Expert System for Detecting Disease caused by *Aedes Aegypti* Mosquito Bites Using Case Based Reasoning Method

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Abstract. Disease caused by mosquito bites is one of the diseases that need special attention, especially in Riau Province because this disease has the potential to fall into the category of extraordinary events (KLB). Data recorded in the Riau Provincial Health Office in 2015 reveals that patients who contracted the virus due to mosquito bites, namely dengue fever reached 3,261 people (IR = 51.4 per 100,000 population) and mortality rate of 20 people (CFR = 0.61%). When this virus is already endemic and becomes an extraordinary event, a quick treatment is needed to reduce the loss of life, especially for the initial diagnosis of the disease. This study aims to design and build an expert system that is used to diagnose diseases caused by the bite of aedes aegypti mosquitoes so that even common people can easily find out whether they have contracted the virus due to the bite of aedes aegypti mosquito or not. The identified diseases are dengue fever, chikungunnya and zika. Expert system developed uses the Case based Reasoning (CBR) method. To measure the level of similarity,ecludean distance measuring instrument is used. The expert system developed produces a system with an accuracy rate of 80%. This value is the same as the threshold value specified by the expert.