Why is COVID-19 on the rise in Asia, and what does this mean for the US?



Written by <u>Deep Shukla</u> on March 25, 2022 — <u>Fact checked</u> by Harriet Pike, Ph.D.

Hong Kong has seen a surge in COVID-19 cases, but is the same situation likely to occur in the United States? Image credit: Louise Delmontte/Bloomberg via Getty Images.

- Countries and regions such as New Zealand, Singapore, and Hong Kong have recently experienced a surge in COVID-19 cases attributed, in large part, to the Omicron BA.2 subvariant.
- These places followed a "zero-COVID" policy until recently, but have seen cases rise dramatically over the past month. These surges are unlikely to indicate whether the United States will follow a similar pattern.
- Previous COVID-19 waves in the U.S. have largely paralleled those occuring across Europe, so soaring BA.2 infections in the United Kingdom and Germany could suggest a forthcoming surge in the

 Experts say a rise in COVID-19 cases in the U.S. is likely, but the amplitude that a new wave of BA.2 infections might reach remains uncertain.

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Countries and regions such as Singapore, Hong Kong, and New Zealand, which were able to keep their number of COVID-19 cases under control for most of the pandemic, are currently experiencing a surge in cases.

These countries previously adopted a COVID-19 <u>elimination</u> strategy or a "zero-COVID" policy, which aimed to reduce the incidence of new cases to naught. This policy involved strict rules involving border controls, contact tracing, mass testing, quarantine, and self-isolation.

<u>Dr. Michael Baker</u>, a professor of public health at the University of Otago, Wellington, told *Medical News Today* that this elimination policy pursued by many countries in the Asia-Pacific region was "generally very successful during the first 12-18 months of the pandemic when vaccines were not widely available."

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"Keeping COVID-19 cases at very low levels for much of this time has resulted in low hospitalizations and deaths, and has protected the economies in many jurisdictions in this region, including China, Hong Kong, Taiwan, Singapore, Australia, and New Zealand," he added.

However, Dr. Baker underlined that this response had been jeopardized by the emergence of the more infectious Delta and Omicron variants.

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mitigation approaches.

The emergence of the Omicron BA.2 subvariant, which initial reports suggest is <u>more transmissible</u> than BA.1, may be at least partly responsible for the recent surge in COVID-19 cases in these countries.

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Will the U.S. see high death rates like Hong Kong?

While <u>mortality rates</u> due to COVID-19 have remained relatively low in most nations that previously implemented a "zero COVID-19" policy, Hong Kong recently reported the world's highest COVID-19 death rate over a 7-day period.

According to experts, a major reason for a large number of hospitalizations and deaths in Hong Kong is the low vaccination rate in the vulnerable older population.

Although vaccination rates among the general population are reasonably good, a <u>significant percentage</u> of the older population remains unvaccinated, which may partly explain why COVID-19 cases skyrocketed in February.

<u>Complacency</u> due to a low number of COVID-19 cases in the community before the emergence of Omicron and <u>vaccine hesitancy</u> led to poor vaccine uptake among these demographics earlier in the pandemic.

New Zealand currently has one of the highest vaccination rates in the world, with <u>95%</u> of individuals over the age of 12 years vaccinated.

"Those countries that were able to achieve high vaccine coverage before entry and widespread circulation of the Omicron variant have been able to keep their bespitalization and death rates law. That is the case in New

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the OECD, Dr. baker hoteu.

In contrast to other Asian countries, mainland China has persisted with the elimination policy, and there have been outbreaks due to Omicron, especially in the Jilin province and the city of Shenzhen. Yet, the number of deaths due to COVID-19 has been limited so far, and the following few weeks will determine China's ability to persist with the policy.

Will the U.S. follow in Europe's footsteps?

Many European nations — including Germany, the U.K., France, and the Netherlands — have also been experiencing a COVID-19 surge due to the BA.2 variant. The U.K., for example, reported a 7-day average of <u>over 89,000</u> cases and 127 deaths as of March 18, 2022.

Experts believe that prematurely removing protective measures against COVID-19 may have contributed to this rise in BA.2 infections. The higher contagiousness of the subvariant and waning immunity from either vaccines or previous <u>SARS-CoV-2</u> infections may have also played a part.

"This [surge] may be exacerbated by the widespread loosening of restrictions including indoor mask mandates in public places and schools, and the decision by many businesses to have their employees fully return to the workplace," said <u>Dr. Davidson Hamer</u>, professor of global health and medicine at Boston University.

Previous waves of SARS-CoV-2 infections in Europe have often played out similarly in the U.S., albeit a few weeks later. Both regions have also employed similar pandemic strategies: a mitigation policy focused on limiting the spread of SARS-CoV-2 in the community rather than complete elimination.

Early signs of BA.2 in wastewater

The proportion of COVID-19 cases due to the BA.2 variant increased from 12.6% to 22.3% between March 5-12, 2022. Despite a decline in cases and hospitalizations in recent weeks, wastewater samples collected from certain communities suggest a potential increase in COVID-19 cases in the forthcoming weeks.

