

# Estimated Reproduction Number of Human-to-human Transmission Due to the New Seafood Market-related Coronavirus Disease 2019 Outbreak in Indochina: A Modeling-based Study

Dear Editor,

The coronavirus disease 2019 (COVID-19) outbreak is still a problem worldwide. The outbreak can occur in any crowded place with poor sanitation control. The seafood market-related COVID-19 outbreak in China is the most famous market-related outbreak.<sup>[1]</sup> Recently, in December 2020, the newest seafood market-related outbreak occurred in China. The market-to-human transmission and human-to-human transmission become big considerations. In general, a food market-related COVID-19 outbreak is usually a difficult-to-control situation. The contamination in food and symptomatic carriers (both merchants and buyers) at the market is an important point to be managed. In a recent report on the first seafood market-related COVID-19 outbreak in China, the estimated reproduction rates for market-to-human transmission and two human-to-human transmissions during the early spread are equal to 0.24 and 2.37, respectively.<sup>[2]</sup> Applying this fact to the observed data in the new seafood market-related outbreak, the estimated reproduction number of human-to-human transmission can be calculated. Within the 1<sup>st</sup> week of the outbreak, the overall market-related cases or market-to-human transmission were equal to 11,184. Therefore, the estimated number of further human-to-human transmission might be as high as 11,692. This expected number is considerably high; however, some might be asymptomatic. The active universal case searching might be useful for further finding a possible human-to-human transmission within the community that will be helpful for successful disease control.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

Beuy Joob<sup>1</sup>, Viroj Wiwanitkit<sup>2</sup>

<sup>1</sup>Private Academic Consultant Center, Bangkok, Thailand, <sup>2</sup>Department of Community Medicine, Dr. DY Patil Vidyapeeth, Pune, Maharashtra, India

## Address for correspondence:

Dr. Beuy Joob,  
Private Academic Consultant Center,  
23 1 Bangkok 113, Bangkok 10330, Thailand.  
E-mail: beuyjoob@hotmail.com

Submitted: 25-Aug-2023 Revised: 15-Sep-2023 Accepted: 30-Sep-2023 Published: 30-May-2024

## REFERENCES

1. Sriwijitalai W, Wiwanitkit V. Wuhan seafood market, diamond princess cruise, and Daegu Shincheonji Church of Jesus: Important places in the timeline of coronavirus disease-19 outbreak. *Med J DY Patil Vidyapeeth* 2020;13:200-1.
2. Mizumoto K, Kagaya K, Chowell G. Effect of a wet market on coronavirus disease (COVID-19) transmission dynamics in China, 2019-2020. *Int J Infect Dis* 2020;97:96-101.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

## Access this article online

### Quick Response Code:



### Website:

<http://www.mmjonweb.org>

### DOI:

10.4103/mj.mj\_56\_23

**How to cite this article:** Joob B, Wiwanitkit V. Estimated reproduction number of human-to-human transmission due to the new seafood market-related coronavirus disease 2019 outbreak in Indochina: A modeling-based study. *Mustansiriya Med J* 2023;22:229.

© 2024 Mustansiriya Medical Journal | Published by Wolters Kluwer - Medknow