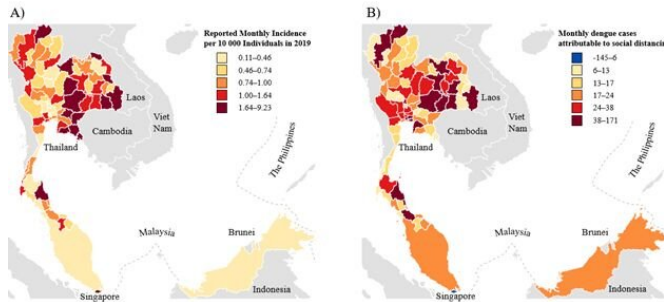


# Is the COVID-19 pandemic affecting dengue virus case numbers?

29 October 2020



Dengue cases before and after the onset of the COVID-19 pandemic Credit: Lim JT, Dickens BSL, Chew LZ, Choo ELW, Koo JR, et al. (2020), 10.1371/journal.pntd.0008719

The ongoing COVID-19 pandemic has resulted in dramatic changes to human mobility, which has the potential to change the transmission dynamics of other infectious diseases. Now, researchers reporting in *PLOS Neglected Tropical Diseases* have found that social distancing has led to a significant increase in dengue infections in Thailand but no change in dengue in Singapore or Malaysia.

The [dengue virus](#) is transmitted by *Aedes* mosquitos and can cause severe fever, headache, muscle and joint pain, fatigue and nausea and vomiting. An estimated 105 million [dengue infections](#) occur every year, with the majority of cases concentrated in Southeast Asia and the Western Pacific region. In this region, COVID-19 has led to workplace closings, bans on mass gatherings and, at times, complete shutdowns. This provided a natural experiment to estimate the effects of reduced human mobility and workplace exposure on dengue transmission.

In the new work, Jue Tao Lim of the National

University of Singapore, and colleagues analyzed dengue case counts for Thailand, Singapore and Malaysia using national surveillance data available through mid-2020. Information was also obtained on climate, COVID-19 interventions, and overall population census data.

In Thailand, the researchers found that social distancing is expected to lead to 4.32 additional cases per month per 100,000 individuals. This rise in cases, largely attributable to increased exposure in residences compared to workplaces, equates to 2,008 additional cases of dengue nationwide. However, no significant impact on dengue transmission was found in Singapore or Malaysia.

"Across country disparities in social distancing policy effects on reported dengue cases are reasoned to be driven by differences in workplace-residence structure, with an increase in transmission risk of arboviruses from social distancing primarily through heightened exposure to vectors in elevated time spent at residences," the researchers say. "[This demonstrates] the need to understand the effects of location on [dengue transmission](#) risk under novel population mixing conditions such as those under [social distancing](#) policies."

**More information:** Lim JT, Dickens BSL, Chew LZ, Choo ELW, Koo JR, et al. (2020) Impact of sars-cov-2 interventions on dengue transmission. *PLOS Neglected Tropical Diseases* 14(10): e0008719. [doi.org/10.1371/journal.pntd.0008719](https://doi.org/10.1371/journal.pntd.0008719)

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