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Letter to the Editor

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Corresponding author:

Sergio Isaac De La Cruz-Hernández, Email: delacruz.hernandez.si@gmail.com COVID-19 Pandemic in Mexico: The Response and Reopening

Sergio Isaac De La Cruz-Hernández PhD¹ and Ana Karen Álvarez-Contreras²

¹Department of Virology, Institute of Epidemiological Diagnosis and Reference (InDRE), Ministry of Health of Mexico, Álvaro Obregón, México and ²Department of Microbiology, National School of Biological Science, National Polytechnic Institute, Miguel Hidalgo, México

Nowadays, coronavirus disease 2019 (COVID-19) has been one of the greatest challenges for the entire world. One of the biggest questions asked during the first year of this pandemic was: How can we return to normal without causing new waves of infections? Despite the fact that the COVID-19 outbreak began in China, this country applied its experience with severe acute respiratory syndrome coronavirus (SARS-CoV) allowing a rapid response to this public-health emergency. Thus, in January 2020, the country imposed strict measures such as home quarantine, traffic restrictions, travel bans, cancelation of public activities, postponement of festivals, the use of face masks in public, and the extension of winter break; thus, the return to work and school reopening were postponed. After applying these measures, the epidemic curve decreased and remained flat until the end of 2021, with China being one of the countries with the fewest daily new cases and deaths from this disease in the world (Figure 1).

In Europe, the response to this pandemic was not the same as in China. During March 2020, lockdowns were introduced in several European countries to stop the spread of SARS-coronavirus 2 (CoV-2), just when the disease had already caused thousands of cases and hundreds of deaths. A few weeks later, the epidemic curves flattened and countries relaxed their respective lockdowns. Nevertheless, the subsequent COVID-19 waves that occurred during the following months of 2020 and 2021 increased the number of daily new cases and deaths (Figure 1).^{4,5}

On the other hand, the COVID-19 pandemic was not handled properly in some American countries; for example, after two months of confinement, the United States decided to reopen its economic activities, despite the fact that the epidemic curve had not flattened.⁶ A similar situation occurred in Brazil, where this country relaxed its restrictions without considering that the number of COVID-19 cases was increasing.^{7,8} Unfortunately, these countries lost control of their pandemics and became, along with India,⁹ the countries with the highest number of cases and deaths caused by this disease in the whole world (Figure 1).⁴

The Mexican Government should have considered the experience of these countries to manage its pandemic. In this sense, Mexico's response was rapid and the Government applied strict measures to contain the spread during March 2020. However, similar to the handling of this pandemic in the United States and Brazil, Mexico decided to ease some restrictions to reopen economic activities, just when the number of cases and deaths of COVID-19 had increased rapidly during the month of May 2020 (Figure 1). His hasty decision was counterproductive, because the number of daily new cases and deaths continued to rise during the following months of 2020, and the health system collapsed due to the new waves of COVID-19 caused by the new SARS-CoV-2 variants that appeared during 2021 (Figure 1). Nevertheless, Mexico decided to continue with the reopening with its health consequences. Despite the sentinel surveillance system adopted by the Government, during 2020, Mexico was among the top 10 countries with the highest number of COVID-19 cases; and during 2020 and 2021, the country was among the top 5 countries with the highest number of deaths caused by this disease.

If Mexico does not want to continue seeing its health system collapse due to the new COVID-19 waves or another pandemic, the country must learn its own lesson and follow the example of China, where the Government admitted very early, the existence of a novel coronavirus and responded quickly to address the outbreak. To be prepared for another public health emergency of international concern, the Mexican Government must be willing to enforce strict measures, including border control and airport arrivals, and mandatory use of face masks.

