Weekly simulation of the behavior of the epidemic by COVID-19 in Colombia

Simulación semanal del comportamiento de la epidemia por COVID–19 en Colombia

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This is a statistical projection of the behavior of the epidemic week by week for the transmission of COVID-19 in Colombia. These projections are based on data provided by the National Institute of Health based on the number of infections and mortality in the country from March 6 to date.

For the projection of possible new cases, measures of central tendency and dispersion were used, taking into account variables such as the accumulated number of patients diagnosed with COVID-19 and the percentage of daily increase. Likewise, the number of deaths reported every 24 hours was noted. To determine the number of severe and critical patients that presented and will present during the epidemic, the percentages of the statistical analysis carried out by Johns Hopkins University1 were taken as a basis. These were adjusted with local rates in order to reduce the possible biases that may arise due to the under-diagnosis of the disease in the country.

Projections are also made based on the attack rate of the disease in Colombia provided by the INS. In addition, the possible under-registration of cases was calculated based on the comparison of the number of tests performed and the mortality that occurred in South Korea and Colombia. Finally, the potential for contagions was calculated taking into account the mobility of the current number of positive cases, the average number of people per household in Colombia, the population at risk, and the minimum and maximum basic reproductive number of the virus (1.5 to 3.5).

The information of the projections can be seen in

Week: 1-12 May: https://revistas.unilibre.edu.co/index.php/iJEPH/article/view/6242/5706

Week: 13-22 May: https://revistas.unilibre.edu.co/index.php/iJEPH/article/view/6242/5699

Week 23-31 May: https://revistas.unilibre.edu.co/index.php/iJEPH/article/view/6242/5705

Week: 27 May-5 June: https://revistas.unilibre.edu.co/index.php/iJEPH/article/view/6242/5751

Week: 3-13 June: https://revistas.unilibre.edu.co/index.php/iJEPH/article/view/6242/5752