



Cross Boundary Morbidity and Mortality: A Situation Analysis of Recent 2012 Diphtheria Outbreak in Thailand

**Viroj Wiwanitkit^{1*}**¹Dr. DY Patil University, Pune, India**Corresponding Author:** Viroj Wiwanitkit, MD, Honorary Professor, Dr. DY Patil University, Pune, India.
Tel: +66-24132436, Email: wviroj@yahoo.com

Received September 11, 2018; Accepted March 30, 2019; Online Published April 14, 2019

Citation: Wiwanitkit V. Cross boundary morbidity and mortality: a situation analysis of recent 2012 diphtheria outbreak in Thailand. Int J Travel Med Glob Health. 2019;7(2):71. doi:10.15171/ijtmgh.2019.16.**Dear Editor,**

Outbreaks of infectious disease occur sporadically around the world. Sometimes, a disease might expand internationally. Herein, the authors discuss a 2012 diphtheria outbreak in Thailand, focusing on the morbidity and mortality. Based on the data recorded by the Thai Ministry of Public Health, there were 53 diphtheria-infected cases and 100 carriers. Among the total infected cases, 7 resulted in death. In-depth analysis showed that the infected patients were from 9 different provinces in Thailand, and there was also one cross-boundary case (1.89%) of a patient from a nearby country in Indochina, Laos. At the same time, there was an outbreak of diphtheria in Laos.^{1,2} Regarding the cross-boundary indexed case in the Thai outbreak under discussion, the patient crossed international borders to obtain treatment in Thailand and registered with the local public health department.

The migration of an infectious disease across international borders is an interesting issue in global public health at present. In travel medicine, the control of travel-related infections is an important concept. Usually, the infected or probable infected case is stopped from entering the country by health control at the immigration office. However, permission might be given to a patient seeking treatment. The present situation of cross-boundary diphtheria falls into this permission category. In such cases, the foreigner contributes to the overall local registered disease statistics. Plans for the control of an outbreak of any infectious disease must consider both local and possible imported cases. In the diphtheria

outbreak in Thailand, the outbreak occurred despite the fact that the diphtheria vaccination is included in the routine universal vaccination program for all Thai newborns. The disease might have been imported from outside the country.^{3,4}

Conflict of Interest Disclosures

None.

Ethical Approval

Not applicable.

Funding/Support

None.

References

1. Nanthavong N, Black AP, Nouanthong P, et al. Diphtheria in Lao PDR: insufficient coverage or ineffective vaccine? PLoS One. 2015;10(4):e0121749. doi:10.1371/journal.pone.0121749.
2. Sein C, Tiwari T, Macneil A, et al. Diphtheria outbreak in Lao People's Democratic Republic, 2012-2013. Vaccine. 2016;34(36):4321-4326. doi:10.1016/j.vaccine.2016.06.074.
3. Wanlapakorn N, Yoocharoen P, Tharmaphornpilas P, Theamboonlers A, Poovorawan Y. Diphtheria outbreak in Thailand, 2012; seroprevalence of diphtheria antibodies among Thai adults and its implications for immunization programs. Southeast Asian J Trop Med Public Health. 2014;45(5):1132-1141.
4. Phonboon K, Ramaboot S, Kunasol P, Preuksaraj S. Thailand Expanded Program on Immunization: a ten-years review of coverage and impact on EPI target diseases. Southeast Asian J Trop Med Public Health. 1989;20(4):529-540.