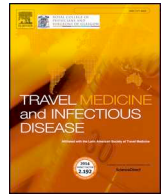




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Correspondence

More data are required for incubation period, infectivity, and quarantine duration for COVID-19



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1. Letter to the editor

Lagier and colleagues pose that continued recruitment of relevant epidemiological data are in order to properly manage COVID-19 [1]. There are very important questions that remain in relationship to incubation period, timing of infectivity, quarantine of patients, and quarantine of contacts. Many epidemiological studies have depended on fast-track amplification technologies which fail to discriminate between viable and non-viable virus. Past experience with SARS Co-V has shown that live virus shedding can be found in some respiratory, urine, and stool samples for more than fourteen days [2]. For MERS-CoV, nasopharyngeal samples have yielded live virus in some past fourteen days [3].

Early reports from the Asian COVID-19 experience continue to prompt a need to reconsider if not revise approaches to control. Some have proposed possible transmission during the incubation period [4]. The suggestion that the incubation period can be extended beyond fourteen days is receiving support [5]. Although it is more common for the incubation period to be less than one week, 97–99% confidence intervals for the tail-end of excretion are more than double the latter timing. If the majority of patients become ill in less than two weeks, the finding of outliers beyond the latter may not be common in a small affected population. To the contrary, a very large population being affected is very likely to have such outliers which could complicate the pattern of spread. Some patients shed the virus in a relatively asymptomatic state [6]. The latter will again have the potential to complicate control measures. Furthermore, the concept that patients only excrete virus when they become symptomatic is not in keeping with most known viral respiratory infections otherwise.

The existing data therefore beckon reconsideration of several important parameters. For the definition of the infectious period, an initiation of timing prior to the actual onset of symptoms, if they occur, seems prudent. Likewise, an extension to a safer end limit for excretion past fourteen days could also attract support. Extension to the quarantine period for a patient with a laboratory-confirmed infection or for a definitive close contact should be considered. Greater stringency for the follow-up of casual contacts could also be applicable.

If COVID-19 was largely a mild disease, further stringency in these regards would be unpalatable to many. In these uncertain times, given

the crescendo to a global pandemic and given the observed morbidity, some further consideration should be given to these very important epidemiological topics. Most will recognize that an extension to infectious periods or isolation/quarantine times has the potential to significantly complicate resources or unduly stretch capabilities, but error towards greater safety has its merits. In large part, we have relied on China to provide timely epidemiological data, but other countries are now in a position to re-analyze some of these critical issues as Lagier and colleagues and others have rightfully begun.

Declaration of competing interest

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