalized patients with confirmed or clinically suspected COVID-19 (no specified disease severity, age, or other demographic/clinical factor; age was restricted to over 18 years of age until May 9, 2020 when a protocol modification removed the restriction). Pregnant and breastfeeding women were eligible.
    - Baseline characteristics: The majority of patients were male (64%); mean age 66.1 years

- Treatment was standard of care plus low-dose dexamethasone (6mg once daily by oral or i.v. administration up to 10 days) or standard of care alone.
- Primary Outcome:
- The authors reported a significant reduction in the primary outcome of 28-day mortality for patients on 6 mg daily treatment of dexamethasone (454/2104 (21.6%) compared to those receiving standard of care alone (1065/4321; 24.5%; RR 0.83 (0.74-0.92); p<0.001) with available data (4.8% of patients had not completed 28 day follow-up).
- Secondary outcomes (not adjusted for multiplicity):
    - Significantly more patients in the dexamethasone group were discharged from hospital by day 28 (1360/2104 (64.6%)) than those treated with standard of care alone (2639/4321 (61.1%); RR 1.11 (1.04-1.19); p=0.002).
    - For those patients not receiving invasive mechanical ventilation at time of randomization, patients randomized to the dexamethasone treatment arm had significantly less risk of requiring invasive mechanical ventilation or death (425/1780; 23.9%) vs. those receiving standard of care alone (939/3638 [25.8%]; RR 0.91 [0.82-1.00]) or invasive mechanical ventilation alone (921/1780 [5.2%] - dexamethasone arm, compared to 258/3638 [7.1%] - standard of care arm; RR 0.76 [0.61-0.96]).
- The following subgroup analyses were reported but were not reported in the trial registry and do not appear to be adjusted for multiple testing (and therefore there is an elevated risk of finding statistical significance when it does not exist):
    - Subgroup Analyses*: Oxygen Requirement.* **The impact of dexamethasone on reducing mortality was greatest for patients receiving invasive mechanical ventilation, where 28-day mortality was reduced by 35%** (29% for those randomized to dexamethasone vs. 40.7% for those receiving standard of care alone, RR 0.65 [95% CI 0.51-0.82]). Twenty-eight-day mortality of patients receiving oxygen without invasive mechanical ventilation was reduced by 20% in response to dexamethasone treatment (21.5% dexamethasone vs. 25% usual care, RR 0.80 [95% CI 0.70-0.92]). There was no reported evidence of clinical benefit, and while not significant, a numerical increase in 28-day mortality rate (17% dexamethasone vs. 13.2% usual care), for patients not receiving respiratory support (rate ratio 1.22 [95% CI 0.93 to 1.61]).
    - Subgroup Analyses: *Age.* **Patients <70 years old had a numerically better clinical response to dexamethasone treatment compared to patients aged 70-80 years or 80 years and above, as observed by reduced incidence of mortality at 28-days.** Of 1142 patients aged <70 years receiving dexamethasone, 124 died by day 28 (10.9%) compared to 413/2506 patients receiving standard of care (16.5%; [RR 0.64; 0.52-0.78]). For patients aged ≥70 <80, mortality rate at day 28 was 146/467 (31.3%) for those randomized to dexamethasone, compared to 262/860 for those receiving standard of care alone (30.5%). For patients aged ≥80, mortality rate at day 28 was 184/495 (37.2%)

for those receiving dexamethasone compared to 390/955 for those receiving standard of care alone (40.8%).

- Subgroup Analyses: Days Since Symptom Onset. Consistent with increased clinical benefit observed for those patients requiring additional oxygen support, dexamethasone treatment had a greater impact at reducing mortality for patients with >7 days since symptom onset at time of trial randomization. Twenty-eight-day mortality for patients with >7 days since symptom onset: 201/1184 (17.0%; dexamethasone) vs. 581/2507 (23.2%; standard of care) (RR 0.68 [0.58-0.80]). Twenty-eight-day mortality for patients with ≤7 days since symptom onset: 252/916 (27.5%; dexamethasone), vs. 478/1801 (26.5%; standard of care) (RR 1.01; 0.87-1.17).
- The study did not perform subgroup analyses on whether the patients received treatment by oral or i.v. administration of dexamethasone. Unlike i.v. administered dexamethasone, oral dexamethasone is only 70-80% bioavailable. It is therefore unknown whether outcomes were affected by differing concentrations of drug according to route of administration.

Clinical Evidence of Safety to Date:

- In the preprint issued by Horby et al., there was no outcome associated with safety reporting [12]. The authors note the full peer-reviewed publication is anticipated shortly, and if any safety signals are reported, they will be reviewed by the CPTG in full.
- Notwithstanding the indication for COVID-19, dexamethasone administration has a well-defined safety profile. Short-term dexamethasone is associated with several adverse effects that critically-ill patients may already be pre-disposed to, including hyperglycemia, psychiatric adverse effects, hypertension, infections, edema, and gastrointestinal bleeding. It is unclear if data on adverse effects were monitored and collected in a systematic manner, as this is not described in the protocol or preprint manuscript.

Authorization/Licensure Status in Canada

- Dexamethasone is currently approved in Canada for multiple indications.

CONSIDERATIONS:

- Dexamethasone has a well-defined safety profile and is an approved drug in Canada for numerous indications.
- Current evidence demonstrates low-dose dexamethasone treatment has a clear benefit for severe hospitalized patients with COVID-19, with the greatest benefit observed for patients that require supplemental oxygen or mechanical ventilation, who are < 70 years old with time from symptom onset > 7 days.
- The benefit-risk profile for dexamethasone for the treatment of elderly (>70y old) COVID-19 patients requiring supplemental oxygen is still unknown, as safety information from the trial has not been published.

- There is growing evidence that COVID-19 may cause ketosis and ultimately trigger diabetes in some patients, however research on this association and molecular mechanism is still ongoing [13-16]. Given glucocorticoid therapy for non-COVID-19 indications has been associated with new-onset hyperglycemia [17], dexamethasone treatment for patients with COVID-19, especially in those with diabetes, may cause glycemic dysregulation.
- There is no current shortage of i.v. formulations of dexamethasone. However, oral formulations of dexamethasone have historically been in and out of short supply in Canada and are currently in Tier 3 shortage at the present time, with an undetermined timeline to return to historical levels. There is concern that injectable formulations will be used to offset the shortage of oral formulations for existing, approved indications. Hospitals have restricted allocations based on historical demand for ordering injectable formulations of dexamethasone to prevent a shortage.
- Well-established steroid equivalents to dexamethasone have defined safety profiles, are approved in Canada for numerous indications, and have historically been used to treat ARDS as well as sepsis from non-COVID-19 causes.

RECOMMENDATIONS:

The Clinical Pharmacology Task Group recommends that among hospitalized patients with COVID-19 who require supplemental oxygen or mechanical ventilation, dexamethasone 6 mg IV for 10 days (or until discharge, if earlier) or equivalent glucocorticoid dose should be strongly considered. This guidance is not meant to replace clinical judgment or specialist consultation.

This guidance will be updated as peer-reviewed evidence emerges, particularly regarding risks and benefits in older age groups, for those with different clinical presentations, and for different demographic subgroups such as sex and age.

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Approved by the Clinical Pharmacology Task Group on July 12, 2020

Appendix E: COVID-19 CPTG Statement on Remdesivir

Ad-hoc COVID-19 Clinical Pharmacology Task Group Statement on Remdesivir

CPTG Meeting Date: June 12, 2020

POLICY QUESTION:

The Public Health Agency of Canada (PHAC) asked the *Ad-hoc* COVID-19 Clinical Pharmacology Task Group (CPTG) for advice on whether known and potential benefits of remdesivir outweigh known and potential risks in the treatment of patients hospitalized with COVID-19.

BACKGROUND:

As of June 17, 2020, 24 clinical trials were registered worldwide to investigate remdesivir as a treatment for COVID-19, with 2 trials in Canada. These include CATCO (Canadian Treatments for COVID-19), the Canadian-led arm of WHO's multinational Solidarity treatment trial (Sunnybrook Research Institute) and a Gilead-led expanded access open-label trial. A series of developments have brought into question the benefit-risk of remdesivir.

