ABSTRACT

Spatial Model of Risk Factors of Dengue Haemorrhagic Fever in East Java Province in 2014

Indonesia is the high suitability country for transmission of dengue. One of provinces with high incidence rate of dengue fever is East Java province which was about 36 per 100,000 population in 2013. DHF is so easy to spread from person to person and even from one area to another, so that the incidence of dengue is increasing and widespread. Analysis is needed to see the role of factors, spatial factors, which influence the incidence of dengue fever in East Java by performing spatial modeling. This research used a quantitative research approach with ecological study design to determine the correlation between the disease and the factors that are of interest in research. This study took administrative regions throughout East Java province as unit of analysis. The data was secondary data which was collected through the study of documents in several institutions. The results showed that rainfall (0.0014), percentage of healthy-practice house (0.0104), healthy house percentage (0.000) and health facilities per 100,000 population (0.0456) influenced the incidence of dengue fever in East Java with R square 0.4334 or 43.34%. The best model for the incidence of dengue fever in East Java province was spatial regression modeling using spatial error model (R² = 0.4334) when compared with the spatial lag regression model (R² = 0.1858). East Java Provincial Health Office needs to anticipate the high rainfall on the incidence of dengue, provides equitable health facilities for communities, promote health practice at home and healthy home.

Keywords: dengue, spatial, regression, east Java