PREDICTION OF LEPTOSPIROSIS SEVERITY IN SRI LANKA: A TIME SERIES APPROACH

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Leptospirosis is a bacterial disease which can be transmitted from animals to people through the urine of infected animals. It is more common in tropical countries such as Sri Lanka. Throughout the year in Sri Lanka Leptospirosis is reported with two peaks in a year, and it is generally observed that it coincides with paddy cultivation. Sri Lanka is having one of the highest incidences of leptospirosis, and it is considered as a leptospirosis high endemic country. The aim of the present study is to predict Leptospirosis incidences in Sri Lanka for two years ahead and develop guidelines for clinical management. The monthly incidences of Leptospirosis in all the areas with RDHS offices in Sri Lanka were obtained from the web site of Epidemiology Unit of the Ministry of Health. This paper presents Seasonal Autoregressive Integrated Moving Average (SARIMA) forecasting model obtained using time series BoxJenkin's approach to predict Leptospirosis incidences two years ahead in Sri Lanka.

Keywords: Leptospirosis, Time Series, SARIMA