

## **ABSTRACT**

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### **SPATIAL ANALYSIS OF THE DISTRIBUTION OF DIPHTHERIA SUSPECT IN MOJOKERTO CITY AS EARLY WARNING IN THE SPREAD OF DIPHTHERIA**

Diphtheria is an acute infectious disease caused by the bacterium *Corynebacterium diphtheriae* that attacks the upper respiratory system. East Java is the province with the highest incidence of Diphtheria in Indonesia every year. Mojokerto City is one of the areas that always has suspected Diphtheria sufferers every year. There is no mapping to analyze the distribution of suspected diphtheria sufferers so that the distribution pattern based on each location is unknown. This can be done by using a Geographic Information System approach. The purpose of this study is to find the distribution pattern of suspected Diphtheria sufferers in Mojokerto City based on population density and the condition of the physical environment of the dwelling as an early warning.

Descriptive research with survey design. Use primary data from survey results and secondary data from the Health Office and BPS Mojokerto City. The number of population and sample is the same (total sample) which is 54 people. The data was presented in the form of a thematic map using ArcView software version 3.3 and tested by Moran's I and LISA test on GeoDa version 1.18, analyzed using SaTScan software version 6.1 and CrimeStat version 3.3. The risk factors for the condition of the physical environment of residence and population density have no significant influence on the distribution of suspected Diphtheria sufferers in Mojokerto City, but the high migration and mobility of the population is supported by the age of the suspect and the lack of complete immunization coverage for Diphtheria.

References : 46 books and journals (1991-2020)

Keyword : Spatial Analysis, Environment, Diphtheria, *C. diphtheriae*,  
Vulnerability