

ABSTRACT

Model of Controlling Dengue Haemorrhagic Fever based on Climate Factors

Environment, both biological and physical, are instrumental factor in the emerging and the spreading of dengue disease. The Climate change may affects to infectious disease pattern and the risk of transmission increasement. Dengue Haemorrhagic Fever (DHF) has become endemic diseases in the major cities in Indonesia. It has been suspected that dengue outbreaks that occur each year in almost all of Indonesia areas is closely related to weather patterns. The purpose of this study was to determine the influence of climate factors (rainfall, humidity, air temperature and solar radiation) towards free number larvae in Surabaya municipal during the year 2009-2011 and provides recommendations control model of Dengue Haemorrhagic Fever based on Climate Factors. The design of the study is a time series studies of ecology. The research was conducted in May-June 2011 and located in the Surabaya municipal, East Java by using secondary data. The number of dengue cases data is derived from the reports listed in Surabaya Health Office. Climate data used are rainfall data, temperature, humidity, and solar radiation obtained from the Meteorology and Geophysics Board (BMKG) Station of Juanda and Station of Perak Surabaya. The results showed that only humidity had influence toward free number larvae and free number larvae had no influence toward number of dengue disease. The conclusion of this study is that the humidity had a significant influence toward free number larvae and free number larvae had no a significant influence toward number of dengue disease. The model of controlling Dengue Haemorrhagic Fever based on Climate Factors are Control of the source of disease, Control of the transmission media and Control of the exposure to the community. Therefore, in January-June periods it requires a good cooperation between the health department and community participation to early awareness efforts as a alert for all sides to perform quick and proper activities.

Key words: Dengue Hemorrhagic Fever (DHF), climate change, environmental factors