

Supplemental File

Interrupted Time Series Segmented Regression Model

$$Y_t = \beta_0 + \beta_1 \text{COVID}_t + \beta_2 \text{Month}_t + \beta_3 (\text{Month after COVID onset})_t + \varepsilon_t$$

Where, Y_t is the ALC rate measured at time t ;

“COVID” is an indicator variable coded as 0 for pre-COVID period (i.e., the period before March 2020) and 1 for the period of COVID presence (i.e., the period after March 2020);

“Month” is the number of months from the start of the study;

“Month after COVID onset” indicates the number of months after COVID presence and takes value 0 for pre-COVID period;

β_0 is the intercept estimating the initial ALC rate at month 0 (i.e., February 2018);

β_1 estimates the change in level of ALC rate for post/onset COVID period (i.e., After March 2020);

β_2 is the pre-COVID slope and measures the change in ALC rates in the pre-COVID segments;

β_3 is the change in the monthly slope after March 2020;

ε_t is the error term for month t which is assumed to be normally distributed with stable variance and first order autocorrelation.