

REVIEW ARTICLE

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COVID-19: Filling the Gaps in the Natural History of the Disease for Controlling the Pandemic**A.Velmurugan^{1*}, A.M.Veerakumar¹, P.Parameshwari²****Affiliation:** 1 Department of Community Medicine, Government Theni medical college, Theni, Tamilnadu, 2 Department of Community Medicine, Chengalpattu medical college, Chengalpattu, Tamilnadu***Author for correspondence:** Dr.A.Velmurugan, M.D. Community Medicine, Assistant professor, Department of Community Medicine, Government Theni medical college, Theni, Tamilnadu. Email: vel416@gmail.com

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ABSTRACT

The Global pandemic of novel coronavirus disease 2019 (COVID- 19) caused by SARS-CoV-2 (Severe Acute Respiratory Syndrome- Corona Virus -2) is progressing on an unprecedented scale. The WHO declared the novel coronavirus outbreak (2019-nCoV) as Public Health Emergency of International Concern (PHEIC) on January 30,2020 and it was further declared as a Pandemic on March 11, 2020. Gaps in the natural history of the disease to delineate accurately the longest incubation period, period of quarantine, the period of communicability, isolation period, chances of re-infection , immunity after infection, the time kinetics for viral clearance and its association with clearance of symptoms, the role of asymptomatic infection, modes of transmission needs to be addressed to control the pandemic. In order to halt a pandemic, setting up of a suitable quarantine period is essential by investigating incubation periods, so that at least 95% of the cases developing symptoms could be captured and henceforth control of pandemic becomes viable. This 14-day quarantine period does not seem to cover the incubation period of 95% of known cases. The number of subjects missed by using the mean or median incubation period should be explored and considered while making policy decisions. When the serial interval is less than the mean or median incubation period, it implies that the transmission could have occurred during the incubation period. The knowledge about the transmission dynamics, proportion of asymptomatic cases and the period of communicability in asymptomatic cases is very limited. The pandemic shows no signs of slowing down and the development of an effective vaccine seems far way. Hence filling the gaps in the natural history of this virus is essential for battling the pandemic.

Key word: Novel coronavirus disease 2019, COVID- 19, SARS-CoV-2, Quarantine, Period of communicability, 95th percentile of incubation period, Serial interval.