Clinical Evidence of Efficacy to Date:

- On April 29, 2020, Wang et al. published clinical findings from a Gilead-led phase 3 randomized controlled trials (RCT), sponsored by the National Key Research and Development of China, testing remdesivir in hospitalized adults with severe COVID-19 (n=237 patients enrolled and randomized; China). The authors reported a numerical reduction in time to clinical improvement (21.0 vs. 23.0 days), median duration of invasive mechanical ventilation (7.0 vs. 15.5 days), and median duration of oxygen support (19.0 vs. 21.0 days), in response to treatment. However, the trial was underpowered to show efficacy due to premature termination from insufficient enrolment and therefore all reported differences are statistically insignificant. The study reported similar rates of the percentage of patients with undetectable viral load at day 28, mortality at day 28, and the median number of days in hospital, for patients treated with remdesivir compared to those treated with placebo. [1].
- On May 22, 2020, Beigel et al. published preliminary results from a National Institute of Allergy and Infectious Diseases (NIAID) -led phase 3 RCT testing remdesivir in hospitalized adults with severe COVID-19 (n=1,063 patients enrolled and randomized; multinational). The authors reported a statistically significant reduction in time to clinical recovery compared to placebo (11 vs. 15 days; $p<0.001$). In addition, the odds of improvement in clinical status at day 15 was statistically higher with remdesivir than with placebo (OR 1.50; $p=0.001$). Patients who underwent randomization during the first 10 days after the onset of symptoms had a lower rate ratio for recovery compared to patients who underwent randomization more than 10 days after symptom onset (1.28 vs. 1.38). The study reports that patients with severe disease had a higher ratio for recovery than patients with mild-to-moderate disease (1.37 vs. 1.09). However, only 11% of patients had mild to moderate disease, therefore this subgroup analysis is not controlled for type I error. At day 14, mortality rates (Kaplan-Meier estimate) were 7.1% in patients who received remdesivir vs. 11.9% in patients receiving placebo (HR=0.70; 95% CI, 0.47 to 1.04). Note: 28% of patients included in the trial had not reached the 28-day follow-up point at time of publication [2].
- On May 27, 2020, Goldman et al. published clinical findings from a Gilead-led randomized, open-label non-controlled phase 3 trial comparing a 5-day vs. a 10-day treatment course of remdesivir in hospitalized patients (≥ 12 years old) with severe COVID-19 not requiring

mechanical ventilation (n=397, multinational). The study reported no significant difference between the 5- day and the 10-day course of treatment after adjustment for baseline clinical status, in respect to distribution of clinical status at day 14 (p=0.14), median duration of hospitalization among patients discharged on or before day 14 (7 days vs. 8 days, respectively), clinical improvement at 14 days (64% vs. 54% of patients, respectively), time to clinical improvement for 50% of patients (10 days vs. 11 days, respectively), and mortality at 14 days (8% vs. 11%, respectively). Notably, 1) patients randomly assigned to the 10-day treatment course had a significantly worse clinical status at baseline than patients assigned to the 5-day treatment course (p=0.02), and 2) fewer patients completed their treatment course in the 10-day treatment arm than in the 5-day treatment arm (43% of patients vs. 85% of patients) [3].

- On June 1, 2020, Gilead released a media statement reporting preliminary findings from their ongoing randomized open-label phase 3 trial comparing a 5-day vs. a 10-day treatment course of remdesivir to standard of care, to treat hospitalized patient (≥ 12 years old) with moderate COVID-19 (n=584 at time of press release). Preliminary evidence suggested remdesivir treatment was associated with clinical benefit compared to standard of care where a 5-day but not a 10-day treatment significantly increased likelihood of clinical improvement on day 11 (p=0.026) [4].

Clinical Evidence of Safety to Date:

- Phase 1 safety data arising from administration to healthy volunteers included evidence of elevated transaminase levels (Grade 1-Grade 2) when administered using the same dosing strategy as that used for COVID-19, for both a 5- and 10-day treatment duration (Study GS-US-399-5505; 200 mg followed by 100 mg dosing for 5–10 days) as well as using a lower dosing regimen (Study GS-US-399-1954; 150 mg daily for 7 or 14 days). Levels normalized after discontinuation of remdesivir [5].
- All above studies in COVID-19 patients reported on safety and no study reported serious safety signals.
- Wang et al. reported a similar percentage of patients reporting adverse events (AEs) between remdesivir-treatment and placebo, however more patients in the remdesivir discontinued treatment due to AEs (12% vs. 5%) [1].
- In Beigel et al., less patients reported a serious AE (SAE) in the remdesivir treated group compared to standard of care (27% vs. 21.1%); this trend was consistent with reporting of grade 3 or 4 AEs (28.8% of patients in the remdesivir arm vs. 33% of patients in the standard of care arm). There was similar incidence of treatment discontinuation due to AE reporting [2].
- Goldman et al. noted more SAEs and discontinuations due to AEs in the 10-day treatment course compared to the 5-day treatment course with remdesivir [3].
- Preliminary safety data from the ongoing Gilead-led randomized open-label phase 3 trial comparing a 5-day vs. a 10-day treatment course of remdesivir to standard of care, reported no increased incidence of AE reporting or SAE reporting associated with 5- or 10-day treatment with remdesivir [4].

Authorization/Licensure Status Worldwide:

- Remdesivir is not currently licensed for use anywhere in the world, for any indication. On April 2, 2020, the European Medicines Agency (EMA) permitted access to remdesivir through the compassionate access programs of the European Union (EU) member states.
- On May 1, 2020, the US FDA issued an Emergency Use Authorization to allow access to the drug for treatment of COVID-19 patients.

- On May 7, 2020, Japan issued a similar authorization for their population, as did South Korea on June 3, 2020, India on June 13, 2020, and Israel on June 16, 2020.
- Singapore granted conditional approval of its use on June 10, 2020, limiting its access to only treat COVID-19 patients with severe disease.
- On June 12, 2020, the ad-hoc COVID-19 CPTG met, and part of the discussions included a benefit-risk profile of Remdesivir to be included in the pandemic response. The Task Group discussed recent global changes in evidence and clinical practice and were provided an evidence summary prepared by the Canadian Agency for Drugs and Technologies in Health (CADTH) [6].

CONSIDERATIONS:

- There is currently limited evidence on the efficacy of remdesivir for COVID-19.
- Reported safety signals following the use of remdesivir in healthy or COVID-19 patient populations include potential impact on liver function.
- Current clinical data on remdesivir as a treatment for COVID-19 is limited to intravenous administration in hospitalized patients with severe COVID-19.
- Therefore, the risk-to-benefit ratio of remdesivir as a treatment for COVID-19 warrants critical evaluation, especially in severe COVID-19 patients requiring mechanical ventilation in the intensive care unit, and in patients with renal injury / failure.
- Strict criteria should be defined to determine the patient population suitable for Remdesivir treatment where those who are least likely to experience adverse effects and most likely to benefit from the drug are prioritized for treatment based on the evidence as it emerges, and based on availability of data for different demographic subgroups such as sex and age.
- The CPTG will re-evaluate the risk benefit profile of remdesivir for use as treatment of COVID-19 following knowledge of cost of treatment, availability of doses for Canada, and as additional results from RCT are disseminated for publication.

CONCLUSIONS:

The CPTG recommends that remdesivir should only be administered in RCT to monitor whether potential benefits of remdesivir outweigh known and potential risks in the treatment of patients hospitalized with COVID-19.

The group will review emerging evidence as provided by PHAC on an ongoing basis in order to make evidence-informed recommendations in a timely manner.

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This statement was prepared by: *N Forbes, M Patel, M Rieder, and M Salvadori*, on behalf of the Clinical Pharmacology Task Group (CPTG).

CPTG Members: *M Salvadori (Co-Chair), M Rieder (Co-chair), M Lordkipanidze, R Hall, M Piquette-Miller, A Collier and S Murthy*.

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Approved by the Clinical Pharmacology Task Group on June 29, 2020

Appendix F: National Early Warning Score (NEWS) 2 - Chart 1

Chart 1: The NEWS scoring system

Physiological parameter	Score						
	3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

Reproduced by: Royal College of Physicians. *National Early Warning Score (NEWS) 2: Standardising the assessment of acute-illness severity in the NHS*. Updated report of a working party. London: RCP, 2017.

