COVID-19 SPREAD SIMULATION MODEL

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Abstract: COVID-19 spread simulation model is presented. The model is based on the concepts adopted in the analysis of chain reactions. The number of infected people capable to infect others was taken as the determining parameter of the system. The model allows one to assess the impact of changes in parameters related to management decisions on the dynamic behavior of the system determined by changes in the number of infected. The model allows one to determine the critical values of the transmission coefficient of infection that determine the achievement of collective immunity.

Keywords: COVID-19; spread of infection

Figure Captions

Figure 1 Temporal change in the number of people with coronavirus infection at $t_{\text{inf}} = 30$ (*1*) and 14 days (*2*)

Figure 2 Temporal change in the number of infected (*1*) and in the number of infected in the last day (*2*) for option 1

Table Captions

Table 1 Variation of the transmission rate of infection over time in the simulation of management decisions

Table 2 Results of simulation of the spread of infection

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