

Are we about to live through a Nipah pandemic?

Preparedness – not fear – will decide how the next outbreak unfolds.

**Alex R. Cook
and Leo Yee Sin**

The news of two new confirmed cases of the Nipah virus in India's West Bengal state – bringing the total to six – has created alarm across the world.

This comes just six years after similar fears were sparked in the Chinese city of Wuhan about a new coronavirus that was likewise making people very sick. Could the world be looking at the early days of a Nipah-26 pandemic?

Younger readers may not know, but almost 30 years ago, Singapore was affected by the world's first outbreak of Nipah. That outbreak, which started in September 1998 in Malaysia and reached Singapore in March 1999, was limited to abattoir workers who had exposure to live imported pigs, and led to a death in Singapore.

Since that first outbreak in Malaysia and Singapore, we have

learnt more about the Nipah virus. We know now that most cases will develop a fever, headache and signs of confusion, while respiratory symptoms are common.

We also know that it is mostly a zoonosis, meaning that cases in people are usually linked to contact with animals. In both West Bengal and Bangladesh, regular human infections have been linked to accidental exposure to the urine of fruit bats contaminating collection pots for palm sap harvested for human consumption.

With all this news, and with airports introducing border measures, do Singaporeans need to be alarmed?

HOW MUCH SHOULD WE FEAR NIPAH?

During the Covid-19 pandemic, the movie *Contagion* had a second wave of popularity, perhaps due to its parallels with what we were all going through.

The movie was lauded for its

realism by many experts. But what is not so well known is that the terrifying outbreak in *Contagion* was modelled on a hypothetical Nipah pandemic.

Despite the parallels between the in-movie measures and what governments implemented in 2020, Nipah is actually very different from coronavirus, and poses much less pandemic threat.

So far, at least, Nipah is scary because it has a high fatality rate (the World Health Organization estimates it at between 40 per cent and 75 per cent). But it does not spread well from person to person, in contrast to Sars-CoV-2, the virus behind Covid-19. Real-life Nipah is quite different from the blockbuster movie.

That Singapore's 1999 outbreak was limited to those who were in contact with live pigs meant that only 11 cases were identified, and spread could be controlled through contact tracing, screening of hundreds of close contacts, isolation of cases and quarantine of close contacts. This is something Singapore authorities have become very efficient in doing.

Despite all of Singapore's intensive contact tracing in 1999, no spread between people was



A Nipah patient being moved in the Indian state of Kerala in 2024. For now, at least, there is no reason to think spread of the Nipah virus cannot be controlled using the same tools used during the first outbreak of the virus in Malaysia and Singapore three decades ago, say the writers.
PHOTO: REUTERS

found. In contrast, even though there has been transmission between people of the strain now found in West Bengal and Bangladesh, this has been limited.

One can speculate that the cases in the news in West Bengal were infected by exposure to a human patient, since the newly confirmed cases are healthcare workers. Healthcare workers are

at greater risk of infection because they are in close contact with sick patients. But now that Bengali authorities have been alerted, they are undertaking preventive measures that should limit the potential for future spread.

This should involve strengthening diagnostics, ideally a cheap point-of-care test,

ensuring sufficient isolation facilities, community engagement on the danger posed by drinking raw sap, and above all, personal protective equipment for front-line nurses and doctors, since they are at such high risk of getting infected while they care for their patients.

The important caveat is: if the virus mutates to spread easily

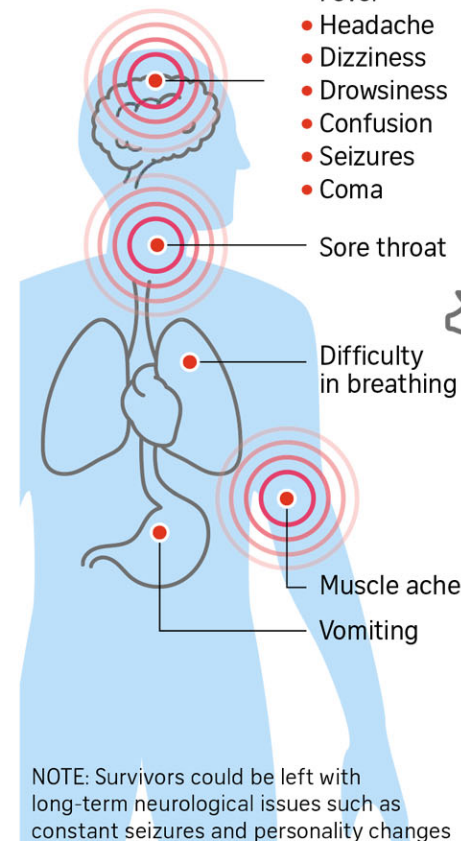
from person to person, then all bets are off the table.