Appendix G: National Early Warning Score (NEWS) 2 - Chart 2

Chart 2: NEWS thresholds and triggers

NEW score	Clinical risk	Response
Aggregate score 0–4	Low	Ward-based response
Red score Score of 3 in any individual parameter	Low–medium	Urgent ward-based response*
Aggregate score 5–6	Medium	Key threshold for urgent response*
Aggregate score 7 or more	High	Urgent or emergency response**

* Response by a clinician or team with competence in the assessment and treatment of acutely ill patients and in recognising when the escalation of care to a critical care team is appropriate.

**The response team must also include staff with critical care skills, including airway management.

Reproduced by: Royal College of Physicians. *National Early Warning Score (NEWS) 2: Standardising the assessment of acute-illness severity in the NHS*. Updated report of a working party. London: RCP, 2017

Appendix H: National Early Warning Score (NEWS) 2 - Chart 4

Chart 4: Clinical response to the NEWS trigger thresholds

NEW score	Frequency of monitoring	Clinical response
0	Minimum 12 hourly	• Continue routine NEWS monitoring
Total 1–4	Minimum 4–6 hourly	• Inform registered nurse, who must assess the patient • Registered nurse decides whether increased frequency of monitoring and/or escalation of care is required
3 in single parameter	Minimum 1 hourly	• Registered nurse to inform medical team caring for the patient, who will review and decide whether escalation of care is necessary
Total 5 or more Urgent response threshold	Minimum 1 hourly	• Registered nurse to immediately inform the medical team caring for the patient • Registered nurse to request urgent assessment by a clinician or team with core competencies in the care of acutely ill patients • Provide clinical care in an environment with monitoring facilities
Total 7 or more Emergency response threshold	Continuous monitoring of vital signs	• Registered nurse to immediately inform the medical team caring for the patient – this should be at least at specialist registrar level • Emergency assessment by a team with critical care competencies, including practitioner(s) with advanced airway management skills • Consider transfer of care to a level 2 or 3 clinical care facility, ie higher-dependency unit or ICU • Clinical care in an environment with monitoring facilities

Reproduced by: Royal College of Physicians. *National Early Warning Score (NEWS) 2: Standardising the assessment of acute-illness severity in the NHS*. Updated report of a working party. London: RCP, 2017

Appendix I: Dietary Recommendations during COVID-19

Maintaining a healthy balanced diet will help to support a patient's resistance to the virus.

Meals

- Encourage patients to eat 3 meals per day;
- Encourage patients to try to eat as much as they can at each meal;
- If a patient has a low appetite, encourage them to eat more frequently (in between meals);
- Encourage patients to choose fruits and vegetables rich in colour (dark green, orange, red, etc.) to increase intake of antioxidants and other nutrients that support immune function.

Fluids

- Water is naturally part of many foods like vegetables and fruit; milk products; hot and cold beverages as well as soup;
- Encourage patients to drink cold or warm liquids according to their preference;
- Encourage patients to drink often, with meals and in between meals.

Other tips

- Encourage patients to get plenty of rest (at least 7 to 9 hours every night)
- If a patient is age 60 years or older, consider whether it would be helpful if they took a multivitamin.

A patient cannot "boost" their immune system through diet, and no specific food or supplement will prevent the patient catching COVID-19/Coronavirus. Remind the patient that infection prevention and control measures remains (such as hand hygiene, physical distancing, respiratory hygiene, wearing a mask, etc.) the best means of avoiding infection.

As no one food or supplement can prevent illness, remind the patient to eat a variety of foods to maintain a healthy balanced diet.

If a patient indicates their appetite is poor and/or they have lost weight, please contact the Regional Dietitian for advice.

Caution: If a patient has specific nutrition needs, it is important that they continue to follow the dietary recommendations made by the dietitian / doctor. If a patient has any dietary concerns, please request a consultation with the regional dietitian for advice.

Appendix J: Dietary Recommendations for a patient with COVID-19 - Confirmed or Suspected

Drink often

It is important that a patient drink often because fever makes a person sweat. This causes a person to lose water and electrolytes.

Water is naturally part of many foods like vegetables and fruit; milk products; hot and cold beverages as well as soup.

Encourage the patient to drink cold or warm liquids according to their preference.

Monitor for signs of dehydration:

- Extreme thirst, dry mouth and tongue, infrequent urination or very dark urine, feelings of dizziness, confusion or headaches.
- Encourage patients to report any concerning symptoms to Health Services

Sore throat

Hard candies or pastilles, preferably without sugar, can also be used to soothe a sore throat.

Fatigue affecting oral intake

It is important that to encourage the patient to eat and drink regularly even if you have a low appetite.

Encourage patients to eat fruits and vegetables rich in colour (dark green, orange, red, etc.) to increase intake of antioxidants and other nutrients that support their body's immune function.

Encourage patients to try to eat as much as they can at each meal.

If a patient's appetite is poor and they are having trouble eating, consult the Regional Dietitian for advice.

GI complaints (nausea, vomiting, diarrhea or severe abdominal pain) that may affect oral intake

It is important that the patient eat and drink, even if they are not feeling well.

If their appetite is poor and they are having trouble eating, speak with the Regional Dietitian for advice.

Appendix K: Guidance on Staff Communication & Engagement with Patients about COVID-19, April 20, 2020

Communication tips

The purpose of these Communication Tips is to help support Healthcare Staff in conversations with patients diagnosed with COVID-19.

As Healthcare Professionals, you are playing a critical role in identifying, reporting and managing cases of COVID-19 within CSC's Institutions.

As there is currently no cure for this virus, infection can sometimes lead to death especially for those most vulnerable (those aged 65 and older; those with compromised immune systems; and those with underlying medical conditions such as, but not limited to, diabetes, heart disease and asthma).

These are unprecedented times and while most of those who contract COVID-19 will recover, it is important to remind all patients to:

- focus on staying healthy;
- practice physical distancing as much as possible;
- wash hands frequently;
- wear a mask; and
- follow their current treatment plans.

Acknowledge fears and feelings of uncertainty

Given the potential seriousness of the diagnosis, patients may show signs of anxiety and uncertainty. Some may verbalize their fears and express anxiety about what kind of care they will receive.

- It is important to acknowledge their fears and take the time to talk about their concerns.
- Asking what they are worried about in particular may open the dialogue.
- They may ask how they contracted the virus. Did they infect others?
- Some may be worried about their family and friends and ask if they can connect with them; some may seek spiritual care and guidance for comfort.
- All efforts should be made to reassure patients they will receive the appropriate medical care and that most with the virus will recover.
- In addition, it is important that patients understand the importance of staying as healthy as possible and to follow treatment recommendations for existing conditions.

Discuss goals of care

- When a patient is diagnosed with COVID-19, it will be important to explain the kinds of care they will receive and assure them they will be included in all care planning decisions.
- Discuss the range of outcomes, noting that most people infected with COVID -19 virus have mild symptoms and recover. For example about 80% of patients have mild to moderate symptoms. Older persons and those with underlying conditions (hypertension, diabetes, cardiovascular disease etc.) are at higher risk for more severe disease. Therefore, it is important to carefully follow treatment recommendations for existing conditions to stay as healthy as possible.
- Assure the patient they will receive the care they need, including comfort care to avoid distress or discomfort.
- While there may be hope for a patient's full recovery, this is an opportunity to ask the patient whether they have an advanced care plan, should their condition deteriorate.
- Inquire as to whether or not they have completed a DNR.
- Have they identified a substitute decision maker?
- If no advance care planning is in place, initiate the conversation and document the patient's wishes.
- Ask if they have any wishes or messages for loved ones and assure them, you will do your best, within your power, to convey those messages.

Be honest, direct and empathic

- It is important to be honest, direct and empathetic when talking with a patient who has been diagnosed with COVID-19.
- Start the conversation early while the patient is well enough and has the energy for the discussion.
- As some patients may have limited literacy skills, it is important that the information shared, be in words the patient understands so they are better able to participate in discussions about their future care.
- You may also wish to take the time to explain the extra precautions Healthcare Staff are taking (i.e. face masks, gloves, etc.) to avoid the spread of the virus.

Take a moment to prepare yourself for the conversation

- You may be very familiar with the patient as you may have been providing healthcare to them for many years, especially those with underlying chronic conditions. They will be looking to you for reassurance that they are being kept as safe as possible.
- Given that the information on COVID -19 is evolving daily, provide a response based on the most current messaging from Public Health.
- Some discussions will not be easy. Take a moment, to gather your thoughts.