Individuals with a SARS-CoV-2 infection can start shedding the virus in feces before other COVID-19 symptoms emerge. Thus, the SARS-CoV-2 RNA levels in wastewater samples can predict COVID-19 cases in the community.

CDC wastewater surveillance data indicate an increase by <u>at least 10%</u> in SARS-CoV-2 levels at 162 out of the 469 active sites.

"Since there have been some concerning epidemiological data in recent weeks including increased viral RNA levels in wastewater and increased cases in some locations around the country, there may be an increase of COVID-19 cases this spring similar to what several countries in Europe are seeing," said Dr. Hamer.

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Uptick likely but not necessarily a surge

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Although experts expect an uptick in COVID-19 cases in the U.S. due to the BA.2 subvariant, there is a lack of certainty about its extent. This uncertainty stems from the differences between the current pandemic situations in the LLS and Furone

For instance, some European nations, such as Spain, have had stringent COVID-19 restrictions, including outdoor masking, which were only lifted recently.

In contrast, the U.S. has had few restrictions since last summer. Such differences in public health policies may have the potential to influence patterns of SARS-CoV-2 transmission.

Since its emergence, the BA.2 variant has been competing with other Omicron subvariants BA.1 and BA.1.1 and is proving to be more transmissible.

"The data from other parts of the world suggest that BA.2 is highly contagious, but not more severe than BA.1. There have been some reports of BA.2 reinfecting individuals who were recently infected with BA.1, but this seems to be relatively rare," Prof. Lauren Ancel Meyers, director of the University of Texas at Austin's COVID-19 Modeling Consortium, also told *MNT*.

"In projecting what might happen in the coming weeks, we have to consider both the infectivity of BA.2 and recent policy and behavior relaxation in the U.S. that might fuel more rapid transmission," she added.

Yet the Rockefeller Foundation's <u>Pandemic Prevention Institute</u> has pointed out that the BA.1.1 subvariant has been <u>more prevalent</u> in the U.S. than in the U.K.

It notes that BA.1.1 has been the dominant Omicron subvariant in the U.S. and that the increase in the prevalence of BA.2 has been more gradual. In other words, the rise of BA.2 seems to have followed a different trajectory so far in the two nations.

Sewage samples not worrying

The <u>Pandemic Prevention Institute</u> has also pointed out that the CDC's wastewater surveillance data only reveal a relative increase in SARS-CoV-2 RNA levels. Thus, if the initial viral RNA levels in sewage samples were extremely low, even a 1,000% increase would only suggest a modest increase in actual cases.

"Based on what we are currently seeing, I do not expect the presence of BA.2 to drive a surge in cases in the near future. With both Delta and Omicron, there was a very clear pattern. We would detect the new variant in the wastewater from a community, and within 2-3 weeks there was a surge in SARS-CoV-2 RNA in wastewater which coincided with an increase in patients. This pattern was very predictable," said Dr. Marc Johnson, a virologist at the University of Missouri.

Dr. Johnson said his observations so far have not indicated a similar scenario:

"I have been seeing BA.2 in Missouri sewer sheds every week for the last 10 weeks, and it is currently in about a third of the sewer sheds. It is slowly displacing BA.1 and is the dominant lineage in several of the sites. However, we have not seen a single location where this coincides with an increase in SARS-COV-2 RNA in wastewater or in cases."

Although COVID-19 case patterns in the U.S. have largely echoed those in the U.K., as the spread of the Alpha variant showed, that has not always been the case.

"The 'BA.2 wave' looks a lot more like the Alpha wave in Missouri. Exactly 1 year ago, Alpha (B.1.1.7) was slowly moving through our state and displacing all of the other lineages. However, it never caused a surge in cases like it did in Europe," Dr. Johnson emphasized.

What can the U.S. do?

Although Omicron and its subvariants seem to cause less severe disease than previous SARS-CoV-2 variants, the high death rates in Hong Kong underscore the importance of immunity — both from COVID-19 vaccines and prior SARS-CoV-2 infections.

A recent Danish study suggests that the risk of BA.2 infection following a BA.1 infection is low. With a considerable portion of the U.S. population exposed to the BA.1 variant, this may also reduce the risk of BA.2 infections in the short term.

Although the protection conferred by COVID-19 vaccines against infection with Omicron tends to wane after a few months, evidence suggests that COVID-19 vaccines remain <u>effective</u> at <u>preventing</u> severe disease.

However, the lower vaccination rates in the U.S. compared to the U.K. have raised concerns about the potential toll of a second Omicron wave.

In the U.S., about <u>65%</u> of individuals are fully vaccinated, and only 44.6% have received the booster shot. In contrast, around 85.8% of eligible individuals in the U.K. have been vaccinated, and 67.3% have been immunized with a booster shot.

Dr. Hamer said vaccine rollout was crucial in states with low coverage.

"The U.S. needs to continue widespread testing, figure out ways to allow people who self-test at home to have their antigen tests results make it into the broader public health surveillance systems, continue sequencing a reasonable proportion of positive samples, and carefully track the impact of rising cases on hospitalization rates — and be ready to reinstate mask mandates if the situation greatly worsens," he advised.

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