EFFECT OF LOGISTIC GROWTH MODEL IN DENGUE HEMORRHAGIC FEVER EPIDEMIC.

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ABSTRACT

Changes population over time are markers of population growth which is influenced by the number of births, deaths and migration. One model of population growth is a continuous growth model logistic model in particular. So far, we consider the growth of the population with an epidemic of a disease as something separate. Therefore, we will consider and find connections between population growth rate of the logistic population growth model with an epidemic of dengue hemorrhagic fever.

Through this research, we will consider and analyze the influence of birth rate of dengue hemorrhagic fever epidemic. Furthermore, using Hemorrhagic dengue transmission model we will simulate the model with multiple birth rate increased. To find solutions of Hemorrhagic dengue transmission model can use the fourth order Runge-Kutta methods and to calculate it using the Matlab software.

The results of this research in numeric shows a significant influence birth rate against the maximum value of x and y. The maximum value Increase in birth rate 10 times the normal cause the maximum x value increases from 2227 to 4703 people person and a maximum value of y from 9547 to 118 600 people.

Keywords: Matematic Models, Dengue Hemorrhagic Fever dan Logistic Growth.