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# Epidemiology News

Georgia Southern University

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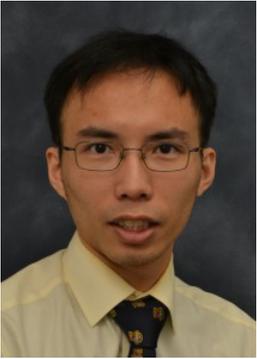
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# Georgia Southern Models the Effect of School Closures

June 9, 2015



A collaborative study including Dr. Isaac Fung, assistant professor of epidemiology, at Jiann-Ping Hsu College of Public Health Georgia Southern University [models the effect of school closures in pandemic scenarios](#). School closures may delay the epidemic peak of the next influenza pandemic, but whether school closure can delay the peak until pandemic vaccine is ready to be deployed is uncertain. To study the effect of school closures on the timing of epidemic peaks, we built a deterministic susceptible infected-recovered model of influenza transmission. We stratified the U.S. population into 4 age groups (0–4, 5–19, 20–64, and  $\geq 65$  years), and used contact matrices to model the average number of potentially disease transmitting, nonphysical contacts. For every week of school closure at day 5 of introduction and a 30% clinical attack rate scenario, epidemic peak would be delayed by approximately 5 days. For a 15% clinical attack rate scenario, 1 week closure would delay the peak by 9 days. Closing schools for less than 84 days (12 weeks) would not, however,

reduce the estimated total number of cases. The study concluded that unless vaccine is available early, school closure alone may not be able to delay the peak until vaccine is ready to be deployed. Conversely, if vaccination begins quickly, school closure may be helpful in providing the time to vaccinate school-aged children before the pandemic peaks.

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