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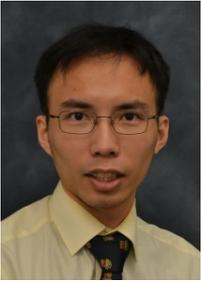
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Preventive Interventions

November 19, 2013



A CDC collaborative study including Dr. Isaac Fung (formerly of the CDC), assistant professor of epidemiology at Georgia Southern University Jiann-Ping Hsu College of Public Health, examines preventive interventions through modeling the effect of water, sanitation and hygiene, and oral cholera vaccine implementation in Haiti. In 2010, toxigenic *Vibrio cholerae* was newly introduced to Haiti. Because resources are limited, decision-makers need to understand the effect of different preventive interventions. The team built a static model to estimate the potential number of cholera cases averted through improvements in coverage in water, sanitation and hygiene (WASH) (i.e., latrines, point-of-use chlorination, and piped water), oral cholera vaccine (OCV), or a combination of both. The authors

allowed indirect effects and non-linear relationships between effect and population coverage. Because there are limited incidence data for endemic cholera in Haiti, the authors estimated the incidence of cholera over 20 years in Haiti by using data from Malawi. Over the next two decades, scalable WASH interventions could avert 57,949–78,567 cholera cases, OCV could avert 38,569–77,636 cases, and interventions that combined WASH and OCV could avert 71,586–88,974 cases. Rate of implementation was found to be the most influential variable, and combined approaches maximized the effect.

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