Predictors of Health Behavior against Maternal Mortality with Dynamic System Models in West Sulawesi

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ABSTRACT

This research aims to estimate the Maternal Mortality Rate (MMR) in 28 years (2007-2035); and to find out the most suitable strategies in decreasing the MMR in West Sulawesi.

The method used was the dynamic system model continued with simulation based on pre-determined scenarios and the use of closed causal (loops) diagrams resulted in dynamic system behavior. The analysis used Powersim version 2.5 for Windows. The research samples were all data related to the study variables, namely the number of maternal deaths and determinants of maternal mortality (the use of contraceptives, birth attendants, and place of birth).

The results showed that the estimated MMR for 28 years in West Sulawesi increased 70% from 293/100.000 live birth in 2007 to 449/100000 live birth in 2035. This increase can be prevented with the intervention of various risk factors, namely the contraceptive intervention on PUS (able to suppress 4 124 (2331%) pregnancy), intervention of birth attendant (able to suppress 13/1 00 000 live birth (4 38%)) and intervention of place of birth (able to suppress 17/100.000 live birth (4 4%)). The combination of intervention of the use of contraceptives, birth attendants, and place of birth is able to suppres 30/100.000 live birth (102%).

Keywords: estimates, Maternal Mortality Rate, dynamic system