

## **Point of care procedures in psychiatry: Practice considerations during the Covid-19 pandemic**

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**Abstract:**

Coronavirus Disease 2019 (Covid-19) is an active pandemic that has required rapid conversion of practice patterns to mitigate disease spread. Although recommendations have been released for physicians to postpone elective procedures, the utility of common physiatry procedures and their infectious risk profile have yet to be clearly delineated. In this article, we describe an update on existing national recommendations and outline considerations as practitioners and institutions strive to meet the needs of patients with disabilities.

**KEYWORDS:**

physiatry, procedures, coronavirus, Covid-19

**Glossary of terms:**

Coronavirus Disease 2019 (Covid-19)

Center for Disease Control and Prevention (CDC)

Center for Medicare and Medicaid Services (CMS)

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

personal protective equipment (PPE)

World Health Organization (WHO)

American Medical Association (AMA)

Nerve conduction study (NCS)

Electromyography (EMG)

American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM)

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### **Background:**

With the ongoing Coronavirus Disease 2019 (Covid-19) pandemic, efforts to mitigate disease spread by minimizing communal contact are vital<sup>1-3</sup>. In March 2020, the Centers for Disease Control and Prevention (CDC) and Center for Medicare and Medicaid Services (CMS) have released recommendations urging clinicians to postpone elective procedures and utilize telemedicine for ambulatory care<sup>4,5</sup>. However, the response by many healthcare providers and settings, especially with elective procedures, continues to be heterogeneous<sup>6,7</sup>. In particular, the utility of common point of care psychiatry procedures and their associated risk profiles during the Covid-19 pandemic need further clarification.

### **Infectious spread:**

Covid-19 is caused by the severe acute respiratory syndrome from novel coronavirus 2 (SARS-CoV-2), which is a respiratory virus presumed to be primarily spread via droplet contact<sup>8,9</sup>. Viral spread occurs via exposure of the nasopharyngeal mucosa and respiratory tract directly to micro-droplets expelled during coughing and/or sneezing by infected individuals or indirectly via self-inoculation of micro-droplets from contaminated surfaces onto the nasopharyngeal and oropharyngeal mucosa. To this end, rescheduling elective medical visits and procedures, implementing careful screening and quarantining protocols for potentially infectious patients and personnel, proper handwashing and equipment cleaning practices, and judiciously yet

appropriately using personal protective equipment (PPE) can reduce viral transmission and potentially reduce Covid-19 related deaths<sup>4,5,10,11</sup>.

### **General Considerations and National Guidelines:**

The CDC and CMS recently released recommendations that all elective and non-essential medical, surgical, and dental procedures be deferred in an attempt to optimize use of healthcare equipment and resources amidst the Covid-19 pandemic<sup>4,5</sup>. The overarching aims for the current national recommendations are four-fold: (1) to preserve personal protective equipment (PPE), inpatient beds, and ventilators; (2) to ensure that the healthcare workforce is available to care for patients most in need; (3) to encourage patients to remain home as much as possible to limit exposure; and (4) to provide a framework for triaging non-essential surgeries and procedures. As an illustration of this framework, CMS provides examples of common elective procedures with division into tiers and recommendations for scheduling based on associated patient and procedural risks<sup>5</sup>. However, these tiered procedural recommendations largely focus on invasive and/or surgical procedures and make scant reference to minimally-invasive and non-invasive procedures, which comprise the vast majority of general psychiatry procedures in which earlier intervention can optimize recovery and reduce cost-burden.

Beyond these recommendations, both the CDC and CMS agree that decisions about proceeding with non-essential surgeries and procedures will be made at the local level by the clinician, patient, hospital, and state and local health departments<sup>4,5</sup>. Psychiatry based procedures are unique in that their overall goals are to allow for functional independence; this is particularly important in such times as we try to reduce the functional decline in our vulnerable patient

population<sup>10,12</sup>. Most psychiatry procedures are performed on an outpatient basis and so do not directly impact the availability of valuable hospital resources needed to care for inpatients. Use of PPE is an important consideration and varies based on procedural and patient risk factors, which will be discussed further below.

