

partnerships are doomed to failure. With the observations gleaned from the business, human behavior and educational literature I believe it is possible to manage, if not avoid, the pitfalls as they arise.

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Learning from the past: trend of dengue infection in Taiwan (2010-2014)

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Objectives: Dengue is the most rapidly spreading disease through mosquito-borne virus in the world. The prevalence of dengue has increased 30-folds in the last 50 years globally. Understanding nationwide dengue's prevalence and trend over time can help to improve prevention strategies and regulation. This study aims to explore the trend in prevalence of dengue infection in various regions in Taiwan. We also investigated the relationship between population characteristics (age and gender) and dengue infection rate.

Methods: We acquired 2010-2014 dengue infection and population data from public statistics datasets made by Taiwan Centers

for Disease Control and Department of Statistics at Taiwan Ministry of Interior. We calculated the yearly infection rate of dengue in 5 regions (northern, Midwestern, southern, eastern and outer islands).

Results: Overall, the infection rate ranged 0.0037%-0.0082% during 2010-2013 but reach 0.0671% in 2014. Most infection cases occurred in the third (summer) or fourth (fall) quarters during the year. The Southern region had the highest yearly dengue infection rate (infection rate: 0.009%-0.0233% during 2010-2013) overtime. There were 2 unexpected outbreaks of dengue that happened during the study period: the first outbreak (infection rate: 0.2206%) occurred in the southern region (most in Kaohsiung City) in 2014, which may be related to the natural gas explosion incident in Kaohsiung City at that time. Another outbreak of dengue occurred in outer islands (infection rate: 0.0469% in 2011, while 0.0005%-0.0066% in other years) (especially in Penghu County) in 2011.

Conclusions: The present study is a preliminary research on trend in dengue infection in Taiwan. Government should direct resources and future interventions to southern Taiwan, which is the hottest region of high population density and target summer-fall period, which is the hot time of dengue infection. Future research is also needed to better understand the triggers of dengue outbreak.

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