This is a difficult time in healthcare especially for those providing care in challenging environments such as correctional institutions. We recognize that as you come to work every day in CSC, you may also be worried about family and friends at home. We thank you for your professionalism, dedication and service.

CSC Health Services, April 20, 2020

Sources:

- *Coronavirus disease (COVID-19): For health professionals; Canada.ca/coronavirus. Government of Canada website.*
- *Tips to Make the Most Difficult Conversations Easier, ACP Hospitalist; Hospital Medicine, May 2014.*
- *Dying Well in Custody Charter- Self- Assessment Tool; A National Framework for Local Action, April 2018. EndofLifeCareAmbitions.org.uk/tag/prison*
- *COVID Communication Skills, A Playbook of Vital Talk Tips; Vital Talk 2020 website.*
- *What Recovery from COVID-19 Looks Like, Public Health, Scientific American; April 11, 2020.*

Appendix L: End-of-Life Care in the ED

End-of-Life Care in the ED for the patient imminently dying of a highly transmissible acute respiratory infection (like COVID19)

For all patients

- Document discussion around GOC and update category status
- Consider involving spiritual care or palliative care. Ensure COVID status is documented
- Place the patient in a private room with appropriate droplet/contact precautions
- Encourage telephone or video conferencing to minimize visitors
- Ensure my visitors are following appropriate PPE procedures

Non-pharmacological symptom management

- Frequent symptom assessment using validated tools for signs of distress
- Frequent patient repositioning
- Eye and mouth care (avoid deep suctioning)
- Emotional support to patient and and family
- Consider discontinuing any therapy or monitoring not contributing to patient comfort

Avoid the use of

- Fan
- Oxygen > 6 L/minute
- High flow nasal cannula oxygen
- BiPAP or CPAP
- ALL nebulized treatments

During withdrawal of life-sustaining therapy, do not extubate the patient in the ED, but decrease ventilatory support and ensure comfort throughout.

Pharmacological symptom management

Airway Secretions

- Glycopyrrolate 0.4mg subcut/IV q4h prn OR
- Scopolamine 0.4mg subcut/IV q4h prn (more sedating, may have a benefit with agitation)

Agitation/Delirium

- Haloperidol 0.5-1mg subcut/IV q2h prn
- 2nd line: Midazolam 0.5mg subcut/IV q30min prn
- Refractory: consider adding methotrimeprazine 12.5-25mg subcut/IV q4h prn

Pain

If opioid naive:
- Morphine 2.5-5 mg subcut/IV q2h prn OR
- Hydromorphone 0.5-1mg subcut/IV q2h prn

If opioid-tolerant, refer to opioid equi-analgesia and conversion tables

Dyspnea

If opioid-naive, low-dose morphine is the medication of choice:
- Morphine 1-2.5mg subcut/IV q30min prn
- or Hydromorphone 0.25-0.5mg subcut/IV q30min prn
- or Fentanyl 12.5-50mcg subcut/IV q15min prn

If opioid tolerant, give breakthrough doses to effect:
- Breakthrough dose = 10% of total daily dose of subcut/IV opioid in 24 hours

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Second line: Midazolam 0.5-1mg subcut/IV q30min prn

For severe respiratory distress, consider Ketamine in dissociative dosing as a temporizing measure:
- Ketamine 1-2mg mg/kg IV or 4 mg/kg IM

Nausea

- Haloperidol 0.5-1mg subcut/IV q4h prn OR
- Ondansetron 4mg subcut/IV q6h prn

Fever

- Acetaminophen 650mg po/pr q4h prn

Infographic created by Dr. Shahbaz Syed, Department of Emergency Medicine, University of Ottawa
Hendin A., La Riviere CG., Williscroft OM., O'Connor E., Hughes J., Fischer, LM. End-of-life care in the Emergency Department for the patient imminently dying of a highly transmissible acute respiratory infection (such as COVID-19). CJEM. March 2020.

Image: EM Ottawa - https://emottawablog.com/2020/03/end-of-life-care-in-the-ed-related-to-covid-19/

Article: « End-of-life care in the emergency department for the patient imminently dying of a highly transmissible acute respiratory infection (such as COVID-19) ». Hendin, A., La Rivière, C., Williscroft, D., O'Connor, E., Hughes, J., & Fischer, L. (2020). CJEM, 1-4. doi:10.1017/cem.2020.352

Additional Resources

1. Clinical management of patients with COVID-19: Second interim guidance, Retrieved September 10, 2020, Public Health Agency of Canada. This guidance document has been endorsed by: Canadian Critical Care Society and Association of Medical Microbiology and Infectious Disease (AMMI) Canada. https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/clinical-management-covid-19.html
2. Infection prevention and control for COVID-19: Second interim guidance for acute healthcare settings, retrieved September 10, 2020, Public Health Agency of Canada. https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/interim-guidance-acute-healthcare-settings.html
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6. Public Health Agency of Canada. (2020, March 23). Government of Canada. Retrieved March 24, 2020, from https://www.canada.ca/en/public-health/services/publications/diseases-conditions/cleaning-disinfecting-public-spaces.html
7. World Health Organization. (2020, March 13). Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected. Retrieved March 24, 2020, from https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected
8. ICD-10-CA Coding Direction for Confirmed COVID-19 Cases - https://www.cihi.ca/en/bulletin/icd-10-ca-coding-direction-for-confirmed-covid-19-cases
    - As direction from the World Health Organization (WHO), when there is documentation of a confirmed case of COVID-19, assign *U07.1* Emergency use of U07.1.
    - Note: Do not assign U07.1 when COVID-19 is only suspected.

CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.

Guidance on Staff Communication and Engagement with Patients about COVID-19

APRIL 20, 2020

Correctional Service Canada | Service correctionnel Canada

Canada

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Communication tips

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April 28, 2020

Discharge Planning – COVID-19

CSC's well established release planning policies and procedures were developed to ensure that an offender's health, including their physical and mental health needs, cognitive impairments and/or chronic conditions are taken into consideration in advance of their release to the community. Incorporation of health discharge planning is an important element of the release planning process and a key factor in the reintegration of offenders into the community.

As part of CSC's response to the COVID-19 pandemic, additional measures are being incorporated into the existing Health Services discharge planning process to prevent and contain the spread of the virus.

Based on consultation with local provincial and territorial public health authorities, CSC Regional Managers, Public Health and Chiefs, Health Services have identified the measures that must be in place for each jurisdiction to support discharge planning that prevents and reduce the spread of the virus.

In addition to these measures, on a case by case basis, Regional Managers, Public Health and Chiefs, Health Services will advise and consult with the local provincial and territorial public health authorities on appropriate measures for release into the community when discharge planning for a person who:

- has symptoms of COVID-19
- has tested positive for COVID-19
- is being released from a site that has had known cases of COVID 19 (staff or inmate)

Additionally, screening for COVID-19 symptoms, including a temperature check, will be incorporated into all release/discharge planning using the inmate active screening form.

An interdisciplinary approach to discharge, including collaboration and coordination to address all aspects of an offender's release is fundamental to successful reintegration. Continued collaboration is particularly important in these challenging times to ensure timely sharing of health information and coordination of post-release services and supports. In addition to aforementioned measures, the *Health Status at Discharge: GIST Report* and pre-release case conference(s) serve as key information sharing tools for health and case management staff on health information related to release, particularly in cases involving direct medical and public health intervention.

Practice Reminder

Symptomatic Patients who Test Negative for COVID-19: Considerations for Medical Isolation

Within CSC, the threshold for testing symptomatic individuals is low, given the expanded list of symptoms for COVID-19, which includes many atypical symptoms.

In the case of **symptomatic inmates who test negative for COVID-19**, institutional physicians and/or nurse practitioners may use **clinical judgement** to make recommendations about medical isolation to the Institutional Head.

The following considerations – related to COVID-19 risk and ethical decision-making – should guide recommendations for medical isolation in the context of symptomatic COVID-19 negative patients.

Considerations

- The patient's clinical presentation and medical history;
- The outbreak status of the institution;
- The rate of transmission in the local community where the CSC institution is geographically situated;
- The type of institution (e.g. intake sites may have a higher risk of introduction from the local community);
- The ethical principles of pandemic response – particularly as they relate to medical isolation and patient restrictions, for instance:
    - *Proportionality*: Restrictions placed upon patients should be proportional to the level of risk.
    - *Non-maleficence*: Decisions should minimize the harm to patients and staff members wherever possible, which requires consideration for the benefits and burdens to patients, the inmate population the isolated patient would be returning to, and staff members.

