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News analysis

# Will new variants lead to more severe outbreaks? Experts say chances low

No such immediate threat, and that gives Singapore a chance to get more vaccinated



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Covid-19 infections and deaths worldwide have been increasing significantly, with the numbers in Singapore appearing to grow in tandem.

The latest figures from the World Health Organisation showed that the number of global infections had increased by 8 per cent in the week of July 19 to 25 over the previous week, while deaths had jumped 21 per cent over the same period.

The highest number of new infections – 96,000 on Friday – was seen in the United States, despite half the population being fully vaccinated already.

In Singapore, where 59 per cent of the population is fully vaccinated and another 18 per cent has received one jab so far, more than 2,000 people are currently infected with Covid-19.

The number of local daily infections diagnosed jumped to 163 on July 19 and has stayed above 100 a day since then.

There are 71 active Covid-19 clusters now. The largest, the Jurong Fishery Port cluster, grew to 1,027 cases in just half a month.

The more transmissible Delta variant has been cited as a major factor in the jump in cases both in Singapore and globally.

But things could get even worse, cautioned Finance Minister Lawrence Wong, co-chair of the multi-ministry task force on Covid-19, in Parliament last Monday: "We have to expect new variants to emerge, which may be more transmissible, more lethal, or more successful at evading the present vaccines."

He added: "We must be prepared that the new variants can lead to more severe outbreaks, and may force us to introduce restrictions again from time to time."

Will this pandemic never end? How long will people here be living under Covid-19 measures, despite rising vaccination rates?

Experts The Sunday Times spoke to however, were cautiously optimistic about the future.

**WHY THE BIG OUTBREAK**  
Dr Askur Kurup, an infectious diseases doctor in private practice, said: "I see patients from this cluster coming in with very high viral loads."

Higher viral loads could mean a shorter contact time between people is needed for the virus to spread, hence making it more easily transmissible.

Professor Dale Fisher, a senior infectious diseases consultant at the National University Hospital (NUH), said the Delta variant is unforgiving of any infection control breaches: "Delta is more contagious and can exploit infection prevention infringements."

"It is very hard to apply perfect infection control measures consistently, wherever and wherever you are. Any breach in hand hygiene, environmental cleaning, mask wearing and distancing can facilitate Covid-19 transmission."

According to recent data from the United States Centres for Disease Control and Prevention, the Delta variant is as contagious as chickenpox.

Professor Ooi Eng Fong of Duke-NUS Medical School, a microbiologist by training, said: "With such transmissibility, nothing short of vaccination would stop this virus."

People who have been fully vaccinated are at a far lower risk of getting sick, or even of spreading the disease, although it may happen.

The Jurong Fishery Port cluster, with 1,027 people infected, and the KTV lounges and clubs cluster, with 251 people, make up more than half of the total number of cases. If they are taken out of the equation, the situation becomes highly manageable.

Associate Professor Alex Cook, vice-dean of research at the National University of Singapore's (NUS) Saw Swee Hoek School of Public Health, said that aside from the more transmissible Delta variant, other factors were at play too, such as poor adherence to safety measures and the large number of contacts of the people at Jurong Fishery Port.

He said: "There are lots of contacts to people who themselves have lots of contacts. If the primary case had been an office worker, say, then even if the adherence to safe management measures was low and it was the Delta variant, it would not have spread like it did."

The KTV cluster was a clear case of blatant breaches of Covid-19 measures. Such callous attitudes are not reflected in the vast majority of infections here.



People at Jurong Point shopping mall last week. According to one expert, while it is possible that new variants with even better transmissibility may appear, Delta is already a very fit strain and has thus far out-competed all other variants to remain the dominant strain in most parts of the world. Recent data from the United States Centres for Disease Control and Prevention has shown that the Delta variant is as contagious as chickenpox. ST PHOTO LIM YAQHU

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Minister for Sustainability and the Environment Grace Fu suggested in Parliament last Monday several possible ways the virus could have been spread in the Jurong Fishery Port cluster.

For one thing, "the humid and laborious environment made it uncomfortable for workers to wear their masks for a prolonged period of time."

Moving boxes of fish is strenuous, so workers were more likely to adjust their masks, or even take them off for short periods.

Furthermore, "some contactless delivery measures were not strictly followed", she said.

Going forward, these are all things that can be improved on.

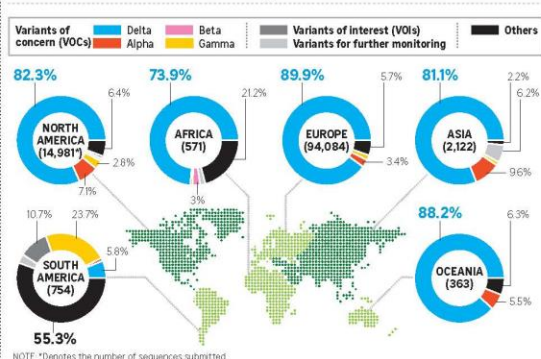
**EMERGENCE OF NEW VARIANTS**

How about Mr Wong's fear of a new and more lethal variant that would set back the whole pandemic effort?

