

Optimal control mathematical SIR model of malaria spread in South Kalimantan

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Abstract

South Kalimantan is one of the provinces vulnerable to malaria because their work is in the vicinity of forests such as miners, and seekers living on the edge of the forests based on a report from South Kalimantan Health Office (2013). Malaria eradication has always been carried out by the government through the South Kalimantan Health Office (2016) and its achievements have increased, but it is still a problem and needs tougher efforts to achieve malaria-free targets 2020. One way to eradicate the disease is to control it through mathematical modeling. This study discussed the formation of modified malaria distribution model. Analyze infection rates in South Kalimantan using the malaria distribution model. Conducting Optimal Control to complete Mathematical Model SIR of Malaria Spread in South Kalimantan.