Institutional physicians and/or nurse practitioners may wish to consult with a colleague (e.g. the regional physician lead or another institutional physician with experience in infectious disease outbreaks and/or COVID-19) when recommending a plan for medical isolation for symptomatic patients who test negative for COVID-19.

Courses of Action

Taking into account clinical judgment and the considerations detailed above, the following courses of action serve as examples of how a negative symptomatic case (and their close contacts) might be managed related to medical isolation.

- **Continue medical isolation**: continue to medically isolate the patient, until one of the following is achieved (whichever is earliest):
    - A minimum of 10 days have passed, with 48 hours symptom free; or
    - The patient receives a second negative test (tested at 4-5 days after the first test), with 24 hours symptom free, at which time medical isolation can be discontinued.

- **Implement modified routine[1]:** release the patient from medical isolation, but continue to modify routine for them and their cohort to the range and/or house, until one of the following is achieved (whichever is earliest):
    - A minimum of 14 days have passed, which accounts for a full incubation period for the symptomatic index patient's cohort; or
    - The index patient receives a second negative test (tested at 4-5 days after the first test), with 24 hours symptom free, at which time modified routine for the index patient and their cohort can be lifted.

If the index of suspicion for COVID-19 is low, discontinuing medical isolation on the basis of a single negative test may be appropriate, but rationale must be well documented in the OHIS-EMR.

Note: Once a symptomatic inmate receives a negative test result, the rest of the range/house and any identified close contacts remain on modified routine until the index case is medically cleared by the institutional clinician (physician or nurse practitioner).

Documentation
The rationale behind any deviation from the COVID-19 algorithms/patient journeys regarding medical isolation **must be thoroughly documented in the** OHIS-EMR by the institutional clinician (physician or nurse practitioner). This documentation should include all considerations that were taken into account, such as:

- The patient's clinical presentation and medical history;
    - Provide details about whether the patient was assessed in-person by the institutional physician or nurse practitioner and the result of that assessment
    - If the patient was not assessed in-person by the institutional physician or nurse practitioner, provide rationale
- The outbreak status of the institution;
- The rate of transmission in the local community where the CSC institution is geographically situated;
- The type of institution (e.g. intake sites may have a higher risk of introduction from the local community); and
- Consultation with colleagues (if applicable).

[1] Modified routine refers to modifying the movement of the patient and/or their cohort to the range- or unit-level. While typically implemented for 14 days to account for a full incubation period of the COVID-19 virus, the institutional physician/nurse practitioner can make a recommendation to discontinue modified routine prior to this, based on clinical judgement.

COVID-19 Contact Tracing

April 17, 2020

COVID-19 is a highly transmittable virus. There is now evidence that asymptomatic transmission is possible and likely occurring, therefore CSC has adopted a comprehensive approach to preventing the spread of this disease.

What is contact tracing?

Contact tracing is a strategy for breaking transmission chains and controlling the spread of disease.

It involves:

- Identifying infected persons
- Taking steps to prevent an infected person from further spreading infection
- Identifying those with whom the infected person may have been in close contact with while infectious

As part of the process, you may receive a phone call from a member of CSC's contact tracing team.

You may be asked questions about the nature and length of interactions with employees/contractors/inmates who have developed symptoms.

If you develop symptoms or are diagnosed with COVID-19, contact your manager immediately.

If you have any questions or concerns, please contact your manager.

If you require support in these unprecedented times, you are encouraged to reach out to an EAP referral agent. Lists of agents are available on the hub (EAP Referral Agents and Regional Contacts page) or by contacting EAP-CISM/PAE-GSIC.GEN@CSC-SCC.GC.CA. You may also contact the Employee Assistance Services at 1-800-268-7708. It is available 24/7.

CORRECTIONAL SERVICE CANADA

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COVID-19 Contact Tracing Guideline

MAY 28, 2020

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Background

Contact tracing is a strategy for breaking transmission chains and controlling the spread of disease, in this instance COVID-19. It involves identifying infected persons, taking steps to prevent an infected person from further spreading infection, identifying those with whom the infected person may have been in close contact with while infectious, and locating and testing close contacts.

In the CSC context, contact tracing is being initiated with the goal of reducing the spread of COVID-19 within institutions and amongst inmates and staff. When new cases or symptomatic individuals are identified amongst staff, contact tracing teams will be personally calling institutional staff members that have been identified as having worked on the effected units, ranges, or houses. The purpose of these calls is to determine if institutional staff have come into close contact (see definition of close contact in Appendix A) with the case(s)/symptomatic individual(s) in the following timeframes:

- 48 hours prior to symptom onset
- Anytime after onset of symptoms

If determined a close contact in either of the above timeframes, the goal is to gather information about the nature of the contacts with the case(s)/symptomatic individual(s) to determine if further safety measures are required to protect other staff and inmates (ex. staying home from work to self-isolate).

Note: this contact tracing team only seeks to gather information about the nature and extent of contact, and does not seek to notify staff of the need to self-isolate or wear personal protective equipment (PPE). The Warden at the affected institution will determine further action regarding which staff are required to self-isolate (stay home) and will reach out to these staff members accordingly.

Procedures

The following outline the procedures for contact tracing:

When new cases or symptomatic individuals are identified amongst staff, the Warden and Chief of Health Services will determine potential staff contacts and create a list to send to the Regional Manager of Public Health (RMPH). The RMPH will notify the appropriate contact tracing lead and will attach the list in the form of an Excel spreadsheet that will include the following information:

- The names of the case(s) or symptomatic individual(s) in either the staff populations
- List of staff who may be contacts of the case(s) or symptomatic individual(s) to call
    - This will include their first and last names, contact information, job title, and date of last shift, and date of next shift
- A column should be present for 'notes' or 'comments' where you can document any additional, relevant data from your call with the staff member
    - If this column is not present, please add an additional column for this purpose

Contact tracing lead will create a new InfoPoint entry for each case/symptomatic individual

1. Create a new case or symptomatic entry for the provided individual(s) in the InfoPoint.

2. Generate a new CSC Case Number for the case or symptomatic individual using the following instruction:

   The Institutions Name plus 3 digits, for example:

   1. Mission001 (for the first case)
   2. Joyceville002 (for the second case)
   3. OttawaParole001 (for the first case)
   4. GrandValley003 (for the third case)

3. Complete the entry to the best of your knowledge using the information provided by the RMPH (date of symptom onset, test results, etc.)

4. Click save.

Member of the Contact Tracing Team: Calling Staff who are Potential Contacts

5. Open the provided excel document and begin the call.

6. Introduce yourself by name and as a member of the CSC contact tracing team for COVID-19.
   - Ex. "My name is _____ and I am a member of the contact tracing team for CSC."

7. Explain the reason for the call.
   - Contact tracing is part of COVID management: when an individual is identified as a "case" (symptomatic or confirmed COVID positive), we perform a thorough contact tracing exercise to identify close contacts of the cases so we can take the necessary measures to prevent further spread of infection
   - Contact tracing is a very important measure for your safety and for the safety of your work colleagues as it can help reduce the spread of COVID-19
   - Emphasize that any decisions about who stays home will come from the staff's supervisor/manager

8. Ask if you can go through questions about different types of contact they may have had with the case(s) or symptomatic individual(s).

9. If the person agrees, provide them with the name of the case(s)/symptomatic individual(s) and ask if they have had any contact with that person in the past 14 days. If yes, specify the type of contact (some examples include spending time in the same room, having a face-to-face conversation, sharing a couch, or sharing an object with the case(s) or symptomatic individual(s))
   - If more than one individual has been identified as a case or symptomatic individual at the institution, ensure you go through <u>each</u> person when considering recent contacts

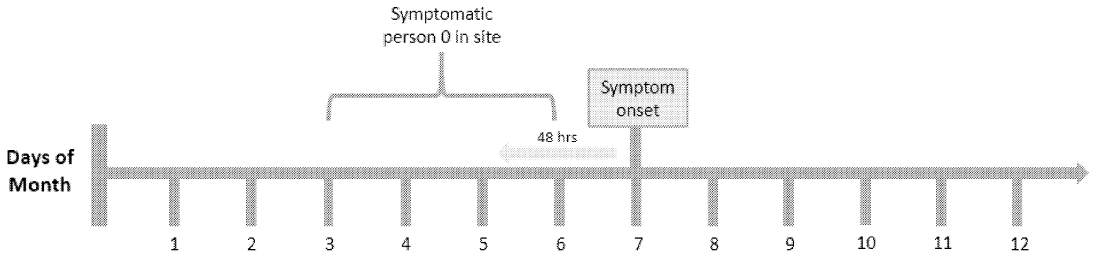
- Document each case or symptomatic individual that the staff member has come in contact with (the linking of cases is important information for contact tracing)
- Document any relevant data in the 'notes' or 'comments' column

a. If there has been no contact with **any** case/symptomatic individual, the staff member would be deemed a **casual contact** and would not require further interviewing (designate individual as a 'casual contact' on the provided excel spreadsheet);

b. If yes to **any** case/symptomatic individual, continue with more specific questions below.

