As the incidence of Omicron increases, so will the number of deaths

Jong-Koo Lee

Department of Family Medicine, Seoul National University College of Medicine, Seoul, Korea

Although the vaccination rate against coronavirus disease 2019 (COVID-19) is very high in the Republic of Korea, it is thought that the peak of the Omicron surge has yet to arrive despite the ever-increasing number of cases, which has recently exceeded 100,000 daily. Among the various viewpoints that have been presented regarding this issue, Horton [1], Editor-in-Chief of The Lancet, criticized the European Union World Health Organization (WHO) Regional Director Dr. Kluge, who said that the end game was now in sight. Horton addressed the issue that the data marshaled in favor of the purported impending end of the epidemic only came from some Western European countries, and he seemed to be of the view that the situation in Eastern Europe was different and could become a source of the epidemic again, given the low vaccine uptake rate in Africa. However, in this context, the head of the WHO, Tedros Adhanom Ghebreyesus visited the Republic of South Africa, the first beneficiary of the hub-and-spoke vaccination strategy, and said that 70% of vaccinations would be done by June–July, and that the situation would improve [2].

Since Omicron is different from other variants in terms of its phylogenetic evolution, the possibility of an epidemic involving other variants is predicted this winter. In other words, it remains unclear whether Omicron will be eradicated, or whether it will occur annually or continue to mutate and become a larger epidemic. Nonetheless, in general terms, the risk of disease occurrence—on a local, global, or endemic scale—or eradication is mediated through disease outbreaks. Endemic diseases are highly likely to occur every year, but the socioeconomic damage is lower, and a massive outbreak will result in remnants of active cases in some areas and the possibility of re-spreading in winter [3].

At the same time, the United Kingdom (UK) and European countries are pushing for a step-by-step recovery of daily life by lifting masks, relaxing social distancing, and reducing border control measures in response to the decreasing number of critically ill patients and fatalities after 3 doses of the COVID-19 vaccine. The Republic of Korea has been cautious about policy changes, but the 3-dose vaccination rate for adults over the age of 18 is 59.4%, which is close to the rate of 66% in the UK (February 17) and higher than that in the United States (43.2% as of February 22). Therefore, it was judged that even though the spread of COVID-19 was receding gradually, the likelihood of a rapid increase in the number of patients was low. Furthermore, the number of critically ill patients and deaths was low. This reasoning supported the choice to ease the public health measures step by step and to switch to home treatment according to very rapid increase in mild cases, but there is also an argument that concerns are warranted about
relaxing stringent anti-COVID-19 measures because that relaxation will take place quickly. However, the government announced that if Omicron's virulence is estimated as the fatality rate for each week of the epidemic, rather than the cumulative fatality rate, the fatality rate of Omicron is lower than the original estimate; therefore, it would be better to relax social distancing and release the restrictions on freedom and economic activity. These claims were made at the same time. Let us take a closer look at the rationale for these arguments.

The rationale for prudent implementation is as follows:

First, although the fatality rate of Omicron is low, considering the active immunity caused by vaccination and the natural immunity caused by infections with the delta variant (as the scale of delta infections has been very large), it has been estimated that if the Omicron epidemic continues in our country, the overall scale of deaths will be similar and the burden of disease will increase [4,5]. To exemplify this reasoning using concrete data, according to a press release on February 21, when comparing the delta- and Omicron-infected patients from the third week of January to the third week of February, the severity rate decreased from 1.4% to 0.38%, and the fatality rate decreased from 0.7% to 0.18%. These rates both decreased to a quarter of the initial level, but the total number of patients increased by 15.6 times, so it is possible that the number of critically ill patients or the number of deaths might quadruple.

Second, Omicron countermeasures were prepared with a focus on respiratory specialist clinics, which were in charge of the transition to at-home treatment. However, the expansion of primary care clinics in accordance with the increase in the number of patients was insufficient, and there were reports of deaths during at-home care due to inadequacies in the transport system, medication system, and patient management system, we need more time to prepareness and need to reduce volume of positive cases by public health measures, such as trace-test-isolation-quarantine supported by Information and Communications Technology.

