

SARAWAK COVID-19: EFFECTS OF PRE-FESTIVAL MOBILITY AND FESTIVAL GATHERINGS

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ABSTRACT

Gathering to celebrate festivals is a common socio-cultural practice amongst Sarawak's diverse groups. For untold years, individuals, households, villages and at times the entire communities get together to observe their various religious, cultural and community festivals. However, during the COVID-19 pandemic period, the practice of gathering to celebrate those festivals became a challenging practice. This is because density of population and intensity of social contacts are deemed to increase SARS-CoV-2 high transmissibility. In this paper, we analyzed the trend of COVID-19 active cases in Sarawak in the first half of the year 2021 and calibrated the parameter signifying the proportion of exposed population taking effective precautionary measures, κ in our model. Our findings suggest that after every festival celebration the value of κ is decreased, leading to the increased number of active cases. In addition, the pre-festival mobility change involving visits to the retail and grocery stores are higher than any other time. Therefore, the festival gatherings and increased pre-festival mobility are catalysts that accelerated the increment of the number of active COVID-19 cases in Sarawak. In light of this, we proposed that any form of festival related gathering ought to be avoided in order to curb any forms of outbreak in Sarawak.

Keywords: Covid-19, Mathematical Modeling, Festival, Gathering, Seir.

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