10. Using the date of symptom onset for the index case, determine if the interaction occurred within the following timeframes:
    - 48 hours prior to symptom onset
    - Anytime after onset of symptoms
        - Ex. If contact occurred when the individual was symptomatic but had not yet initiated proper physical distancing protocol due to testing delay

The figure below illustrates the contact tracing timeline for a symptomatic staff member:



11. Determine the nature of the interaction for each case or symptomatic individual identified above using the following suggested questions, using your judgement and knowledge of the individuals role to individualize the questions as necessary (ie. the questions asked of a parole officer may be different than the questions asked of a teacher):
    - Have you recently spent a prolonged period of time within 2 meters of the case?
    - Have you eaten lunch in the lunchroom with the case?
    - Have you carpooled to work with the case?
    - Have you shared equipment (such as computers, keys, etc.) with the case?
    - Have you recently been a part of a training session with the case?
    - Have you had any face-to-face conversations with the case?

    a. If no, they would be deemed a **casual contact** and do not require further interviewing. Designate individual as a 'casual contact' on the provided excel spreadsheet.

b. If yes, they may be a **close contact** - continue with contact tracing below.

12. Determine if the interaction(s) discussed above meet the following criteria for a close contact:
    - Approximately 15 minutes face-to-face (<2 meters distance/ 6ft), may be cumulative
    - Closed space with a confirmed case for longer than two hours
    - Any type of physical contact
    - Sharing of items that have not been properly disinfected

Note: If appropriate personal protective equipment was worn for the entire duration of the contact, this is considered a casual contact (see definition of close contacts in Appendix A).

a. If the interaction does not meet the above criteria, they would be deemed a **casual contact** and do not require further interviewing. Designate individual as a 'casual contact' on the provided excel spreadsheet.

b. If the interaction meets the above criteria, this would be deemed a **close contact**. Proceed to step 13.

13. Determine the date of their next scheduled shift to prioritize accordingly if further action is necessary.

Member of the Contact Tracing Team creates a new InfoPoint entry for a contact

14. With the staff member still on the phone, create a new InfoPoint entry for a 'Contact' and continue with the questions in the InfoPoint:
    - To create a contact number, use the original case number of the case/symptomatic individual followed by the initials of the contact. For example: Mission002-XX.
    - If the individual has had close contact with multiple case(s)/symptomatic individual(s), enter multiple contact numbers into the same InfoPoint entry. For example: Mission002-AS, Mission003-AS.

Reminder: Although it is outlined in the InfoPoint, always remember to determine if the close contacts are symptomatic. If they are symptomatic, please verify when symptom onset occurred so that the 48 hour period prior to symptom onset can be calculated for their own contact tracing.

15. Click save.

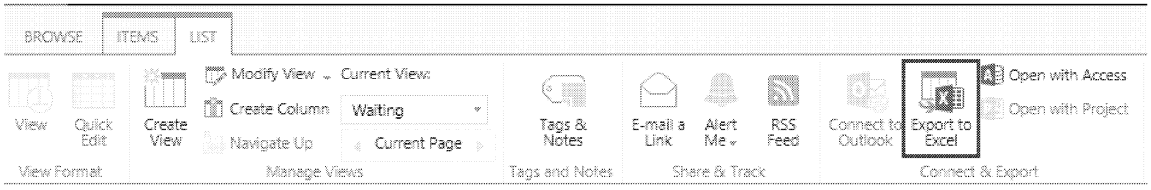
16. Inform the contact that if further action is required, they will receive notification from senior management at their institution with direction. Emphasize the importance of monitoring for symptoms and informing their manager if they develop symptoms.
    - If the staff member asks you whether or not they should be going to work, respond with the following: *I apologize I am unable to provide you with any direction regarding your work schedule or ability to go into the workplace. Please contact your Manager or Supervisor to discuss further.*

17. If you are unable to reach a staff member on your list, leave a message asking for them to call you back and continue to try until you are able to reach them.

Contact Tracing Team Lead (or designated team member) exports InfoPoint data to Excel

Once you have completed entering data for all individuals deemed close contacts in the InfoPoint, designate a member of your contact tracing team to export the data into an Excel spreadsheet using the following steps.

18. In the 'Contact' tab of the InfoPoint, go to the 'List' tab at the top left of the screen and select 'Export to Excel'.



19. A spreadsheet should populate with all data from the InfoPoint. Filter the data by clicking on the dropdown arrow in the 'Institution' column and select the appropriate institution. Then, click on the dropdown arrow in the 'Close contact number' column select only the contacts relevant to your index cases. For example:
    - If the case or symptomatic individual being traced was GrandValley009, select all contacts with the root case number of GrandValley009 prior to their initials (i.e. GrandValley009-AB, GrandValley001-CD, etc.)

20. To facilitate easier interpretation of the data, please create a more concise spreadsheet by deleting all columns except for the following:

Last name / Nom de famille	First name / Prénom	Contact information (cell #, home #, e-mail) / Information du contact étroit (#cellule/# tel/courriel)	Job title / Profession	Date of most recent close contact / Date du dernier contact étroit	Date to self-isolate until (14 days from close contact) / Date de fin de l'auto-isolement (14 jours suite au contact étroit)	Notes

    - In the 'notes' section, provide any other data that will assist senior management in determining if further action (self-isolation) is required.
    - Flag symptomatic staff to senior management for future contact tracing.

21. Once this table is prepared, save with the title 'Contact Tracing' followed by the relevant case number(s) and send to the appropriate senior management (RMPH, Warden, RD, CHS).

22. The contact tracing lead will be responsible to follow up with the institution management (RMPH, Warden, RD, CHS) for the remaining information and enter it into infopoint.:
    - Date of test
    - Result of test
    - Public health return to work date
    - Actual return to work date

Appendix A: Close and Casual Contact Definitions

1) Close contact of a case:

a. An individual who has greater than 15 minutes face-to-face (<2 meters distance) contact with a case/symptomatic individual, in any setting (this may be cumulative, i.e. multiple interactions).
b. Healthcare workers who have not worn appropriate PPE or had a breach in PPE during the following exposures to the case/symptomatic individual:
    - Health care workers performing assessments, vital signs, etc.
    - Direct contact with the case/symptomatic individual, their body fluids or their laboratory specimen
    - Present in the same room, without appropriate PPE, when an aerosol generating procedure is undertaken on the case/symptomatic individual.
c. Individuals in the same accommodations as a case/symptomatic individual sharing kitchen, bathroom facilities, living area.
    - Inmates sharing a range, house or cell
d. Correctional officers who had prolonged close contact for more than 15 minutes (within 2 metres) with a case/symptomatic individual who have not worn appropriate PPE or had a breach in PPE during the following exposures to the case/symptomatic individual while
    - Performing physical searches, pat downs, finger printing, interviewing, home visits, etc.)
    - Direct contact with the case/symptomatic individual, their body fluids
e. Contacts who have shared a closed space with a case/symptomatic individual for longer than two hours, taking into consideration the size of the room, ventilation and the distance from the case/symptomatic individual.

2) Casual contact of a case:

a. Any individual who has shared a closed space with a case/symptomatic individual for less than two hours.
b. Healthcare workers, including correctional officers, who have taken recommended infection control precautions, including the use of appropriate PPE, during the following exposures to the case/symptomatic individual:
    - Direct contact with the case/symptomatic individual or their body fluids
    - Present in the same room when an aerosol generating procedure is undertaken on the case/symptomatic individual.
c. Any individual who has shared a closed space with a case/symptomatic individual for longer than two hours, but taking into consideration the size of the room, ventilation and the distance from the case/symptomatic individual, does not meet the definition of a close contact.

