Guidance for the Provision of ECT at VA during the COVID-19 Pandemic (VGH and UBCH)
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Practitioners are referred to the provincial document "Infection Prevention and Control (IPC) for Surgical Procedures During COVID-19: Adult"[1] (dated March 16, 2021) and the regional document "IPC Protocol for Electroconvulsive Therapy (ECT) Treatment During COVID-19"[2] for reference. However, patients undergoing ECT have unique considerations, and the environment in which ECT is performed at VGH and UBCH has unique considerations which forms the framework for this guidance.

Patient Screening

It is recognized that the provision of ECT can be high risk for several reasons: 1) Provided in its usual fashion with pre- and post- procedure bag mask ventilation, ECT is an aerosol generating medical procedure (AGMP); 2) Patients are inherently difficult to screen for symptoms and may refuse testing; and 3) Many patients come from facilities where COVID-19 outbreaks have historically occurred with higher frequency (long term care facilities, forensic institutions, group homes).

The goals of patient screening are:

1. To identify symptomatic patients and have them tested for COVID-19.
2. It is recognized that many patients will not be able to give a complete history and that some will refuse testing. The goal of screening is not to eliminate risk, but rather to identify the very high-risk patients.

Inpatient screening: Will occur as per the "Infection Prevention and Control (IPC) for Surgical Procedures During COVID-19: Adult" guideline. Patients with symptoms consistent with COVID-19 should be tested.

Outpatient screening:

- Will be done 72 hours in advance of treatment by the psychiatry program. Patients with any symptom(s) consistent with COVID-19 should be tested.
- Approximately 30% of ECT outpatients come from home for maintenance therapy, and would be able to provide a cogent symptom/contact history. These patients will be managed as per the IPC for Surgical Procedures During COVID-19 algorithm.
- The remainder of patients come from a variety of care locations including long term care, group home, assisted living, CLBC or mental health licensed facilities, forensic institutions, or alternate.
    - Determination of whether the centre is involved in a COVID-19 outbreak or investigation is reliably occurring via 2 paths: 1) A list of facilities where an official outbreak has been declared by PH is received daily by the ECT staff, and 2) The staff

at the facility is asked whether the patient/cohort/ward is involved in a cluster or outbreak investigation.

- The patient will be screened if possible. If not possible, history from an alternate provider (nurse, care aid, family member etc.) will be attempted recognizing that this symptom screen is not necessarily accurate or complete.
- Patients that are screened as negative by an alternate provider should be treated as **yellow**.

STEP ONE			**STEP TWO (IF COVID-19 TEST RESULTS AVAILABLE)***	
Must have this information prior to ECT		**COVID-19 Risk Category**	**COVID -19 Test Results**	**COVID-19 Risk Category**
From COVID-19 outbreak unit/facility or instructed to self-isolate by public health	**COVID-19 Symptoms**			
NO	NO	GREEN	**NEGATIVE**	GREEN
NO	YES/UNKNOWN or alternate provider screen negative	YELLOW		GREEN
YES	NO	YELLOW		YELLOW
YES	YES/UNKNOWN or alternate provider screen negative	YELLOW		YELLOW
UNKNOWN	UNKNOWN or alternate provider screen negative	YELLOW		YELLOW
			POSITIVE**	RED

*Risk categorization of patients with COVID-19 tests pending should proceed based on STEP ONE information above. A negative test may facilitate downgrading a "yellow" risk patient from STEP ONE to a "green" risk in STEP TWO when test results become available.

**Patients who test positive for COVID should be considered RED until ≥10 days after symptom onset (≥20 days if immunocompromised or severe COVID-19)

When to proceed with ECT in patients with confirmed, suspected, or recovered COVID-19

Planning for ECT in a patient with confirmed, suspected, or recovered COVID-19 requires consideration of the following factors:

- Potential for COVID-19 transmission to HCWs and other patients;
- Increased risk of patient morbidity and mortality in the context of active or recent infection; specifically for those with:
    - Oxygen saturation <94% on room air
    - Pneumonia
- The risk associated with delaying ECT, specifically for those with:
    - Catatonia not responsive to benzodiazepines; Malignant Catatonia
    - Extreme suicide risk such that the patient otherwise would require 1:1 or seclusion (or already on 1:1 or in seclusion for this reason)
    - Profound malnutrition with ongoing anorexia
    - Dehydration and/or electrolyte disturbances due to poor intake
    - Psychotic Depression with command hallucinations to harm self or others
    - Recurrent physical aggression due to a condition that has already proved to be acutely beneficial from ECT
- The decision is not always clear, nor does published evidence inform the correct timing for each affected individual.
- ***The patient is considered no longer infectious when >/=10 days post first symptom onset AND 24 hours fever free AND improving symptoms***. Importantly, the morbidity risk to the patient receiving ECT after a COVID-19 infection is unknown. These guidelines are consistent with the current IPC algorithm see table below:

