SENSITIVITY ANALYSIS IN CASE SERIES WITH TWO CORRELATED RECURRENT OUTCOMES

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The case series method for analyzing the relationship between an intermittent exposure and the occurrence of a recurrent event in only cases [1] was recently adapted to situations where two types of events may occur [2]. An association measure between the exposure and occurrences of one type of event rather than the other can be estimated by the ratio of relative risks (RRc) provided they are independent. The present work aims to investigate the sensitivity of the RRc estimation to the departure from the independence assumption. Simulation experiments are used where correlated multinomial data are generated by categorizing latent correlated normal variables. Preliminary results seem to indicate a good behavior of the estimations of the RRc and its variance. For illustration, the impact of macrolides use on colonization with antibiotic-resistant rather than susceptible pneumococci is investigated in a children cohort study.