

## May 8: COVID-19 Clinical Update

### Illinois Masking Requirements and Neurologic Complications of COVID-19

*This daily communication is intended to facilitate the sharing of important clinical information during the COVID-19 healthcare crisis and to help respond to questions from physicians across Northwestern Medicine.*

Today's issue features information regarding Illinois masking requirements and the neurologic complications of COVID-19. Insight about neurologic complications is provided by Northwestern Medical Group Neurologist Edward Manno, MD, who also serves as vice chair for Clinical Affairs, Department of Neurology, Northwestern University Feinberg School of Medicine.

#### **ILLINOIS MASKING REQUIREMENTS**

As of May 1, Illinois residents are required to wear a mask or face covering in public places and in situations where they are unable to maintain a six-foot distance from others. All individuals over the age of 2 are required to wear masks, provided they are not medically prohibited. This means people are required to wear them when traveling on public transportation, and when entering any business or indoor public setting. Masks are not needed outside in parks, as long as physical distancing of six feet or more is maintained.

What qualifies as a mask is broad. Based on guidance from the Centers for Disease Control and Prevention (CDC), N95 respirators and surgical masks should be reserved for emergency and healthcare workers. Face coverings for the general public can include bandanas, scarves or T-shirts. The key requirement is that it covers both the nose and mouth. The CDC notes:

- Masks are intended to stop the spread of the virus to others, not to prevent individuals from being exposed.
- Masks should fit snugly but be comfortable on the face.
- Ear loops and multiple layers of fabric are recommended.
- After donning, masks should not be touched.
- Masks should be removed by the ear loops, and then hands should be washed immediately following removal.

For more information about Illinois' masking policy, click [here](#).

## NEUROLOGIC COMPLICATIONS OF COVID-19

While the mechanism by which the SARS-CoV-2 virus gains access to the nervous system is not completely understood, neurological manifestations of the virus have been reported since early in the course of the pandemic. Direct neural invasion by other coronaviruses has been documented, but thus far, there is no pathological evidence for direct neurotropism with SARS-CoV-2. Hypoxia and cytokine-induced blood-brain barrier disruption during severe infections are also putative mechanisms for secondary cerebral dysfunction.

Retrospective, observational studies and case reports have started to describe the spectrum of neurological complications. One observational study of 241 patients at three COVID-19 hospitals in Wuhan, China, noted neurologic symptoms in 36.4% of patients. Symptoms were most commonly found in patients with severe illness and were categorized into acute cerebrovascular events (5.7%), impairments of consciousness (14.8%) and muscular injury (19.3%). Similarly, a severe encephalopathy has been observed in patients requiring mechanical ventilation.

An observational study of 58 patients in Strasbourg, France, noted severe agitation in 69% of patients and confusion with associated long-track findings in two-thirds of patients. On discharge, one-third of patients had persistent cognitive deficits.

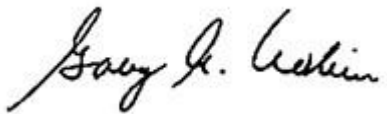
More recently, five patients (< 50 years of age) without cerebrovascular risk factors presented to New York hospitals with large vessel occlusions requiring thrombectomy. Thus, acute stroke may also be a presenting sign of COVID-19. Cases of meningoencephalitis and a hemorrhagic necrotic encephalitis have also been reported. Para-infectious sequelae, such as Guillain-Barré syndrome, have also been described in five patients from Italy.

One of the most distressing signs encountered for some patients has been a loss of smell and taste. Initially reported at the onset of symptoms, this now appears to occur throughout the course of infection. Resolution of these symptoms has occurred in almost half of patients during the first week. However, the extent of recovery will require more time for evaluation.

NMG Neuroimmunologist Igor Koralnik, MD, head of Neuroinfectious Diseases, is studying the T-cell response in COVID-19 brain samples. He is also starting a neuro-COVID clinic. We will share additional information about these efforts as they become available.

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Thank you to all NM physicians and clinicians for your ongoing collaboration and dedication to providing exceptional *Patients First* care to the communities we serve. If you have questions or would like to share the story of an NM hero, please email us at [covid-19md@nm.org](mailto:covid-19md@nm.org).



**Gary A. Noskin, MD**  
Senior Vice President, Quality  
Northwestern Memorial HealthCare  
Chief Medical Officer  
Northwestern Memorial Hospital