Lastly, although there have been clear changes in perceptions of this disease over the past 2 years, as exemplified by a marked decrease in the severity of infection and fear scores compared to 2020, it is nonetheless noteworthy that 40.2% of residents responded that they would not be able to receive treatment for COVID-19 due to a lack of treatment facilities such as hospital beds. As the number of confirmed cases increases, the number of respondents who were concerned about the increase in severity and death took second place, accounting for 33.2% of the total, and 19.1% of the respondents also said that it would be difficult to receive timely treatment for other diseases due to the spread of COVID-19. It is necessary to consider this gap in perceptions between healthcare providers and the public [6].

Turning to the opposing point of view, if the virulence of delta and Omicron is estimated as the fatality rate for each variant's cohort, rather than the cumulative fatality rate, it is predicted that the fatality rate of Omicron will be lower based on recent epidemiological trends. The number of patients hospitalized due to the Omicron variant is also small, so there is no shortage of beds, and the death rate is almost the same as that of influenza, so the public does not need to be anxious. Thus, there is no possibility of a major problem, even if measures against COVID-19 transmission are actually lifted.

The general public finds it difficult to accept the government's explanation. In other words, the excessively conservative prediction of the number of patients is causing distrust. Furthermore, the number of patients with BA.2 (stealth Omicron), a sub-lineage of Omicron, is increasing in some countries. This variant has a faster rate of transmission than the original Omicron variant, a higher immune evasion rate, resistance to existing treatments, and already accounts for 4.9% of infections in the Republic of Korea [4]. Therefore, while monitoring this situation, it is necessary to take a cautious approach, while avoiding anxiety, until the end of the pandemic. Prevention policies to reduce the number of patients—such as prompt screening and voluntary isolation at home, wearing a mask, preventing mass outbreaks, and promptly vaccinating those who are not vaccinated—should not be hastily chosen as policies to favor or disadvantage the upcoming election. In any case, the basic policy direction to protect the lives of the people must be faithfully observed. In addition, as long as cases continue to be imported from the epicenters of variants, international cooperation will inevitably become more important to prevent the spread of this disease.

Therefore, in order to make policy decisions accurately, there is a need for a system that can provide accurate knowledge of the facts. Instead of simple theoretical modeling or simulation, it should be possible to know the situation in the field as it unfolds. The government is responsible for the real-time identification of inpatients, critically ill patients, and fatalities. It is also necessary to establish a system that can quickly synthesize the results of various epidemiological data and interventions in real time to make decisions. Considering that the end game of Omicron is a period of preparation for a larger epidemic, rather than the end of COVID-19, improvements should be made to supplement the shortcomings of the countermeasures that have been taken to date.
Notes

Ethics Approval
Not applicable.

Conflicts of Interest
The author has no conflicts of interest to declare.

Funding
None.

References

1. Horton R. Offline: complacency threatens progress against COVID-19. Lancet 2022;399:615.
2. World Health Organization (WHO). South Africa's mRNA hub progress is foundation for self-reliance [Internet]. Geneva: WHO; 2022 [cited 2022 Feb 21]. Available from: https://www.who.int/news/item/11-02-2022-south-africa-s-mrna-hub-progress-is-foundation-for-self-reliance.
3. Commission on a Global Health Risk Framework for the Future. The neglected dimension of global security: a framework to counter infectious disease crises [Internet]. Washington, DC: The National Academies Press; 2016 [cited 2022 Feb 21]. Available from: https://doi.org/10.17226/21891.
4. Korea Disease Control and Prevention Agency (KDCA). COVID-19 weekly report Feb 21. 2022 [Internet]. Cheongju: KDCA; 2021 [cited 2022 Feb 21]. Available from: https://www.kdca.go.kr/board/board.es?mid=a20501010000&bid=0015&list_no=718757&cg_code=&act=view&nPage=1.
5. Bhattacharyya RP, Hanage WP. Challenges in inferring intrinsic severity of the SARS-CoV-2 Omicron variant. N Engl J Med 2022;386:e14.
6. Newsis. [40% of Gyeonggi residents 'Fear of medical disruption due to the spread of Omicron'] [Internet]. Seoul: Newsis, 2022 [cited 2022 Feb 22]. Available from: https://newsis.com/view/?id=NISX20220216_0001762062. Korean.