Emergence From the COVID-19 Pandemic and the Care of Chronic Pain: Guidance for the Interventionalist

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BACKGROUND: The current coronavirus disease 2019 (COVID-19) pandemic led to a significant disruption in the care of pain from chronic and subacute conditions. The impact of this cessation of pain treatment may have unintended consequences of increased pain, reduced function, increased reliance on opioid medications, and potential increased morbidity, due to the systemic impact of untreated disease burden. This may include decreased mobility, reduction in overall health status, and increase of opioid use with the associated risks.

METHODS: The article is the study of the American Society of Pain and Neuroscience (ASPN) COVID-19 task force to evaluate the policies set forth by federal, state, and local agencies to reduce or eliminate elective procedures for those patients with pain from spine, nerve, and joint disease. The impact of these decisions, which were needed to reduce the spread of the pandemic, led to a delay in care for many patients. We hence review an emergence plan to reinitiate this pain-related care. The goal is to outline a path to work with federal, state, and local authorities to combat the spread of the pandemic and minimize the deleterious impact of pain and suffering on our chronic pain patients.

RESULTS: The article sets forth a strategy for the interventional pain centers to reemerge from the current pandemic and to set a course for future events.

CONCLUSIONS: The COVID-19 pandemic represents an overwhelming challenge to interventional pain physicians and their patients. In addition to urgent actions needed for disease mitigation, the ASPN recommends a staged return to pain management professionals’ workflow. (Anesth Analg 2020;131:387–94)

GLOSSARY

ASPN = American Society of Pain and Neuroscience; BMI = body mass index; CDC = Centers for Disease Control and Prevention; CMS = Centers for Medicare & Medicaid Services; COVID-19 = coronavirus disease 2019; ED = emergency department; ESAS = elective surgery acuity scale; EU = European Union; HIPAA = Health Insurance Portability and Accountability Act of 1996 (USA); OR = operating room; PAPR = powered air-purifying respirator; PCR = polymerase chain reaction; PPE = personal protective equipment; RO = reproduction number; SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2; WHO = World Health Organization

The global coronavirus disease 2019 (COVID-19) pandemic has significantly impacted the way that medical care is provided to patients with pain. Early efforts where geared toward social distancing and decreasing the transmission of the virus. These measures lead to a temporary suspension of most interventional and in-person pain therapies. As clinicians move to the next phase of providing pain treatment in the midst of an evolving pandemic, these guidelines were developed by an...
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The Risks and Impact of Untreated Pain During the COVID-19 Pandemic

Pain is a frequent reason for emergency department (ED) visits. Pain accounts for 45%–75% of ED patient presentations, with half having moderate or severe pain. The current influx of ED visits to screen, confirm, and treat COVID-19 has proven challenging for many hospital systems. The increased demand has led to limitations on personal protective equipment (PPE), which puts health care personnel at risk. The addition of untreated chronic pain patients may lead to a further major overburdening of ED resources.

It is imperative that physicians treat chronic pain to minimize the immunosuppressive and deconditioning consequences of untreated suffering, and potentially increase survival in cancer patients. When our patients, communities, and health care systems are being adversely affected by a viral pandemic, optimizing overall well-being of our chronic pain patient populations should be a top priority.

GOVERNMENTAL RESPONSE TO THE PANDEMIC

Federal Response

On March 18, 2020, the Centers for Medicare & Medicaid Services (CMS) recommended limiting nonessential care and issued policy changes: (a) to allow for continued care while limiting exposure to COVID-19; (b) to expand surge capacity and preserve PPE; and (c) to provide guidance to providers and health systems. Before these policy changes, on March 9, 2020, CMS relaxed regulations to expand telehealth. Previous CMS provisions limited telehealth. Requirements for audio and video interaction remained.

On April 7, 2020, CMS recommended a 3-tier approach for triaging all nonessential medical services and procedures by acuity: (1) low acuity or elective (postpone); (2) intermediate acuity or urgent (consider postponement); and (3) high acuity or emergent (do not postpone). Several medical societies rapidly adopted this tier approach publishing best practice guidelines for classifying emergent procedures (eg, intrathecal pump refills) and urgent procedures (eg, acute disk herniation with radiculopathy).

On April 16, 2020, CMS released guidelines with “Opening Up America Again,” which require planning to resume in-person nonemergent, non–COVID-19 care, which in turn follows 3 phases issued by the White House and the US Centers for Disease Control and Prevention (CDC) on April 16, 2020. These guidelines allow governors to implement phase reopening at the local level. These guidelines strongly encourage maximum use of telehealth. In regions with low incidence of COVID-19, offering non–COVID-19 elective in-person care can be offered if clinically appropriate.

