An Outbreak of Influenza A (H1N1) pdm09 Virus in Primary School in District of Perak Tengah, Perak

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Abstract

Schools are a conducive setting for an influenza outbreak to occur due to the close and prolonged contact among teachers and students in class. The local district health office was alerted on 1st April 2018 of four Influenza cases by private hospital in Ipoh. In total 12 cases of influenza-like illness were found among the 255-exposed people in a primary school in this district. Five of these were laboratory confirmed cases of Influenza-A (H1N1) pdm09 virus and remaining 7 cases were epidemiologically linked. The overall attack rate (AR) was 4.7% (12/255), the highest in the class 1A 27.3% (6/22) where the outbreak started. Four were hospitalized and eight received treatment as outpatient. All cases suffered from fever (100%); cough (53.3%); body ache (41.7%); and sore throat (16.7%) and recovered well after few days. There was a statistically significant association between classrooms and cases with \( p \)-value = 0.006. During inspection we found out that class 1A was made of modified metal cabin container, 39m³ to accommodate 23 peoples. High attack rate in class 1A was most likely due to the direct exposure to primary source of infection. Environmental factors such as airconditioned classroom, close ventilation, lack of natural light and shared activities among teacher and students for a long duration may promote the transmission of influenza virus among them. Immediate response and non-pharmacological public health measures such as strict isolation of sick students at home, health education to students, teachers and parents through social media may have played a significant role in reaching large number of people in very short time to halt the transmission of disease and resulted in ending of the outbreak.

Keywords: Influenza, H1N1, Flu, School, Children, Outbreak

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