CORONAVIRUS DISEASE (COVID-19)

Manager's Guide COVID-19: Contact Tracing of Symptomatic Employee/Contractor

APRIL 20, 2020

COVID-19 is a highly transmittable virus. There is evidence that asymptomatic transmission is occurring, therefore CSC has adopted a vigorous, adaptive approach to preventing the spread of this disease.

Contact tracing is a strategy for breaking transmission chains and controlling the spread of disease. It involves identifying infected persons, taking steps to prevent an infected person from further spreading infection, identifying those with whom the infected person may have been in close contact with while infectious, and locating and testing close contacts.

In the CSC context, contact tracing is initiated when employees/contractors notify management of either symptoms or diagnosis.

Managers are expected to follow the below steps:

Conversation with employee

You as the manager will:

1. Advise employee/contractor that contact tracing will occur by explaining:
   - All work contacts from the 48hr period prior to symptom onset will be contacted as part of the process for understanding and managing the spread of COVID-19.

2. Instruct employee/contractor to call Public Health (PH) for testing, as required:
   - Where testing is required, employees must inform the provincial public health agency that they are an essential worker for priority testing.
   - If the employee/contractor is denied testing, they should notify their manager.

3. Collaborate with the symptomatic employee/contractor to fill out the information in the spreadsheet provided: Date of symptom onset, types of symptoms, test results, etc.

4. Collaborate with the symptomatic employee/contractor to compile a list of potential work related close contacts (See definition of close contacts in Appendix A), to facilitate the contact tracing process.

CORONAVIRUS DISEASE (COVID-19)

Manager's Guide COVID-19: Contact Tracing of Symptomatic Employee/Contractor

APRIL 20, 2020

5. Advise employee/contractor of return to work policy and formula.
    i. If their local provincial public health agency advises differently, advise them to report the difference in date to contact tracing leads.
    ii. The most stringent of the two policies will be followed.

6. Encourage the employee/contractor to reach out to the Employee Assistance Program for support.
    - The lists of EAP referral agents are available on the EAP Referral Agents and Regional Contacts page of the Hub or by contacting EAP-CISM/PAE-GSIC.GEN@CSC-SCC.GC.CA. You may also contact the Employee Assistance Services at 1-800-268-7708. It is available 24/7.

Working with institutional staff and contact tracing team

You as the manager will:

1. Collaborate with the warden and chief of health services to fill out the spreadsheet provided with a separate list of all employees/contractors who may have been contacts with the symptomatic individual in the 48hrs prior to symptom onset or any time thereafter.
    - For example, those who shared a post or were assigned to the same range/house on the same day.

2. Provide this information to the regional contact tracing lead[1], who will coordinate the contact tracing process to identify close contacts of the symptomatic individual.

Members of the contact tracing team will personally call institutional staff/contractors that have been identified as having worked on the effected units, ranges, or houses. The purpose of these calls is to determine if institutional staff/contractors have come into close contact with the symptomatic individual in the 48 hours prior to symptoms onset or anytime thereafter.

Reporting back to staff

You as the manager will:

1. Provide information about those who have been determined to be close contacts to the appropriate senior managers at the institutional and regional level.

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1 **Regional Contact Tracing Leads**
ATL: Renée Gagnon (506) 851-2360 ONT: Allison Storring (613) 545-8159 QUE: Marie-Helene Dufresne (438) 988-5082 and Simon Bégin (418) 284-5285 PRA: Shannon Harriman-Gerard (306) 220-5142 PAC: Megan Potvin (343) 543-8680 and Gurjit Toor (604) 839-5474

CORONAVIRUS DISEASE (COVID-19)

Manager's Guide COVID-19: Contact Tracing of Symptomatic Employee/Contractor

APRIL 20, 2020

2. Reach out to those close contact employees/contractors to provide instruction on required self-isolation and/or return to work arrangements.

3. Encourage the employee/contractor to reach out to the Employee Assistance Program for support at 1-800-268-7708.

4. Will notify the senior manager of the department of the effected person when advising employees/contractors to stay home from work to medically isolate:
    - IMS (OMS) staff: Simon Bonk
    - HR: Nick Fabiano
    - Tech Services: Ghislain Sauvé
    - Healthcare workers: Chief of Health Services

5. Advise employees to report their date of return to work to the contract tracing leads.

Appendix A

Close Contact Definition

Close contact of a case:

a. An individual who has greater than 15 minutes face-to-face (<2 meters distance) contact with a case/symptomatic individual, in any setting (this may be cumulative, i.e. multiple interactions).
b. Healthcare workers who have not worn appropriate PPE or had a breach in PPE during the following exposures to the symptomatic individual:
    - Health care workers performing assessments, vital signs, etc.;
    - Direct contact with the symptomatic individual, their body fluids or their laboratory specimen;
    - Present in the same room, without appropriate PPE, when an aerosol generating procedure is undertaken on the symptomatic individual.
c. Individuals in the same accommodations sharing kitchen, bathroom facilities, living area
    - Inmates sharing a range, house or cell
d. Correctional officers who had prolonged close contact for more than 15 minutes (within 2 metres) with a symptomatic individual who have not worn appropriate PPE or had a breach in PPE during the following exposures to the symptomatic individual while:
    - Performing physical searches, pat downs, finger printing, interviewing, home visits, etc.;
    - Direct contact with the symptomatic individual, their body fluids

e. Contacts who have shared a closed space with a symptomatic individual for longer than two hours, taking into consideration the size of the room, ventilation and the distance from the case/symptomatic individual.

CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.

COVID-19: Guidance for Dental Services

JULY 9, 2020

Document History

Revision Date	Document Section	Description of Revisions
July 9, 2020		Document was created.

Introduction

Due to the risks associated with COVID-19, dental workplaces require careful planning and enhanced guidance to support the safe delivery of dental services. Dental workplaces are particularly vulnerable to viral transmission, due to nature of aerosol generating dental procedures, the proximity of the operating field to the upper respiratory tract, and the number of patients seen by a dental contractor in a day. This document provides interim guidance, in the context of the COVID-19 pandemic, for dental contractors in CSC. Dental contractors providing any in-person care amidst the COVID-19 pandemic must also adhere to the direction of provincial public health, and their governing college to promote their safety, as well as the safety of CSC's patients and staff.

This guidance document was developed using the best practice information currently available. It will be updated as new information becomes available.

Infection Prevention and Control

Modifications to dentistry practice in the context of COVID-19 are based on reducing the spread of infection. Infection prevention and control (IPC) practices within CSC are essential to promote the health and wellbeing of patients, employees, and contractors. It is important to note that this document focuses only on IPC measures for COVID-19 in dental settings; for additional information on IPC practices within CSC, please see COVID-19 Infection Prevention and Control Preparedness Guidance and Infection Prevention and Control Guidelines. For further information related to CSC's interim measures related to COVID-19, please see the COVID-19 Resources on the Hub.

Infection Prevention and Control Measures for Dental Procedures (COVID-19)

Practice Requirements

General Infection Prevention and Control Measures

In addition to routine practices (see Infection Prevention and Control Guidelines):

- The dental room must have a closed door because of possible aerosol generating medical procedures (AGMP) such as high speed hand pieces, air water syringes, and ultrasonic instruments.
- The dental room must be decluttered as much as possible (this includes removing any non-dental equipment or supplies stored in the dental room, computers, etc.)
- Ensure the availability of 60-90% alcohol based hand rub (ABHR)[1] or other hand sanitizer approved by Health Canada for COVID-19[2] at entrance and throughout the office.
- A high efficiency particulate air (HEPA) filter should be used if air in the dental room is recycled.
- Only necessary personnel for the dental case must be in the immediate environment.
- Ensure appropriate signage is posted in common areas, including topics such as hand washing, respiratory hygiene, and physical distancing (See CSC Posters and Resources and COVID-19 Wash Your Hands for signage).
- See COVID-19 Infection Prevention and Control Preparedness Guidance for more information on IPC measures for COVID-19.

Cleaning

- Full cleaning and disinfecting of the dental room before procedures.
- Cleaning and disinfecting in between patients by dental contractor.

