

## Submission to the Commonwealth Government's Covid-19 Response Inquiry

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Dear Panel,

My name is Bowen Tan and I am a recent graduate from the [REDACTED] program at [REDACTED]. Thank you for the opportunity to make a submission and share my views and experiences about the Government's COVID-19 pandemic response.

My submission focuses on two important aspects of pandemic risk/impact mitigation. First, I'll touch on the need for Australia to improve its novel pathogen detection capability, in order to nip potential future pandemics in the bud. Second, I discuss the need to make next-gen PPE available to essential/strategic workers to ensure they're able to continue attending work without risk to them or their families.

### **Point 1: Improving Australia's Novel Pathogen Detection Capability**

Preventing future pandemics should pair efforts at stopping novel pathogens from emerging, with ensuring we have the plans and technologies to nip them in the bud quickly if the public becomes exposed to them.

Taking 17 November as the date of first human SARS-CoV-2 infection, there were 44 days between first infection and first response (31 December 2019), 54 days between first infection and genome publication (10 January 2020), and 67 days between first infection and the lockdown of Wuhan (23 January 2020). For SARS-CoV-2, this was enough time to spread across the world. Modelling shows that if Wuhan had locked down one (16 Jan), two (9 Jan) or three weeks (2 Jan) earlier, cases of COVID-19 in Wuhan could have been reduced by 66%, 86% or 95% respectively.

Despite this failure, we know that success is possible. We can stop an outbreak from turning into a pandemic if we can quickly enact the right response. During the first year of COVID-19, both Taiwan and New Zealand achieved 100 consecutive days free of community transmission. This was largely due to an understanding of the seriousness of SARS-CoV-2 while case numbers were low. The 2002-2004 SARS, Ebola, and many other examples also demonstrate that containment is possible.

I think everyone in the world would wish that Wuhan had the capability to detect a novel pathogen outbreak, disseminate information, and respond in a timely manner. Early detection and action could have led to containment rather than a pandemic – saving millions of lives and trillions of dollars.

However, in Australia, we are in no position to criticise China. We also don't have early detection capacity and we don't have plans to contain novel pathogens at jurisdictional or national levels. When a novel pathogen emerges here, we are also unlikely to be able to identify it and act early enough to prevent it from spreading beyond our shores.

We can build such systems now and get ahead of the next pandemic.

This Inquiry should recommend that the CDC write a white paper proposing options for a national system for the early detection of pathogens, including setting out the costs and benefits of such a system, and put it to the government before the end of 2024. The white paper should explore a mix of proven techniques and emerging technologies - including metagenomics. The goal should be an enduring system that can protect the lives and livelihoods of Australians from the next pandemic.

## **Point 2: Highly Effective PPE for Essential Workers**

The paper [REDACTED]

[REDACTED] explains that in a pandemic worse than COVID-19, workers who operate critical infrastructure may die or refuse to attend the workplace. If that happens, a modern interconnected society would rapidly collapse. The second-order consequences from a lack of electricity causing cascading failures in other critical sectors would far exceed the immediate consequences of the virus.

When the Inquiry thinks about support for industry, the primary goal of that support should be keeping the lights on during a future, worse, pandemic. If critical infrastructure fails, other questions like financial support or community support rapidly become irrelevant or impossible.

Among the various recommendations, [REDACTED] argue that [REDACTED] (P4E) is essential to dealing with the risk of failing critical infrastructure. The argument for P4E is that essential workers (such as those critical to providing food, water, power and law enforcement) need the confidence that they can continue to work without endangering themselves

and their loved ones. The paper provides requirements for what this kind of equipment would need to look like.

The paper also includes discussions about definitions of essential workers, ways of preparing the workforce and supply chain, and a discussion of social and technological approaches to slowing the spread of future pandemics.

I recommend that the inquiry read *Securing Civilisation Against Catastrophic Pandemics* and treat it as a foundation stone for other recommendations. That is, our first priority has to be actions that take these worst-case scenarios off the table. Action against other elements of the terms of reference are only possible and impactful if we can be confident that we're in a position to prevent a social collapse.

I'd like to thank the panel again for the opportunity to make this submission. I hope the panel finds these points convincing, and that it enhances the panel's ability to provide effective policy recommendations to the government.

Kind regards,

Bowen Tan