State Response

During the COVID-19 pandemic, states followed the federal government in enacting regulations, expanding benefits, and loosening restrictions. A dilemma has emerged that shows limitations of a uniform policy in the United States based on variable state responses. States have relaxed both telehealth-based controlled substance prescribing and advanced practice provider scope, which varies in each region of the country.

US CDC protocols also address the postrecov- ery concerns. There is a need for post–COVID-19 health recovery strategy—one that is committed to mitigating the damage aftermath. The foundation for the guidelines around reopening health care facilities at the state and local levels draws on the requisites outlined in the National Coronavirus Response report. Provisions include universal COVID-19 testing capacity, public compliance with stay-at-home and physical distancing orders, and a public health and health care system with the capacity to respond to hotspots and outbreaks of COVID-19 as restrictions on movement and gathering lifted.

International Response

This guidance focuses on the United States, but insights can be gained from the response in other countries and regions. The first European COVID-19 case was documented in France in January 2020. In March 2020, the World Health Organization (WHO) declared Europe as the COVID-19 epicenter. Since that time, more than 2.5 million cases have been confirmed with Italy, France, Spain, and the United Kingdom most impacted. This has been complicated by the European Union (EU) rule that prevents global policy. Pain medicine practice has been restricted with other general practices in most EU countries, with Spain, Italy, and the United Kingdom declaring restrictions later in the timeline of infection.

No current staged reopening plan exists for the EU. Australia has a moderate incidence of COVID-19, and Asia has a high incidence of the disease. Current responses to pain treatment in Australia include decreased case utilization, and increased access to mental health care. Pain treatment procedures are available for essential workers and within 90 days of an acute condition. Restrictions have been placed in patients over the age of 70 years, with a body mass index (BMI) >40, and with poorly controlled comorbidities. For urgent procedures, a pain level greater than 7/10 is required, with severe pain that may limit function. To limit utilization, Australia has allowed for radiofrequency ablation without prior diagnostic blocks and spinal cord stimulation without a trial.
In general, Australia, China, Japan, South Korea, Hong Kong, and Singapore have followed a model of limited access to care for pain patients with a reopening planned from July to September 2020 based on achieving a reproduction number (R₀) of <1 for COVID-19.²⁰

**RECOMMENDATIONS FOR EMERGING FROM THE PANDEMIC**

**Proposed Definitions of Elective, Urgent-Elective, and Urgent Pain Interventions**

CMS published recommendations in mid-March 2020 for nonemergent, elective medical services in a tiered framework of procedures.⁸ The American College of Surgeons has released recommendations in its Elective Surgery Acuity Scale (ESAS), along with guidelines and considerations for resuming elective surgeries.²¹,²² Interventional decisions now include an expanded discussion where the clinician and patient must weigh the clinical scenario and consider the periprocedural risks to the patient, clinical team, and local health care system (Table 1).

There are significant costs to canceling or postponing interventional pain procedures, as untreated pain can cause anxiety, depression, loss of sleep, inability to work, and diminished quality of life.²³–²⁵ Though scoring systems have been implemented to determine procedure appropriateness, physician medical judgment remains the hallmark determining whether delaying a surgery or procedure will cause serious adverse medical consequences.²⁶ Suggested definitions specifically for the urgency and timing of interventional pain procedures are:

**Elective:** These procedures are not time-sensitive; that is, a patient normally could or would wait for >4 weeks to undergo the surgery or procedure based on the unique circumstances. This includes procedures where the delay of the procedure or surgery can be managed more conservatively over a short time period, and no significant additional patient harm is anticipated.

**Urgent elective:** These procedures are time-sensitive; that is, a patient normally could not wait for 2–4 weeks to undergo the surgery or procedure being considered, for unique circumstances. In addition, this includes procedures where a delay of the procedure or surgery for more than a few weeks could potentially lead to a worsening of a patient’s condition.

**Urgent:** These procedures are time-sensitive; that is, a delay in proceeding with a surgery or procedure would result in significant exacerbation and worsening of the condition and result in other demands on the health care system, such as emergency department visit, inpatient hospitalization, or unintended consequence of escalated doses of analgesics. The physician should document why the decision was made, and the patient should be properly informed.

The present ASPN COVID Work Group recommends that if the locality or region has adequate medical resources and PPE to handle current and near-term projected COVID-19 cases, clinicians can proceed with all urgent and urgent-elective interventional pain procedures while using proper social distancing, screening, and testing recommendations.

