ABSTRACT

Maternal mortality rate is an important indicator in the world of health. Maternal mortality rate is a woman who dies during pregnancy, childbirth, and postpartum (42 days after delivery) regardless of the duration of pregnancy or location of pregnancy, caused by pregnancy but not by accident. This study analyzes the factors that influence maternal mortality. The statistical model used is Latent Class Poisson Regression (LCPR). LCPR can find hidden groups in heterogeneous data sets. The method for estimating parameters is the maximum likelihood method and the optimization process uses the Expectation-Maximization Algorithm. The results of the study showed that the best model was in class 2 with a Consistent Akaike Information Criterion (CAIC) value of 181.859. In class 1, the variables of the percentage of Td3 immunization in pregnant women, the percentage of poor people, and the percentage of households with proper sanitation have a significant effect on the number of maternal deaths in Central Java in 2021, while the percentage of fertile age couples (PUS) Active in Family Planning does not have a significant effect on the number of maternal deaths in Central Java in 2021. In class 2, the percentage of poor people, the percentage of households with proper sanitation, and the percentage of PUS Active in Family Planning have a significant effect on maternal deaths, while the percentage of Td3 immunization does not have a significant effect on maternal deaths.

Keywords*: Maternal Mortality Rate, Latent Class Poisson Regression, Maximum Likelihood Estimation, Expectation Maximization Algorithm*