Pandemics usually start when one of the thousands of viruses that are present in non-human animals spreads to humans and acquires the ability to spread between us through mutations; it is thought that that is how all the pandemics of the last hundred years have started. The WHO has

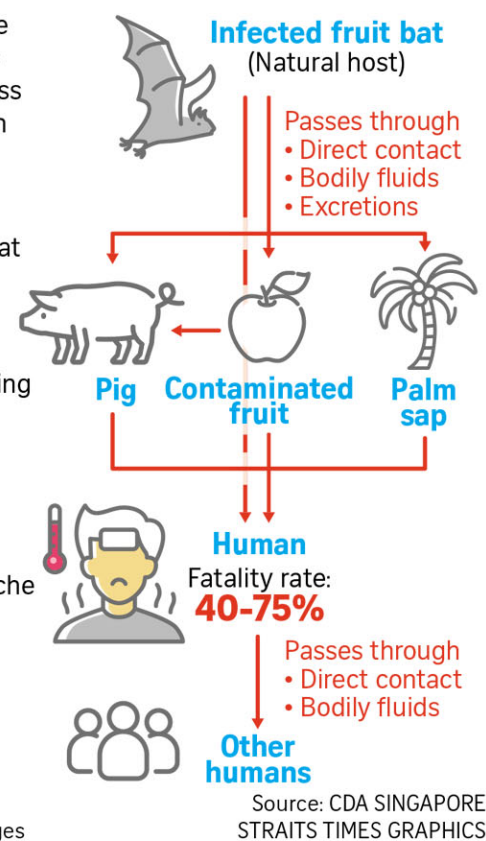
What you need to know about the Nipah virus

Health authorities across Asia are stepping up precautions following an outbreak of the virus in India. There is no approved vaccine or cure for the virus.

SYMPTOMS



HOW IT SPREADS



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listed Nipah virus as a high-priority pathogen for this reason.

With its high case fatality rate, and the current lack of a vaccine or antiviral, a Nipah virus capable of human-to-human spread would make Covid-19 look benign.

Unfortunately, as the incubation period can be longer than two weeks, we won't know for a while

the full extent of the Indian outbreak. But for now, at least, there is no reason to think spread cannot be controlled using the same tools we used three decades ago.

WHAT IT MEANS FOR SINGAPORE

At an individual level, this outbreak shouldn't require any

change from Singapore residents for now. No, you don't need to stop eating pork (though your diet may improve if you limit consumption). No, you don't need to change your travel plans, even if you were planning a trip to Kolkata, though monitoring Ministry of Foreign Affairs advice would be wise.

It is especially important that we avoid stigmatising Bengalis or anyone from the affected regions. Just as in the early days of Covid-19, when Sinophobia spread across the West, we are again seeing social media posts in other countries that use this outbreak as an excuse for vile racism. We must guard against that.

At the national level, screening is now taking place at borders, though we must realise this may not catch all cases, especially those still incubating illness. Most important will be the ability to identify cases early. If you have recently travelled to West Bengal or Bangladesh and start to feel unwell, seek medical attention early – it helps protect not just you, but also your family, neighbours and friends.

Singapore is well placed with multiple preventive measures ready to be activated: border screening, contact tracing, multiple forms of surveillance, diagnostic capabilities, and systems to refer patients to the state-of-the-art facilities at the National Centre for Infectious Diseases should any Nipah case make its way here.

In fact, it is thanks to the Nipah and, later, SARS outbreaks that we have invested in such capabilities.

INVESTING IN PREPAREDNESS AND GLOBAL HEALTH

This outbreak reminds us that we are in a highly connected world. Singapore is more connected than most, exposing us to greater risk of outbreaks.

We need to be part of the

solution to global health problems, not a bystander.

What is needed globally to mitigate the risk of a Nipah pandemic is investment: in pathogen and disease surveillance, in vaccines – the Coalition for Epidemic Preparedness Innovations is doing an early stage safety and efficacy trial – and in health systems.

A cycle of “investment and neglect” tends to follow major outbreaks: when the last outbreak is fresh in our minds, we recall how bad it was and vow to do all it takes to prevent another, but over time, people forget, and prioritise other things.

We cannot neglect preparedness for outbreaks or pandemics, despite many other pressing public health issues. As we move on from Covid-19, there is a real risk that we forget just how damaging it was.

As the US has withdrawn from the WHO and withdrawn funding from the global health system, it is vital that other countries, including Singapore, show leadership in preparing for and preventing future outbreaks.

Singapore's doctors and researchers have much to offer to our region, driving initiatives such as the ADVANCE-ID network at the NUS Saw Swee Hock School of Public Health and the Centre for Outbreak Preparedness at Duke-NUS.

These international networks create and disseminate information that is valuable not just to our region, but also to us in Singapore, because we are safer if our neighbours are safer.

We probably are not facing a Nipah-26 pandemic. But another pandemic will come, and when it does, we hope we won't regret not preparing better.

• Alex R. Cook and Leo Yee Sin are professors at the Saw Swee Hock School of Public Health, National University of Singapore.