Some experts have advocated the surgeries and interventional pain procedures being categorized with the nomenclature of “essential” versus “nonessential” instead of elective, urgent elective, and urgent to mitigate confusion with government restrictions. The decision to proceed with elective interventional pain procedures can also be considered given the risks of delaying care for patients. Another important factor to consider is that the majority of pain-related procedures can be performed in an office or outpatient setting, reducing the burden on inpatient facilities taking care of the critically ill COVID-19 patients. As a “reopening” proceeds in the summer of 2020, clinicians should continue to exercise case-by-case discretion in scheduling elective pain procedures.

### Screening of Patients for Pain Procedures

COVID-19 screening before any pain-related procedure should follow a comprehensive, systematic approach for every individual patient. It is vitally important that proper steps are followed to minimize asymptomatic transmission of the virus. In accordance with CDC guidelines, we recommend these screening steps for common pain treatment injections:²⁷

1. Before arrival to facility
   a. Patients should be contacted by telephone when scheduling procedures, screening for symptoms of COVID-19, or reporting any

### Table 1. Considerations for Pain Interventions During COVID-19 Pandemic

| Consideration                          | Questions                                                                 |
|---------------------------------------|---------------------------------------------------------------------------|
| Patient’s likelihood of current COVID-19 infection | Has the patient recently completed travel to regions with high incidence or recent surge? |
| Immunosuppression occurs in some individuals due to chronic pain | Would the patient’s risk of infection be substantially elevated by undergoing the procedure? |
| Resource availability | Will the procedure require critically limited supplies (certain drugs or PPE) or care (hospital bed)? |
| Risk of worsening condition | Is the patient’s condition likely to lead to lasting morbidity or mortality if untreated? |
| Risk of emergency service utilization | Is the patient’s condition likely to become urgent? |
| Resource availability | Is their condition severe and intractable? |

Abbreviations: COVID-19, coronavirus disease 2019; PPE, personal protective equipment.
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Previous infections or known contact with confirmed COVID-19–positive individuals.
b. Advise patients to check their temperature at home before their procedure. If febrile, the patient should notify the facility performing the injection. If afebrile, the patient can proceed to the facility.
c. Encourage patients to notify your staff before leaving their home if they have had a fever or other symptoms suggestive of COVID-19.
d. COVID-19 testing at least 48 hours preprocedure on patients requiring general anesthesia.

2. On arrival to facility
a. Ensure all patients enter the facility through a common location while maintaining social distancing and face masks to screen effectively and limit risk of asymptomatic transmission.
b. Screen all patients for possible symptoms of COVID-19, including cough, shortness of breath or difficulty breathing, fever, chills, repeated shaking with chills, muscle pain, headache, sore throat, or new loss of taste or smell.

Advanced procedures, including spinal cord stimulation, dorsal root ganglion stimulation, and intrathecal drug delivery, may require additional screening tools to ensure patient and health care personnel safety. Due to aerosolization, intubation and extubation are both high-risk time periods for exposure, so limiting general anesthesia on COVID-19–positive individuals is essential.28,29 In addition to the above screen measures, one could consider these additional tests preoperatively:

1. Polymerase chain reaction (PCR) testing
   a. Throat swab and nasal swab samples are typically used for reverse transcriptase-PCR testing. Unfortunately, due to inadequate sample collection and performance, PCR may have a high false-negative rate.30 Serial testing would improve the sensitivity of the test.
2. Serology testing
   a. Serology testing involves searching for the presence of antibodies, which would indicate that a person had a prior COVID-19 infection and produced an immune response to the virus. These results are particularly important for those individuals with few or no symptoms. Since it takes the body 1–2 weeks to make antibodies, this is not the ideal test for symptomatic patients.31

Utilization of Telemedicine for Pre- and Postprocedure Evaluations
The COVID-19 pandemic has brought telemedicine to the forefront of patient care, as clinicians were required to utilize remote assessment strategies during ubiquitous “shelter in place” orders, limiting in-person visits to only those deemed urgent. During the pandemic, the 1135 CMS waiver relaxed compliance requirements for synchronous audio/video encounters, and subsequently, CMS granted more accessibility to telehealth visits through non–Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliant systems.

Telemedicine is being used to provide pre/post-procedural consultation, intermittent remote outcome monitoring, and patient procedural education, along with streamlining preauthorization before performing many procedures.

Preoperative considerations for the use of telehealth should be applied for reviewing laboratory results, and radiological imaging; obtaining a history and physical, and patient consent; and tracking longitudinal outcomes. Emphasis should be placed on reassessing comorbidities and risk/benefit, especially if a procedure was postponed due to COVID-19. Telemedicine should also focus on procedural prioritization and determine which patients are emergent versus urgent versus elective.32,33 Remote patient education about the procedure and expectation alignment can be accomplished. These efforts include education packets, consent forms, and scheduling. Telemedicine during the postprocedure period has been used predominantly in 3 ways, including scheduled follow-up, routine monitoring, and management of arising issues.34

PPE Requirements for Interventional Pain Procedures
PPE is used to reduce the exposure to body fluids or infectious agents.35 During the COVID-19 pandemic, the balance is to protect the patient and interventionalist from severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and other infectious agents, while being mindful of the local PPE supply chain.