While most psychiatry procedures are considered elective, this designation does not suggest that they are unnecessary, but rather are not time-sensitive in nature. Given the current status of national recommendations - practitioners have a level of autonomy in deciding which patients may be appropriate candidates for a non-emergent or non-life sustaining procedures<sup>4,5</sup>. Therefore, blanket protocols to terminate all ambulatory could introduce barriers for persons with disabilities for whom timely psychiatric care can be vital to their health and function<sup>10,12</sup>.

Persons with disabilities are medically vulnerable given their associated impairments<sup>10</sup>. Furthermore, they often require several accommodations ranging from caregiver and nursing support to transportation arrangements. As such, measures to mitigate healthcare interruptions are vital. In their recent report for disability considerations during the Covid-19 outbreak, the World Health Organization (WHO) states that barriers to health care are likely increased for persons with disabilities<sup>10</sup>. The CDC, CMS, and the American Medical Association (AMA) have advocated for the use of telemedicine to provide ambulatory care, when possible<sup>5,6,13</sup>. The WHO specifically recommends telemedicine as a means to decrease barriers to ambulatory care for persons with disabilities<sup>10</sup>. Additionally, telemedicine may provide a unique opportunity to stratify procedural urgency and identify appropriate procedural candidates.

### **Procedural stratification:**

Common point of care physiatry procedures include, but are not limited to<sup>14</sup>:

- pain and musculoskeletal procedures such as joint, peripheral nerve, epidural injections, and trigger point injections
- spasticity procedures such as chemodenervation and neurolysis
- electrodiagnostic procedures such as nerve conduction (NCS) and electromyography (EMG) studies

The elective nature and time sensitivity of these procedures has understandably come into question. While no clearly delineated recommendations from governmental health agencies or major medical societies exist, considering the urgency and indication of each procedure on a case-by-case basis is instrumental. As previously mentioned, the use of telemedicine services in the Covid-19 pandemic, as extensively endorsed by the CDC, CMS, AMA, and WHO, may help to stratify procedural urgency in patients pending elective procedures<sup>5,6,10,13</sup>. We would like to more fully consider the elective and functionally driven nature of physiatry procedures, as well as their time sensitivity.

### ***Elective***

There exist purely elective procedures in chronic conditions that can be rescheduled without meaningful functional impairment or patient risk. While elective physiatry procedures may not carry life-sustaining benefits, they can provide meaningful improvements in pain (Table 1, Row 1). Consequently, if deferred long enough, some patients may resort to urgent care or emergency

rooms to address uncontrolled pain. Given the overwhelming estimates of expected respiratory illnesses and healthcare demands in the United States in the coming weeks and months, measures to decrease the burden of preventable emergency room visits and hospital admissions is highly desirable<sup>15</sup>. Judicious use of elective pain-management procedures in the clinic setting for certain at-risk patients may prove useful to decrease unnecessary emergency room visits. A recent paper by Cohen et al. also support these sentiments as they list several considerations for triaging pain management options which include likelihood of patients seeking emergency room services, be started on opiates, functional detriment, acuity, and work status<sup>16</sup>.

### ***Functionally driven***

Much uncertainty exists with time insensitive, “functionally driven” procedures that may optimize functional recovery or capacity in certain patients (Table 1, Row 2). Similar to the previously discussed elective procedures, these procedures do not carry lethal implications if not performed. However, these procedures can offer or facilitate significant functional benefit and mitigate sequelae like falls or pressure wounds.

