110 SEASONALITY IN HUMAN CASES OF CRIMEAN-CONGO HEMORRHAGIC FEVER AND ITS DEPENDENCE ON TEMPERATURE – EMPIRICAL EVIDENCE FROM PAKISTAN

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Crimean-Congo hemorrhagic fever (CCHF) is endemic in Pakistan. There is limited literature on epidemiology of the

disease in the country. In this study, we carried out time series analysis of data (2007–2010) from three tertiary care hospitals to provide empirical evidence of seasonality in disease occurrence and its association with temperature. Cosinor model revealed statistically significant seasonality in monthly number of CCHF patients admitted to the hospitals. The estimated amplitude was 3.24 cases per month with phase (i.e. peak location) in mid-June and low point (i.e. nadir) in mid-December. Generalized linear model revealed association between monthly number of CCHF admissions and average monthly temperature. A unit increase in temperature increased expected number of patients by 1.10 (95% CI : 1.07–1.13). A strong positive correlation (r=0.98) between between fitted values of GLM and cosinor models indicate relation between seasonal pattren and temperature. The risk should be managed according to seasonality and temperatue can be used as predictor in disease modeling.