Prof Fisher said: "If such a variant emerged overseas and came to Singapore, we could be vulnerable again. This is why genetic surveillance is a critical universal activity."

Based on GISAID data, which provides the most comprehensive global surveillance and sharing of the genomic sequences of the coronavirus, no other variant looks set to take the world by storm in the near future, said Dr Sebastian

## Delta variant dominates global Covid-19 infections



NOTE: \*Denotes the number of sequences submitted. Variant sequences collected between June 28 and July 27 this year by GISAID, a global science initiative which has the largest number of Covid-19 sequences.

Under the World Health Organisation classification, there are currently four variants of concern. A VOC has to fulfil one of the following:

- Increased transmissibility
- Increased virulence
- Reduced effectiveness of vaccines and treatments

• Since around April, the Delta variant has spread more quickly and overtaken the other VOCs – that is, Alpha, Beta and Gamma – to dominate infections in most parts of the world.

• The exception is South America, where Gamma remains strong, although its share of infections has gone down from more than 60 per cent over a two-week period.

• In Singapore, Delta accounts for 98 per cent of all infections, including imported ones.

• There are also currently four VOIs which have the potential to become VOCs. They are Eta, Iota, Kappa and Lambda.

Sources: BVIGS, A\*STAR SINGAPORE WITH DATA FROM GISAID, WHO, SUNDAY TIMES GRAPHICS

Maurer-Stroh, executive director of the Agency for Science, Technology and Research's Bioinformatics Institute.

The Delta variant now accounts for the vast majority of global infections – except in South America where Gamma, another variant of concern, still holds sway.

Professor Paul Tambyah, a senior infectious diseases consultant at NUH, said: "The Delta variant is replacing all the other strains just like the D614G, the grandfather of the Delta variant, did in the middle of last year."

But a new variant can dominate very quickly. The D614G variant became globally dominant and swept aside all other variants towards the end

of last year and now accounts for all circulating coronaviruses.

The Delta variant shot up from less than 10 per cent of infections in April to become the dominant variant in most parts of the world now.

"There's thus selective pressure for viruses to be milder to keep their host out of hospital so they can seed more infections."

But his colleague, Associate Professor Hsu Li Yang, an infectious diseases specialist by training, said this might not always be the case, as evolution "throws up all sorts of mutations and configurations to see which survives best."

"So there are variants of microbes where virulence has increased, albeit mostly transiently."

So while the world cannot rule out the possibility of a variant that is both more transmissible and deadly, the chances of such happening are low. But over the next couple of months, there appears to be no such threat.

This will give Singapore a weather to get more people here, especially the elderly, vaccinated.

**IMPORTANCE OF VACCINATION**

Yes, Covid-19 is here to stay and outbreaks will occur from time to time, "but the burden on society from interventions to prevent Covid-19 should get much less onerous", said Prof Cook.

"I fully expect we'll see large outbreaks even once vaccination is more or less complete, but for the most part these will be mild, maybe asymptomatic infections."

But he added: "Right now, my main concern about the healthcare system is the pool of unvaccinated elderly. About 25 per cent of those over 70 years old are at very high risk of being critically ill and they have not been vaccinated."

"Unless it improves, once we move into the endemic state – possibly in the next few months – we will see hundreds of totally avoidable deaths."

Prof Fisher agreed – not because the virus is more deadly, but "more cases due to more transmission means more serious cases will be seen."

Said Prof Ooi: "If we can achieve a high vaccination rate, we can expect Covid-19 cases to appear sporadically and, wherever there is onward transmission, to be limited in scale."

Dr Kurup said plainly: "I think we are in this funk because of the unvaccinated."

While people infected with the Delta variant tend to have higher viral loads, he said: "Viral loads in vaccinated patients seem to reduce quickly, so the risk of cross-transmission is likely limited. The key is to go all out and vaccinate."

Dr Kurup, who has been caring for Covid-19 patients over the past year, said his clinical experience managing these Covid-19 cases "gives me great conviction and faith in the vaccines' ability to prevent severe illness."

Those who had been vaccinated generally had few, if any, symptoms.

Prof Fisher and Prof Ooi both felt that Singapore should stop testing vaccinated people, who are asymptomatic, for the disease.

Unlike Singapore, most countries in the world report only asymptomatic cases, as Covid-19 infections are identified only when people seek medical help.

Said Prof Fisher: "No doubt case numbers, if we want to keep testing like this, will fly into numbers we could not imagine."

Prof Ooi agreed: "The current screening of the asymptomatic, and then putting those that test positive but vaccinated into isolation, is simply not helpful."

"If we screen dengue clusters for asymptomatic dengue, we would have found more than 100,000 cases of dengue in Singapore last year."

Those more than 35,000 people diagnosed with dengue last year are the ones who had seen a doctor. People with mild or no symptoms are not included in the count.

Added Prof Fisher: "Ideally we will reach a stage where most people bother or worry about Covid-19 the way they bother about measles or the flu."

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