



COVID-19: Current Status and Necessary Measures for Prevention of Future Outbreaks

Abdollah Mohammadian-Hafshejani^{*}

Modeling in Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran

***Corresponding Author:** Abdollah Mohammadian-Hafshejani, Email: amohamadii1361@gmail.com

Received: July 31, 2023, Accepted: September 3, 2023, ePublished: September 29, 2023

To Editor,

This manuscript aims to provide an update on the current status of COVID-19 worldwide and the necessary measures to be taken to prevent an increase in the number of cases in the future. As we already know, COVID-19 is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which was first identified in December 2019 in Wuhan, China.¹ Since then, the virus has spread globally, causing a pandemic that has affected millions of people.

As of July 30, 2023, over 490 million confirmed cases and more than 6.1 million deaths (a case fatality rate of 1.24%) have been recorded worldwide.² On May 5, 2023, the World Health Organization (WHO) declared an end to COVID-19 as a global public health emergency. Despite efforts to control the spread of the virus, significant challenges still need to be addressed. A range of measures should be implemented to prevent further increases in new cases of COVID-19, mortality, and economic, social, and mental-psychological problems. Vaccination is the most effective way to prevent severe disease and death from COVID-19, and it is crucial to increase vaccine coverage worldwide.³ Countries successfully controlling the pandemic have implemented comprehensive vaccination programs, including outreach to underserved communities.⁴

In addition to vaccination, public health measures such as wearing masks, maintaining physical distancing, and improving ventilation in indoor spaces can help reduce transmission.⁵ These measures are crucial in areas with low vaccination rates or where new virus variants have emerged. Furthermore, it is essential to strengthen healthcare capacity and improve health systems to effectively manage future waves of the pandemic by increasing the availability of medical supplies, expanding testing and contact tracing, and providing adequate care for patients with COVID-19.⁶

Finally, ongoing research into the virus and its variants is essential to develop new treatments and vaccines and

improve our understanding of the disease.⁷ These studies can assist in addressing emerging challenges, such as new types of viruses, and provide a scientific foundation for public health policies and interventions.

Although COVID-19 was a bitter experience for humanity, valuable experiences were gained during the pandemic, including the expansion of digital epidemiology and using its capacity to track patients, transformation to virtual training during the COVID-19 pandemic, and expansion of the boundaries of knowledge to identify different types of diseases and discover different types of vaccines. By sharing these experiences, they can be used in the future to reduce damage caused by infectious diseases.

In conclusion, the COVID-19 pandemic continues to pose a significant threat to global health. Therefore, it is crucial to implement a range of measures to prevent further increases in the number of cases. By increasing vaccine coverage, implementing public health measures, improving healthcare capacity, and conducting ongoing research, we can reduce the impact of the pandemic and prevent future waves of infections.

Competing Interests

None.

Ethical Approval

Not applicable.

References

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. *N Engl J Med.* 2020;382(8):727-33. doi: [10.1056/NEJMoa2001017](https://doi.org/10.1056/NEJMoa2001017).
2. World Health Organization (WHO). Coronavirus Disease (COVID-19) Dashboard. Available from: <https://covid19.who.int/>. Accessed July 30, 2023.
3. Huang YZ, Kuan CC. Vaccination to reduce severe COVID-19 and mortality in COVID-19 patients: a systematic review and meta-analysis. *Eur Rev Med Pharmacol Sci.* 2022;26(5):1770-6. doi: [10.26355/eurrev_202203_28248](https://doi.org/10.26355/eurrev_202203_28248).
4. The Lancet. COVID-19 in Africa: no room for complacency. *Lancet.* 2020;395(10238):1669. doi: [10.1016/s0140-6871\(20\)31140-0](https://doi.org/10.1016/s0140-6871(20)31140-0).

- 6736(20)31237-x.
5. Ghoroghi A, Rezgui Y, Wallace R. Impact of ventilation and avoidance measures on SARS-CoV-2 risk of infection in public indoor environments. *Sci Total Environ.* 2022;838(Pt 4):156518. doi: [10.1016/j.scitotenv.2022.156518](https://doi.org/10.1016/j.scitotenv.2022.156518).
 6. Farsalinos K, Poulas K, Kouretas D, Vantarakis A, Leotsinidis M, Kouvelas D, et al. Improved strategies to counter the COVID-19 pandemic: lockdowns vs. primary and community healthcare. *Toxicol Rep.* 2021;8:1-9. doi: [10.1016/j.toxrep.2020.12.001](https://doi.org/10.1016/j.toxrep.2020.12.001).
 7. Le TT, Vasanthakumaran T, Thi Hien HN, Hung IC, Luu MN, Khan ZA, et al. SARS-CoV-2 Omicron and its current known unknowns: a narrative review. *Rev Med Virol.* 2023;33(1):e2398. doi: [10.1002/rmv.2398](https://doi.org/10.1002/rmv.2398).