

**Editorial**

## When to Discontinue Isolation Precaution for Critically-Ill COVID-19 Patients

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Several questions arise when the number of critically-ill COVID-19 patients increase in critical care unit: 1) when to discontinue isolation precaution? 2) do we need to perform COVID-19 test to document clearance before discontinuing isolation precaution? 3) how likely that healthcare workers get infected with late viral shedding? These are common and practical questions that encountered in daily care for severely ill COVID-19 patients. There are also several limitations associated with receiving care at a critical care unit that hosts COVID-19 patients including the delayed in laboratory diagnosis, delayed in receiving standard of care for treatment, less contact and less care (e.g., physical examination, suction) by doctors and nurses. Combination of these factors do result in increasing the mortality of COVID-19 patients that are admitted to the critical care unit,<sup>1,2</sup> and thus moving COVID-19 patients that no longer need isolation to general critical care unit will help facilitate better care and better quality of treatment.

It is well recognized that healthcare workers do need full contact and airborne precautions that include gloves, gowns, caps, hoods, protective eyewears prior to entering a patient room. Most of the critical care units also designed as cohort unit and make it difficult to change personal protective equipment between patient care. Early in the pandemic, WHO and CDC (USA) recommended test-based clearance with at least 2 negative 2 RT-PCR for patient with COVID-19.<sup>3</sup> This strategy can lead to a prolonged isolation for

weeks, if not months. Furthermore, sicker patients tend to have detectable RNA for longer period. Notable, some patients with 2 negative tests do have positive test once test again, despite having no symptoms.<sup>3</sup> Using RT-PCR with specific cycle threshold value should be interpreted with cautions as they do not reflect true viral load, which require standardization with the reference curve.<sup>4</sup> As such, they are not directly comparable across assays. It is now clear that the persistent RNA viral detection is not necessary translate into viable virus that can infect others. From several clinical data,<sup>5,6</sup> contagiousness rapidly decreased to nearly zero after about 10 days from the symptom onset in mild-moderate ill patients and 15-days in critically ill and immunocompromised patients.

The longest duration of viral viability that had been reported thus far is 20-days from symptoms onset and may associated with late viral shedding.

It is worth mentioning that CDC is currently (as of May 23, 2021) recommended that 10 day isolation from symptom onset for mild-moderate ill patients and 10 to up to 20 day isolation for patients with severe critical illness or severely immunocompromised patients. Moreover, CDC recommend no test-based clearance given the evidence that people with persistently positive RT-PCR tests are not contagious. Test-based clearance should be reserved for rare cases when there is a need to discontinue isolation early, or potentially to inform the decision to prolong isolation for severely ill

immunocompromised patients. Patients who were recovered from COVID-19 and remains asymptomatic should not be tested within 3-month after symptom onset, even if they had close contact with another COVID-19 infected patients. Lastly, it is important to keep update the data regarding the COVID-19 duration of infectivity, as the change of it is inevitable in this rapidly progressing field. This certainly has major implications for public health and infection control practice in the hospital.

### References

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