

Modeling the Transmission Dynamics of the Middle East Respiratory Syndrome Coronavirus in Humans

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Abstract

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) is a novel respiratory disease, reported in the year 2012, initially localize to Middle East countries, with a high potential for transmission via close contacts amongst families and health care workers [1]. In this study, we formulate and fully analyze a mathematical model that assess the impact of quarantining and isolation strategies in controlling the disease. Analysis of the the model shows that the MERS-COV can be control if a certain threshold quantity can be brought to a value less than unity [3]. In the absence of vaccine or treatment, these strategies have proved to be effective in containing the disease [2]. Numerical simulations are used to support the results.

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