Early and goal-directed spasticity management has been shown to facilitate motor recovery and functional gains<sup>17,18</sup>. Patients with chronic spasticity may necessitate timely chemodenervation or neurolysis to facilitate body positioning, enhance motor capacity, enable hygiene care, prevent contractures, and even provide pain relief<sup>17-19</sup>. Pain management procedures in the inpatient and subacute rehabilitation settings may enhance patient participation and optimize their use of limited inpatient rehabilitation time. Patients with chronic pain may also benefit from timely peripheral joint, nerve, or trigger point injections for analgesic benefit that may accelerate



mobility and function<sup>20-22</sup>. Notably, the procedural driven analgesic benefit in the chronic pain population may prevent risk of opiate diversion or misuse, which may result in respiratory compromise that can be particularly dangerous with concomitant Covid-19 infection<sup>23</sup>. It should be noted that articular corticosteroid injections have been shown to increase influenza risk and so too may increase the risk of contracting Covid-19<sup>24</sup>. Therefore, careful consideration of patients' immune status is imperative prior to peripheral corticosteroid administration.

An additional concern is that if these procedures are deferred, worsening impairments will increase dependence on caregivers and increase the vulnerability of disabled patients during the staffing limitations and social distancing associated with the pandemic<sup>11,13</sup>. Therefore, physiatrists may consider performing functionally driven procedures in appropriate patient candidates who are deemed to have discrete functional goals. Appropriate patient and procedure specific infectious prevention measures should be undertaken.

### ***Time-sensitive***

There are also time-sensitive psychiatry procedures for which procedural benefits may include a reduction in mortality, morbidity, or immediate disease burden<sup>25-27</sup>. Such procedures should continue to be performed given their importance in providing timely diagnostic and therapeutic benefit (Table 1, Row 3).

Patients with intrathecal therapies are susceptible to a host of complications with interruptions to intrathecal drug delivery<sup>26,27</sup>. While withdrawal from intrathecal opiates can be unpleasant for patients and can require inpatient monitoring, withdrawal phenomena from intrathecal clonidine

and baclofen can be life-threatening. Thus, it is imperative to ensure that patients with intrathecal pump systems have timely refills to avoid risk of drug withdrawal. Additionally, those patients with suspected intrathecal drug delivery dysfunction require timely device interrogation, troubleshooting, possible catheter assessment, and rescue enteral medications.

Electrodiagnostic studies can be vital for adding diagnostic and prognostic benefit in persons with suspected neurogenic, neuromuscular, or muscular disorders<sup>25,28</sup>. While affected patients can vary in presentation, clinical concern for rapidly progressing paraparesis/paraplegia, motor neuron disease, and critical illness neuropathy/myopathy are some of most common reasons for inpatient NCS and EMG studies. Information gleaned from these studies can alter clinical management, which can be time-sensitive depending on the severity of the condition. In a single center study of 98 inpatient procedures, Perry et al. found that EMG and NCS studies yielded a clinically relevant and new diagnosis in 13% of cases and altered treatment decisions in 17% of cases<sup>25</sup>. Since NCS/EMG studies involved prolonged patient contact and thus increased potential exposure, the American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) recommends deferral of electrodiagnostic studies in cases of confirmed or suspected Covid-19 or recent exposures unless necessary for management<sup>29</sup>. In these cases, practitioners must wear appropriate PPE as allocated by their institution<sup>12,30</sup>.

**Patient and procedure specific risks:**

Despite implementation of recommended preventative measures, the risk of Covid-19 exposure or infection is likely increased with certain patients and procedures (Table 2)<sup>11,13</sup>. In higher risk cases, proper prophylactic considerations must be taken so as to meaningfully minimize the risk

of spread among the patient, physician, and supportive personnel<sup>11,13,30,31</sup>. Such considerations are especially necessary in persons with disability as they are often at a higher risk for disease-related morbidity and mortality<sup>11,13</sup>.