[1] **Public Health Agency of Canada (2020).** Infection prevention and control for COVID-19: Interim guidance for long term care homes. Retrieved from: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevent-control-covid-19-long-term-care-homes.html

[2] **Public Health Agency of Canada (2020).** Hard-surface disinfectants and hand sanitizers (COVID-19): List of hand sanitizers authorized by Health Canada. Retrieved from: https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/hand-sanitizer.html

  - **For AGMP's:** Following the appropriate settle time, dentists must ensure that operatories (including all clinical contact surfaces and equipment) are cleaned and disinfected prior to treating a new patient. This should include all surfaces and floor where droplets could settle.
  - **For non-AGMPs:** Clean the operatory room clinical contact and housekeeping surfaces as per normal infection prevention and control (IPAC) protocol
- Full cleaning and disinfecting of the dental room at the end of the day.
- Cleaning and disinfection must be undertaken using appropriate hospital-grade low-level disinfectant that are registered in Canada with a Drug Identification Number (DIN) and labelled as effective for both enveloped and non-enveloped viruses.
- The use of an electrostatic machine is recommended at the beginning and end of the day, as well as after any AGMPs performed on known COVID-19 positive patients, if available at the institution and based on the availability of cleaning staff. Please note that use of an electrostatic machine is in addition to routine cleaning and disinfection, not a replacement.

Personal Protective Equipment (PPE)

The following PPE is required for all dental procedures in CSC: N95 mask (or equivalent KN95 mask approved by Health Canada), face shield, gown, and gloves.

- CSC staff and contract dental providers, must be trained in personal infection prevention and control practices including donning and doffing PPE (COVID-19 Update Personal Protective Equipment).
- Although not all dental procedures are AGMPs, to avoid changing from a procedural medical mask to an N95 mask while attending to the patients, CSC will require that an N95 mask be used for all procedures.
- Staff and contract dental providers must have been fit tested for an N95 mask. If KN95 masks are used, they do not require fit testing. However these masks still require the user to perform a seal check prior to entering the dental room (see COVID-19 Update Personal Protective Equipment for KN95 seal check instructions).
- An N95 mask may be used for the entire duration of the clinic provided it has not been manipulated and is not visibly soiled, damp, damaged or difficult to breathe through.
- A face shield is mandatory and may be used for the duration of the clinic as well, provided it is disinfected between patients and discarded if it is visibly soiled, damaged or difficult to see through (see Reuse Face Shields COVID-19). Regular glasses and loupes can be worn under the face shield in addition, if desired/required.
- Gown and gloves should be changed between each patient, at the appropriate, separated donning and doffing stations.

Please see COVID-19 Update Personal Protective Equipment for PPE guidance that staff and contractors must adhere to while in CSC institutions, which includes universal masking protocols to be followed at all times in between dental procedures.

Security

- The dental room should ideally have a door that allows the correctional officer to have a clear view into the room.
- All persons in the room must wear personal alarms.
- If a correctional officer is waiting outside the dental room, the officer must have the appropriate (PPE) available in case entry to the dental room is required.
- No casual entry into the dental room is permitted during procedures. Place a sign on the door to indicate this (see Appendix A).
- If the correctional officer remains in the room, the officer must wear full PPE including an N95 mask.

Please see the **CSC Dental Relaunch Checklist** (see Appendix B) for a list of considerations when preparing for the relaunch of dental services.

Patient Flow

- Dental contractors should perform a point-of-care risk assessment for all patients prior to commencing the appointment to determine if the patient is experiencing symptoms (see COVID-19 Update Personal Protective Equipment for more information about this assessment) and must brief the patient on the risk of transmission of COVID-19 related to dental aerosols.

- If the patient is experiencing symptoms, the inmate should return to their cell and not enter the dental clinic. The appointment should be rescheduled to a later date (at least 14 days later) if possible. Refer to COVID-19 Algorithm for Symptomatic Inmates.
- If a patient experiencing symptoms requires urgent/emergency dental attention, the dentist may use their clinical judgement to decide whether or not to proceed with the dental procedure.

- Each patient is to have their temperature taken (recorded in OSCAR measurements) prior to commencing the appointment.
  - If the patient's temperature is above 38°C, the patient should not be placed in the dental room, but the dentist should assess if the fever may be related to a dental infection.
  - If there is any indication that the fever may be related to a dental infection or if the patient requires urgent/emergency dental attention for another reason, the dentist may use their clinical judgement to decide whether or not to proceed with the dental procedure.
- All staff, including dental contractors, should be screened by operations for symptoms of COVID-19 upon entering the institution.
- Four handed dentistry (the dentist and the assistant working as a team to provide dental care) should be practiced at all times.
- Prior to leaving the appointment, patients should be instructed to monitor for symptoms and notify Health Services if symptoms develop within the 14 day period after the appointment. Heath Services staff must then follow the COVID-19 Algorithm for Symptomatic Inmates and notify the dental contractors involved in the appointment.

During the Appointment

Have the inmate perform hand hygiene (either with ABHR, another hand sanitizer approved by Health Canada for COVID-19, or soap and water) upon arriving.

Perform hand hygiene and don PPE consisting of gown, N95 mask, face shield, and gloves for all cases by the dental contract staff and security if there is any possible risk of the need for their intervention.

1. Close the door to the procedure room and place a sign on the door that indicates the door should not be opened during the procedure (See Appendix A).
2. Have the patient perform a rinse with a 1% hydrogen peroxide solution for 30 seconds and then repeat for another 30 seconds.
3. High volume suction (HVS) is to be used.
4. Use rubber dam whenever possible.
5. Once the procedure is complete, the inmate should be directed to perform hand hygiene first and then don their mask prior to leaving the room.
6. Change gloves (performing hand hygiene as outlined in COVID-19 Update Personal Protective Equipment).
7. Clean and disinfect operatory using hospital-grade disinfectant while wearing PPE.
8. Doffing of PPE by dental personnel is performed in the designated area and disposed of into the designated no-touch waste receptacle. Follow continuous masking requirements as outlined in the COVID-19 Update Personal Protective Equipment.
9. Ensure the door remains closed post-procedure and is not used for another inmate until settle time is completed.

Settle time

The "settle time" is the amount of time needed for infectious airborne organisms that may be created during an AGMP to settle out of room air or infectious aerosols and land on surfaces. Settle time starts following an AGMP when a pathogen (e.g., COVID-19) has the potential to be aerosolized during the procedure.

If the dental procedure was an AGMP:

- The wait time of either:
  - 15 minutes for AGMPs performed using dental dams for the entire procedure, hydrogen peroxide pre-procedural mouth rinse, proper PPE, and high-volume suction; **OR**
  - 2 hours for AGMPs performed without any one or more of the following: dental dam for the entire procedure, hydrogen peroxide pre-procedural mouth rinse, proper PPE, or high-volume suction (for example, a surgical extraction, where a rubber dam cannot be used),

begins as soon as the room is emptied[3]. The dental room door needs to remain closed for the settle time duration[4] and no other procedures can take place in this time. The time that the door can be opened should be marked clearly on the door (see Appendix C). Once the wait time has expired full cleaning is performed.

If the dental procedure was not an AGMP:

- There is no wait time necessary and routine practices for cleaning/disinfecting the room prior to the next case can proceed according to established practice standard.

Note: If an institution is situated in an area with a low community incidence of COVID-19, a revised approach to reduce the settle time may be considered.

Scheduling

To optimize the number of appointments available in a dental clinic, consider scheduling appointments in such a way that maximizes the number of patients requiring non-AGMPs and minimizes the number of patients requiring AGMPs. This will reduce wait times in between appointments and increase the number of patients seen in a day. For example, consider starting the clinic with non-AGMPs such as dentures, inquiries/checks, triaging, etc. Schedule appointments that will involve the use of high speed hand pieces, air water syringes, ultrasonic instruments, or other AGMPs for the end of the work day, where possible, to better accommodate the settle time.

Consider scheduling patients at a higher risk of severe illness from COVID-19 (older age, those with underlying medical conditions, etc.) at the beginning of the day, first after lunch or on a separate day.

[3] **The College of Dental Surgeons of Saskatchewan (2020).** CDSS Alert – COVID-19 Pandemic: IPC Interim Protocol Update. Retrieved from: https://saskdentists.com/images/pdf/temp_files/Alerts__Memos/20200608_CDSS_Alert_Phase_3.pdf

[4] **Centers for Disease Control (2020).** 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