

Subject Area:

## Continuous chain of exporting Wuhan novel coronavirus infection: a comparison of primary and secondary step rates

Rujittika Mungmungpantipantip

Private Academic Consultant Center, rujittika@gmail.com

Viroj Wiwanitkit

Dr DY Patil University

Follow this and additional works at: <https://jmisr.researchcommons.org/home>



Part of the [Medical Sciences Commons](#), and the [Medical Specialties Commons](#)

---

### Recommended Citation

Mungmungpantipantip, Rujittika and Wiwanitkit, Viroj (2021) "Continuous chain of exporting Wuhan novel coronavirus infection: a comparison of primary and secondary step rates," *Journal of Medicine in Scientific Research*: Vol. 4: Iss. 1, Article 16.

DOI: [https://doi.org/10.4103/JMISR.JMISR\\_19\\_20](https://doi.org/10.4103/JMISR.JMISR_19_20)

This Letter to the Editor is brought to you for free and open access by Journal of Medicine in Scientific Research. It has been accepted for inclusion in Journal of Medicine in Scientific Research by an authorized editor of Journal of Medicine in Scientific Research. For more information, please contact [m\\_a\\_b200481@hotmail.com](mailto:m_a_b200481@hotmail.com).

# Continuous chain of exporting Wuhan novel coronavirus infection: A comparison of primary and secondary step rates

Dear Editor,

Wuhan novel coronavirus infection is an important emerging disease that has become a global consideration at present [1]. The disease had its origin in China and then traversed internationally. Importation is by air travel and there is continuous report of imported cases in many countries. An acceleration in the accumulated number of imported cases is observable [2]. At first, the disease is imported from only China. Nevertheless, after a 1-month period of outbreak, the disease is already been exported from non-Chinese countries as well. The case from Thailand to Korea is a good example. Here, the authors assess the continuous chain of exporting Wuhan novel coronavirus infection from China to a country and then to another country. The authors focus on the situation of the coronavirus infection exporting from Thailand and then to South Korea. The rate of exportation in primary and secondary steps are hereby calculated. On 4<sup>th</sup> February, for the first step of the chain there were 20 440 cases of Wuhan novel coronavirus infection in China and there were 19 imported cases from China in Thailand. For the second step of the chain, there was one imported case from Thailand to South Korea. The rate of exportation in primary and secondary steps are equal to 0.093 and 5.26%, respectively. The rate of exportation in the primary step is 56.56 times more than the rate of exportation in the secondary step. This can reflect on the fact that the present focus on disease screening for immigrants from China is not sufficient. The screening should be for all immigrants.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

**Rujittika Mungmungpantip<sup>a</sup>, Viroj Wiwanitkit<sup>b</sup>**

<sup>a</sup>Private Academic Consultant Center, Bangkok, <sup>b</sup>Department of Community Medicine, Dr DY Patil University, Pune, Maharashtra, India.

**Correspondence to:** Dr. Rujittika Mungmungpantip, Private Academic Consultant Center, Bangkok 103400 Thailand  
E-mail: rujittika@gmail.com

## REFERENCES

1. Yasri S, Wiwanitkit V. Editorial: Wuhan coronavirus outbreak and imported case. *Adv Trop Med Pub Health Int* 2020; 10:1–2.
2. Sookaromdee P, Wiwanitkit V. Imported cases of 2019-novel coronavirus (2019-nCoV) infections in Thailand: Mathematical modelling of the outbreak. *Asian Pac J Trop Med* 2020; 13:3.

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	
<b>Quick Response Code:</b> 	<b>Website:</b> <a href="http://www.jmsr.eg.net">www.jmsr.eg.net</a>
	<b>DOI:</b> 10.4103/JMISR.JMISR_19_20

Submitted: 11-Feb-2020 Revised: 19-Feb-2020 Accepted: 11-Mar-2020 Published: 26-Feb-2021

**How to cite this article:** Mungmungpantip R, Wiwanitkit V. Continuous chain of exporting Wuhan novel coronavirus infection: A comparison of primary and secondary step rates. *J Med Sci Res* 2021;4:114.