Additionally, careful consideration is warranted for procedures where multiple direct patient encounters are necessary. Such scenarios which include diagnostic nerve blocks to be followed by neuroablative procedures i.e. phenol neurolysis, radiofrequency ablation, etc. or series of viscosupplementation understandably confer increased patient and practitioner risk given recurrent interactions. Given that meaningful or durable analgesic or functional benefit in such instances may only be fully achieved after completion of these procedural protocols, practitioners should carefully weigh the potential benefit of these procedures against the amplified risks posed to patients and physicians with recurrent encounters. Recently, the American Society of Interventional Pain Physicians has released risk stratification guidelines to help characterize patients at increased risk of COVID associated morbidity<sup>34</sup>. While not substantiated, such resources can be instrumental in helping identify and exclude procedural candidates.

### **Conclusion:**

The uncertainty of Covid-19 associated disease burden has led to rapidly changing clinical practices and recommendations. The intent of our commentary is to provide an update on existing national recommendations and outline considerations as practitioners and institutions strive to make wise decisions at the local and individual level for physiatric practices. Given

global and national disparities in healthcare resources, rehabilitation care models, and Covid-19 prevalence and healthcare burden, these decisions are inherently complex and individualized.

While the CDC and CMS recommend for elective procedures to be rescheduled in order to preserve healthcare resources and personnel, these recommendations do not account for the spectrum of psychiatry procedures and the uniquely vulnerable population we serve. A more nuanced approach that takes procedure and patient specific risks into account will facilitate a more individualized approach to balancing the competing concerns of preserving PPE, protecting both medical staff and patients from Covid-19 exposure and infection, and continuing to provide high-quality care for conditions that substantially impact quality of life and function.

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**TABLE 1. Clinical scenarios and physiatry procedures based on elective, functionally driven, or time-sensitive indications.**

PROCEDURE INDICATION	CLINICAL SCENARIO	PROCEDURE
<i>Elective</i>	primary and secondary osteoarthritis  radicular pain from cervical or lumbar radiculopathy, spinal stenosis, etc. or facetogenic pain from facet arthropathy  peripheral neuralgia  myofascial pain syndrome trigger points  chronic neurogenic/neuromuscular/muscular compromise	joint injections  axial procedures, including epidural steroid injections, medial branch blocks, facet injections, radiofrequency ablation  peripheral nerve injections  trigger point injections  NCS and EMG
<i>Functionally driven</i>	functionally impairing spasticity, often sub-acute  suboptimal participation in rehabilitation program given musculoskeletal pain refractory to conservative measures, severe pain limiting ambulation, increasing caregiver burden, etc.	chemodenervation or neurolysis  axial or peripheral joint, nerve, and trigger point injections
<i>Time-sensitive</i>	intrathecal drug withdrawal scheduled intrathecal drug refill  rapidly progressing ascending paraplegia or motor neuron disease, critical illness polyneuropathy/myopathy	intrathecal pump catheter aspiration or intrathecal pump medication refill  NCS and EMG

**TABLE 2. High risk clinical scenarios and prophylactic considerations based on procedure specific risks.**

PROCEDURE SPECIFIC RISKS	HIGH RISK CLINICAL SCENARIOS	PROPHYLACTIC CONSIDERATIONS
<b><i>Droplet or aerosolized contagion exposure</i></b>	<p>head and neck procedures carry greatest risk of aerosol exposure</p> <p>risk is also high in patients with tracheostomies (on vent or not), rhinorrhea, and/or sialorrhea</p>	<p>consider using a respirator (i.e. N95 mask) in patients with possible illness; consider adding a face shield when droplet exposure is likely<sup>27,29</sup></p>
<b><i>Steroid administration</i></b>	<p>steroid-induced immunosuppression likely increases susceptibility for Covid-19</p>	<p>consider steroid dose reduction or other alternative medications for vulnerable and/or immunosuppressed populations<sup>24</sup></p>
<b><i>Reusable equipment</i></b>	<p>EMG leads and machine ultrasound probes and machine procedure suite surfaces</p>	<p>following CDC recommended cleaning and disinfection protocols is vital in maintaining sanitary equipment and surfaces<sup>31</sup></p>