COVID-19
Prolonged Shedding vs Reinfections and Zoning Patients for IP&C
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*Note: This is a general guidance document. Patients in critical care, immunosuppressed etc. may need local modifications based on discussion with an Infection Specialist (Infectious Diseases / Microbiology / Virology)

**Prolonged shedding**

In patients infected with SARS-CoV-2, the duration of viral shedding varies significantly and may depend on severity. Among 137 survivors of COVID-19, viral shedding based on testing of oropharyngeal samples ranged from 8-37 days, with a median of 20 days. A different study found that repeated viral RNA tests using nasopharyngeal swabs were negative in 90% of cases among 21 patients with mild illness, whereas results were positive for longer durations in patients with severe COVID-19. In an evaluation of patients recovering from severe COVID-19, it was found that the median shedding duration was 31 days (range, 18-48 days). These studies have all used PCR detection as a proxy for viral shedding.

[Medscape - COVID-19]

**Reinfections**

In some mild COVID-19 cases, detection of antibodies requires a longer time after symptoms, and in a small number of cases, antibodies are not detected at all, at least during the time scale of the reported studies. There is a paucity of information about the longevity of the antibody response to SARS-CoV-2, but it is known that antibodies to other human coronaviruses wane over time, and there are some reports of reinfection with homologous coronaviruses after as little as 80 days. Thus, the possibility of reinfection of previously mild SARS-CoV-2 cases is a realistic possibility, and should be considered. Such reinfection may be less likely to result in clinical disease, unless antibody dependent disease enhancement by sub-neutralising antibody titres occurs. It is unclear if such reinfections will result in onward transmission, but that cannot be excluded.

[Dynamics of humoral immune response following SARS-CoV-2]

**COVID-19 Infection Prevention and Control guidance of Zoning patients that are prolonged shedders (continued swab PCR positives)**

- If patient has **NO** COVID-19 symptoms/signs currently and is ≤14 days since onset of COVID-19 symptoms OR first swab PCR positive (if never had COVID-19 symptoms)
  - **BLUE ZONE**

- If patient has **NO** COVID-19 symptoms/signs currently and is >14 days since onset of COVID-19 symptoms OR first swab PCR positive (if never had COVID-19 symptoms)
  - **YELLOW ZONE**

- If patient has **ANY** persisting COVID-19 symptoms/signs currently and had a previous swab PCR positive result.
  - **YELLOW ZONE IN SIDEROOM**
  - **OR COHORT NURSE WITH OTHER SYMPTOMATIC PATIENTS IN YELLOW ZONE UNTIL RESULTS KNOWN.**

*Note: Move patient to blue zone if current PCR result turns out to be positive.*
Reference:

This SAGE Paper was used for the wording about Reinfections

Medscape information was used for the wording about prolonged shedding
https://emedicine.medscape.com/article/2500114-overview#a9
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