Table 1: Recommendations for discontinuation of isolation and other transmission-based precautions

<table>
<tr><th>COVID – 19
symptom severity</th><th>Patient
immunocompromised?*</th><th>When to discontinue isolation and other transmission-based precautions:</th></tr>
<tr><td rowspan="2">Asymptomatic, Mild to Moderate
(no admission to hospital for COVID-19)</td><td>NO</td><td>≥ 10 days since 1st symptom onset
AND
≥ 24 hours since last fever
AND
Improvement of symptoms (cough, shortness of breath, etc.)</td></tr>
<tr><td>YES</td><td rowspan="3">≥ 20 days since 1st symptom onset
AND
≥ 24 hours since last fever
AND
Improvement of symptoms (cough, shortness of breath, etc.)</td></tr>
<tr><td rowspan="2">Severe to Critical
(admission to hospital for COVID-19)</td><td>NO</td></tr>
<tr><td>YES</td></tr>
</table>

*immunocompromised: chemotherapy for solid organ cancer, HIV with a CD4 count of ≤200 cells/mm^3 or ≤15%, primary immunodeficiency, any person taking a biologic/immunomodulatory therapy, prednisone of >20 mg/day (or equivalent dose) for ≥14 days, tacrolimus, sirolimus, mycophenylate, methotrexate, or azathioprine, solid organ or bone marrow transplant, leukemia, lymphoma or hypogammaglobulinemia

Management

- All direct patient care should take place with procedure mask, eye protection and gloves (preprocedure, procedure and recovery areas).
- It is recommended that those involved with 1) management of the airway and 2) care of "yellow" patients also wear a gown.
- Many practitioners prefer to use a n95 mask due to the high turnover nature of the ECT slate.
- Air exchanges between patients are no longer required, however ventilation should be optimized (ie: open windows, etc).
- All patients should have surgical face masks on at all times pre and post procedure.
- Patients in the treatment area(s) will be managed as per the treatment algorithm below.

Infection Prevention & Control Risk Category			
	Green	**Yellow**	**Red**
Treatment Room	All staff in ECT suite don: • Surgical mask* • Eye protection • Gown/Gloves	All staff in ECT suite don: • Fit-tested N95 respirator* • Eye protection • Gown/Gloves	All staff in ECT suite don: • Fit-tested N95 respirator* • Eye protection • Gown/Gloves
Phase 1 Recovery	Follow routine institutional practices (Surgical mask, eye protection, gloves)	Use droplet/ contact precautions (Surgical mask, eye protection, gown/gloves)	All staff in Phase 1 recovery don: • Fit-tested N95 respirator* • Eye protection • Gown/Gloves
Air Exchange	Cleaning and disinfecting may begin immediately	Cleaning and disinfecting may begin immediately	Cleaning and disinfecting may begin immediately as long as the RED patients are cohorted
Disposition	Return masked patient to appropriate inpatient unit	Return masked patient to appropriate inpatient unit	Return masked patient to appropriate inpatient unit

*Any member of the team may choose to wear an N95 respirator. Individual decisions shall be respected by the team, but need not change the Patient Risk Category.

Category RED patients:

- Red patients will be cohorted into an afternoon slate.
- 6th floor staff will be notified that COVID positive patients will be on the floor in the afternoon (inhabitants of the 6th floor may choose to keep their office doors closed).
- Signs will be posted on ECT suite doors notifying personnel of COVID RED ZONE.
- All patients will have medical grade surgical face masks on at all times pre and post procedure.

- All staff will don full PPE including fit-tested n95 masks.
- No need to do air exchanges, treat entire ECT suite as a COVID ward.
- Wipe down equipment between patients, terminal clean at the end of the day.

COVID-19 Vaccinated patients:

The recent arrival of vaccines for COVID-19 is likely to have a pivotal effect on patient assessment. However, long term efficacy and safety data has not been elucidated. Based on the limited data available to date, it is too early to determine the impact vaccines have on a patient's risk of transmission, perioperative risk and long-term immunity. All patients, regardless of vaccination status, should continue to be screened based on the current algorithm with the appropriate risk stratification.

References:

Infection Prevention and Control (IPC) Protocol for Surgical Procedures During COVID-10 Pandemic: Adults (updated March 16, 2021)
http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID19_IPCProtocolSurgicalProcedures Adult.pdf

IPC Protocol for Electroconvulsive Therapy (ECT) Treatment During COVID-19 (not yet published to CDC website).

https://v2.printsys.net/References/VCHealth/VCHGroup/Static-Forms/BCHA.0166.pdf

http://ipac.vch.ca/Documents/Acute%20Resource%20manual/Aerosol%20Generating%20Medical%20Procedures.pdf