

# COVID-19: Questionable Seasonality

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## Dear Editor,

Variation in seasonality is one of key factor that play a role in viral transmission. Absence of herd immunity to Coronavirus disease-19 (COVID-19) suggest that it is weather resistant and spreading in population with no prior immunity (1). It is dangerous to rely on the assumption that it will end with the change of weather (1).

Our scientific understanding for COVID-19 transmission is fluid so it is advisable not to make assumptions about this virus and based our opinions with evidence. The appropriate way of reducing the transmission still based on personal protection (1,2).

A study showed an analysis from four different coronaviruses which were known to cause respiratory infections every year over a period of 8 years was performed (1). This analysis studied coronavirus occurrence and transmission in the cohort of households in Michigan (1-3). It showed that they are found in a limited time period. Time period mentioned in the study was through December to May reaching a peak from January to February. Analysis was designed to examine who influenza vaccine worked in their community. This analysis contained specimens which were followed on a weekly basis to get information about respiratory illnesses. Four highly seasonal coronavirus types were tested which were OC43, 229E, HKU1 and NL63 (1-4). 993 coronavirus infections were detected. OC43 was found to be most common type and 229E was the least common. There was a striking seasonal similarity between the four types with peak aggregate months between January and February (2-4). Children under 5 years got the highest frequency and 260 out of 993 patients acquired the infection from an infected household member. Infection rates level when age increases which were an unusual finding (2-4). They are very much related to SARS-CoV-19 virus and causing a milder illness (2,3). This led us to question how the current pandemic will evolve. If COVID-19 behaves like

other seasonal coronaviruses, its cases may start to diminish by end of May or early June 2020, until transmission starts again in winter (4). Seasonality, even for common respiratory viruses, is a poorly understood phenomenon. While countries with temperate climate tend to have outbreaks of respiratory viruses during the colder season, transmission in tropical countries continues throughout the year. Also, sporadic outbreaks of respiratory viruses in the northern hemisphere in warmer weather have been reported related to cruise ships and air travel (2,3). A lot remains unknown. Which viral mutants survive and proliferate would certainly depend on that.

Sincerely,

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## Ethics

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