ABSTRACT

Modeling Of Dengue Hemorrhagic Fever (DHF) Incidence Based on Altitude, Rainfall And Larvae Free Number (LFN) Factors In Magetan

Dengue Haemorrhagic Fever (DHF) is one of the infectious diseases of dengue due to poor environmental conditions caused by the dengue virus through the bite of *Aedes aegypti* and *Aedes albopictus*. DHF is still a health problem in Magetan. Diseases that can grow and thrive in low-lying areas will have problems if the growth and development in the high plains. Magetan particular region, which climate that shows its importance in the transmission of dengue virus.

The general objective of the research is to make modeling occurrence of dengue hemorrhagic fever (DHF) is based on altitude, rainfall and larvae free Number (LFN) factors in Magetan.

The research used an observational research of ecological study time trends. This type of research is a cross-sectional explanatory. Analysis of the data used in the study of the panel regression which is a combination of cross-sectional data and time series.

Variable altitude is variabel determinant of rainfall variables and LFN that affect the incidence of DHF in the various sub-districts in Magetan. Modelling the incidence of DHF, using Fixed Effects Model with the equation: DHFi = C+0.087323rainfalli-0.596867LFNi. The decline in the incidence of dengue by area-based management based Simpul theory method. Simpul 1 (control the source of the disease), Simpul 2 (control the transmission medium or the environment) and Simpul 3 (control in the community/society).

Expected to have forms of cooperation and partnerships across relevant sectors of society with the purpose of programs that can be used and implemented optimally so that it can break the chain of transmission as well as being impact (strong influence) in decreasing morbidity due to DHF.

Keywords: Dengue Hemorrhagic Fever (DHF), Altitude, Rainfall, Larvae Free Number (LFN)