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The Covid-19 pandemic five years on: Are we safer now?

A barricade set up to keep people out of a residential compound in Wuhan, China, in April 2020. Recognising vulnerabilities in global supply chains exposed during the pandemic, Singapore has diversified its sources for essential goods, particularly medicines and food, while also investing in local production. The 30-by-30 goal – to produce 30 per cent of the country's nutritional needs locally by 2030 – aims to reduce our reliance on external suppliers. PHOTO: AFP

The harsh reality is that global guard rails have weakened even as the risks of the next pandemic have not.

Teo Yik Ying

As the world's attention is consumed by geopolitical tensions and economic disputes, a quiet but serious crisis is unfolding in the United States – a novel strain of H5N1 avian influenza has begun infecting dairy cattle and humans.

Previously confined to wild birds and poultry, this strain has now been detected in dairy cows in Nevada and Arizona, with human cases emerging among farm workers.

While the US Centres for Disease Control and Prevention (CDC) reported that these human infections remain mild and no sustained human-to-human transmission has been observed, the situation underscores the virus' potential to adapt and cross species barriers.

Experts warned such mutations could increase the risk of a new pandemic, evoking memories of the global crisis triggered by Covid-19.

It was five years ago on March 11, 2020, that the World Health Organisation (WHO) declared Covid-19 a pandemic. Three weeks later, on April 3, Singapore declared a circuit breaker in response to the outbreak, marking an extraordinary period in our country's history that saw our borders shut, schools and businesses closed, and everyday life put on hold.

As vaccination gathered pace and the pandemic eventually receded around the world, national leaders vowed they would never again allow a virus to paralyse their economies and societies. Billions of dollars were pledged for pandemic preparedness, with commitments to strengthen health security and global response mechanisms.

But five years on, it is worth asking: Are we truly safer today, or was that resolve merely temporary?

THE RISE OF MORE FREQUENT PANDEMICS

One troubling reality is that deadly pandemics have been occurring more often in recent decades.

Over the past two decades, the world has faced several significant pandemics: Sars in 2003, H1N1 in 2009, Mers in 2012, Ebola in 2013, Zika in 2015, and Covid-19 in 2020. While the mpox outbreak in 2022 was not officially classified as a pandemic, WHO still declared it a Public Health Emergency of International Concern.

Scientists have long warned that a confluence of factors is accelerating the emergence of novel infectious diseases.

The global population surpassed eight billion in 2022, driving the expansion of housing and agricultural settlements into previously undisturbed ecosystems. This encroachment increases interactions between humans and wildlife, heightening the risk of zoonotic diseases – illnesses that jump from animals to humans.

To meet the food demands of a growing population, farming has also become more intensive. High-density livestock farming creates ideal conditions for pathogens to evolve and spread, as large numbers of animals housed in close quarters facilitate rapid transmission.

Every new infection presents an opportunity for the pathogen to mutate, potentially enhancing its ability to infect new hosts, evade immune responses, or develop resistance to treatments. This is why human workers in large-scale industrial farms often face heightened risks of infection, as seen in the H5N1 outbreaks in US poultry and dairy cattle farms.

In addition, deforestation, climate change and biodiversity loss disrupt natural habitats, forcing wildlife to migrate closer to human populations. These environmental shifts alter the dynamics of disease transmission, exposing human communities to emerging pathogens with pandemic potential.

In the past, zoonotic spillovers were largely localised to nearby communities. However, in an era of affordable and rapid international travel, pathogens can spread globally within days, turning local outbreaks into international crises.

IS SINGAPORE PREPARED?

The Covid-19 pandemic has instilled a heightened sense of public health awareness among Singaporeans. Today, it is common to see individuals voluntarily wearing masks when they are unwell and a stronger social expectation to avoid crowded spaces when sick to reduce the risk of transmission.

Beyond behavioural changes, Singapore has also taken significant steps to enhance its resilience against future pandemics. The widespread adoption of home-based learning and remote work, accelerated by the pandemic, has embedded a culture of flexibility that strengthens social resilience. Schools and workplaces now embrace digital solutions, ensuring continuity during health crises without major disruptions to education and economic activities.

An After Action Review resulted in a comprehensive White Paper outlining key lessons from Covid-19, with concrete

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The global picture is far less reassuring

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recommendations to improve outbreak responses. A crucial takeaway was the importance of a science-led, systematic approach to crisis management.