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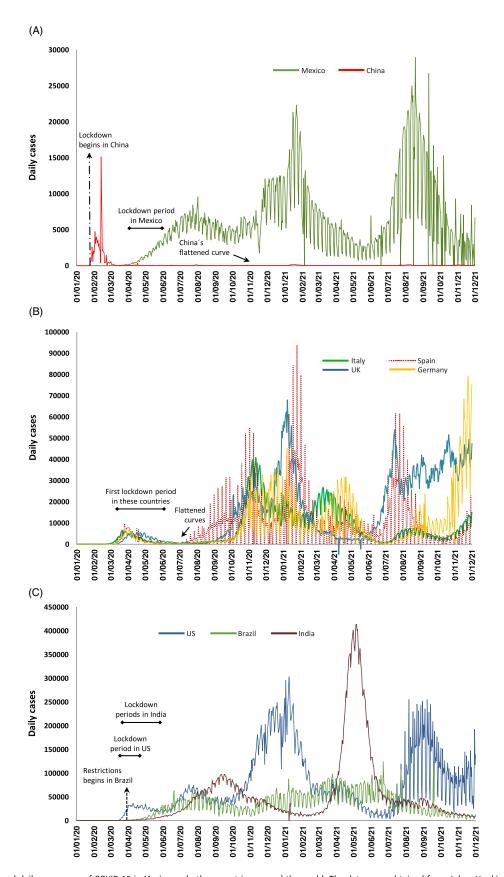


Figure 1. Lockdowns and daily new cases of COVID-19 in Mexico and other countries around the world. The data were obtained from Johns Hopkins University & Medicine Coronavirus Resource Center (from January 2020 to December 2021). Lockdowns and flattened curves are indicated by horizontal lines and arrows. (A) China and Mexico; 2.10,11 (B) Germany, Italy, Spain, and UK; and (C) United States, Brazil, and India. 6.8,9

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References

- Nkengasong J. China's response to a novel coronavirus stands in stark contrast to the 2002 SARS outbreak response. *Nat Med.* 2020;26:310-311.
- Taghrir MH, Akbarialiabad H, Marzaleh MA. Efficacy of mass quarantine as leverage of health system governance during COVID-19 outbreak: a mini policy review. *Arch Iran Med.* 2020;23(4):265-267. doi: 10.34172/aim. 2020.08
- Zhang Y, Jiang B, Yuan J, et al. The impact of social distancing and epicenter lockdown on the COVID-19 epidemic in mainland China: a data-driven SEIQR model study. medRxiv. 2020. doi:10.1101/2020.03. 04 20031187
- Johns Hopkins University & Medicine. Coronavirus Resource Center (from January 2020 to December 2021). Accessed December 31, 2021. https://coronavirus.jhu.edu
- Glass DH. European and US lockdowns and second waves during the COVID-19 pandemic. *Math Biosci.* 2020;330:108472. doi: 10.1016/j.mbs. 2020.108472

- Zhang X, Warner ME. COVID-19 policy differences across US states: shutdowns, reopening, and mask mandates. *Int J Environ Res Public Health*. 2020;17(24):9520. doi: 10.3390/ijerph17249520
- Neiva MB, Carvalho I, Costa Filho EDS, et al. Brazil: the emerging epicenter of COVID-19 pandemic. Rev Soc Bras Med Trop. 2020;53: e20200550. doi: 10.1590/0037-8682-0550-2020
- Ruiz-Roso MB, de Carvalho Padilha P, Mantilla-Escalante DC, et al. Covid-19 confinement and changes of adolescent's dietary trends in Italy, Spain, Chile, Colombia and Brazil. Nutrients. 2020;12(6):1807. doi: 10.3390/nu12061807
- Soni P. Effects of COVID-19 lockdown phases in India: an atmospheric perspective. *Environ Dev Sustain*. 2021;23(8):12044-12055. doi: 10.1007/ s10668-020-01156-4.
- SEGOB. Diario Oficial de la Federación (DOF): 30/03/2020. Official Journal of the Federation of the government of Mexico. Accessed December 31, 2021. https://www.dof.gob.mx/nota_detalle.php?codigo= 5590745&fecha=30/03/2020
- 11. **SEGOB.** Diario Oficial de la Federación (DOF): 29/05/2020. Official Journal of the Federation of the government of Mexico. Accessed December 31, 2021. https://www.dof.gob.mx/nota_detalle.php?codigo=5594138&fecha=29/05/2020
- CoVariants. Enabled by data from GISAID. Overview of variants/mutations (Mexico, from January to December 2021). Accessed December 31, 2021. https://covariants.org/per-variant
- De La Cruz-Hernández SI. Another vision of the situation of the COVID-19 pandemic in Mexico during 2020. Disaster Med Public Health Prep. 2021;1-3. doi: 10.1017/dmp.2021.340