If patients are deemed or confirmed to be SARS-CoV-2 positive, transmission-based precautions must be exercised. The CDC recommends contact and droplet precautions for those with SARS-CoV-2.36 If aerosol-generating procedures are performed, airborne precautions are recommended.37 If adequate testing can be accomplished, typical standard precautions with sterile technique can be performed for interventional pain procedures and surgeries. Interventional pain procedures can be categorized based on 3 factors: percutaneous versus incisional/surgical procedure; short versus prolonged neuraxial entry; and aerosol-generating procedures versus nonaerosol-generating procedures.

Most percutaneous interventional pain procedures are performed using a surgical cap, mask, and gloves, without a gown. Examples include epidural steroid injections and peripheral nerve blocks. When an individual is performing a percutaneous procedure with
prolonged neuraxial access, such as spinal cord stimulation trial or kyphoplasty, it is recommended that a gown be used, in addition to the aforementioned barriers. In patients with SARS-CoV-2, all of these precautions should remain, with the addition of an eye shield or face shield to adhere to droplet precautions. When an incisional/surgical procedure is performed, a surgical cap and mask; goggles, eye shield, or face shield; gown; and gloves should be used. The decision to replace the surgical mask to an N95 respirator mask or a powered air-purifying respirator (PAPR) is dependent on whether an aerosol-generating procedure is performed, such as endotracheal intubation or laryngeal mask placement. Currently, after intubation, depending on the air-exchange rate of the operating room (OR), it is recommended that 15–30 minutes pass before the remaining personnel enter the OR. During a COVID-19 outbreak, it is important to reduce the waste of PPE. Current recommendations to maintain a supply of N95 respirator mask are to sterilize per protocol and reuse, if possible, at your facility. Previously published literature recommends not to reuse N95 masks more than 5 times, in the absence of recommendations from the manufacturer.

A Step-Wise Response to Future Pandemics
Advance planning and a rapid response are crucial in reducing the impact of a pandemic. The continuum of the pandemic can be generalized into 2 categories: interpandemic and pandemic phases. The pandemic phase can be further categorized into the alert, pandemic, and transition phases.

As a “flattening of the curve” and a deceleration interval of new COVID-19 cases are expected, it would be prudent to evaluate our preparedness and strategies to mitigate the impact of inevitable future pandemics. Since most chronic pain care is delivered via outpatient clinical venues, collaboration, information sharing, and coordination of our response is paramount. Table 2 summarizes a step-wise approach.

Table 2. Step-Wise Response of Interventional Pain Practices in Case of Future Pandemics

| Response Step | Consensus Recommendations |
|---------------|---------------------------|
| 1.            | Align practice and community actions with the magnitude and phase of the pandemic, in accordance with WHO guidelines: need for rapid containment in affected areas; readiness for response in nonaffected ones. |
| 2.            | Form a standard safety check process for screening patients who may require in-person visits, that is, urgent visits or intrathecal drug pump refills. |
| 3.            | Assess the stock and conserve PPE by limiting office visits and procedural encounters. |
| 4.            | Hold all nonessential procedures and limit in-person clinic visits, while considering interventions necessary to avoid emergency room visits due to pain. |
| 5.            | Conduct financial assessment of essential versus nonessential practice expenses and overhead. |
| 6.            | Consider financial assistance from government and private loan assistance programs, if needed, early on. |
| 7.            | Conduct most patient care through virtual environments (telemedicine). |
| 8.            | Plan for resumption of normal workflow with considerations for advanced screening. |

Abbreviations: PPE, personal protective equipment; WHO, World Health Organization.

The interventional pain management practices should be prepared to generate a step-wise response in case of future pandemics. This is especially true to appropriately treat patients, while maintaining a financially sound and solvent medical practice.

CONCLUSIONS
The unexpected COVID-19 pandemic exposed a global medical community that was unprepared for the unprecedented challenges at hand. Many have focused on ventilators, intensive care beds, and PPE, but interventional pain physicians and the patients they care for were also overwhelmed by the emergent actions needed for disease mitigation. This led to the under treatment of pain, with unintentional yet associated potential harm to those patients who had their interventional pain care delayed or canceled. At this point in time, we recommend a staged emergence from the current treatment limitations and propose a future road map to meet similar challenges going forward.

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