This led to the establishment of the Programme for Research in Epidemic Preparedness and Response (Prepare), a $100 million initiative that brings together experts across disciplines – including analytics, epidemiology, vaccine development, and diagnostics – to fortify Singapore's defences against emerging infectious diseases.

Recognising vulnerabilities in global supply chains exposed during the pandemic, Singapore has diversified its sources for essential goods, particularly medicines and food, while also investing in local production. The 30-by-30 goal – to produce 30 per cent of the country's nutritional needs locally by 2030 – aims to reduce our reliance on external suppliers.

Singapore has also successfully attracted pharmaceutical companies to set up local vaccine manufacturing facilities. Companies like Sanofi, BioNTech and Hilleman Laboratories will bolster regional pandemic preparedness by ensuring timely production and distribution of vaccines and therapeutics.

Institutionally, the establishment of the Communicable Diseases Agency (CDA) streamlines efforts in disease detection, prevention and control. By consolidating policymaking and operations against infectious diseases – including oversight of the National Centre for Infectious Diseases – Singapore aims to ensure a more cohesive and efficient response to health threats.

IS THE WORLD PREPARED?

Yet, regardless of how much Singapore has done, pandemic preparedness is not a challenge any one country can tackle alone.

By definition, pandemics are global crises that demand coordinated international responses. The world's collective readiness determines whether the next pandemic is swiftly contained or spirals into another catastrophe. In this regard, the current global landscape is deeply concerning.

The WHO has pushed for a Pandemic Treaty to ensure better cooperation and equitable access to vaccines, treatments, and data sharing in future outbreaks. However, despite three years of negotiations, progress has stalled due to disagreements, particularly over equity issues.

High-income countries stress the importance of rapid and transparent data sharing, particularly regarding new pathogens and their genomic sequences, which is crucial for developing diagnostics, vaccines and therapeutics.

However, resource-scarce countries worry that while they may provide critical pathogen data, they may not receive equitable access to the medical interventions developed from that data. Past experiences have shown how pharmaceutical companies from wealthy nations profited from such data sharing while selling vaccines and treatments back to low-income countries at exorbitant prices.

As a result, these lower-income countries have demanded guarantees in the treaty for fair access to affordable medical supplies during pandemics. However, high-income countries have resisted provisions that would require waiving intellectual property rights or mandating fixed percentages of medical stockpiles to be shared.

Equity is central to pandemic preparedness. Covid-19 illustrated how disparities in healthcare infrastructure and access can exacerbate outbreaks and prolong global crises. Without a concerted effort to strengthen health systems and surveillance capabilities in resource-limited regions, the world remains vulnerable to future pandemics.

FUNDING CRISIS

If global consensus remains out of reach, can regional blocs step up, and will that be enough?

The Africa Centres for Disease Control and Prevention has played a crucial role in coordinating pandemic responses across the continent, both during and after Covid-19. In South-east Asia, the Asean Centre for Public Health Emergencies and Emerging Diseases was announced in late 2020 to bolster regional preparedness.

Singapore also hosts the Asia Centre for Health Security, an academic think-tank dedicated to strengthening Asia's defences against catastrophic biologic threats, alongside the Asia Pathogen Genomics Initiative, which collaborates with regional governments to enhance genomic surveillance of emerging pathogens.

While these regional initiatives help address gaps left by the absence of a cohesive global strategy, they remain heavily reliant on financial and technical support – resources that often come from international aid. This dependence is now under threat due to shifting geopolitical priorities.

Several high-income countries, including the UK, Germany and France, have already signalled cuts to their foreign aid budgets in favour of increased defence spending. The United States' withdrawal from the WHO and the termination of USAid programmes compound the challenges to multilateral collaborations.

Critical organisations such as the World Bank, the Coalition for Epidemic Preparedness Innovations and Gavi, the vaccine alliance, play pivotal roles in pandemic prevention and response. However, these organisations now face significant funding shortfalls, which threaten their ability to fulfil their mandates.

A SOBERING REFLECTION

Against this backdrop, are we truly safer today than we were five years ago?

While Singapore has made commendable strides in strengthening its pandemic defences, the global picture is far less reassuring.

If Covid-19 was a test of global unity, the world largely failed that test. Worryingly, political will has waned, international cooperation is increasingly strained by rising nationalism, and the global systems meant to prevent and contain future outbreaks now face an uncertain future.

The question now is whether global leaders can be persuaded to change course before the next pandemic strikes.

As H5N1 continues to simmer ominously in the background, the world may not have much time left to find out.

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