Submission to the COVID-19 Enquiry – Robert J Mathews

1. Introduction

As a brief word of introduction, I retired from Australia's Defence Science and Technology Group (DSTG) in 2017 after a 50 year career. While my major career activities were associated with supporting the Australian Government's chemical and biological disarmament objectives, I also spent a substantial part of my career working with Personal Protective Equipment (PPE), and a substantial part of my career supporting efforts aimed at the prevention of bioterrorism events, and the medical community's response to bioterrorism events. This included working closely with scientific and medical staff who are employed by relevant Australian government agencies and the Australian Defence Force, as well as other agencies including the World Health Organisation (WHO), INTERPOL, and the Centre for Disease Prevention and Control (CDC) in Atlanta (US).

In this submission, I briefly describe my observations and reflections of some of the difficulties experienced by the Federal Department of Health (DoH) in the handling of the Health Response Measures, particularly during the early phase of the COVID-19 pandemic (Sections 2 and 3). Based on those difficulties, I recommend that the Enquiry Panel considers several proposals which I consider will improve Australia's preparedness for future pandemics (Section 4).

2. Insufficient attention by Federal Department of Health to Future Health Challenges

I had been working with officers in the Federal Department of Health (DoH) on a range of 'biosecurity' issues since the early 2000s, in particular, since the 'reconstruction' of the Spanish Flu virus in a laboratory in 2004) and the more recent gain-of-function research on potential pandemic pathogens. This included my assisting the DoH in the development of the oversight procedures for Australian laboratories working with Security Sensitive Biological Agents (SSBAs). In 2010, I was invited by the US Government to participate in a US National Intelligence Council Workshop in Washington on future global challenges. The unclassified report from that workshop referred to the likelihood of a pandemic by 2030.[1] The report expressed concern about rapid advances in genetic engineering of pathogens and noted that "An easily transmissible novel respiratory pathogen that kills or incapacitates more than one per cent of its victim is among the most disruptive events possible". There was interest in these future health challenges when I subsequently discussed them with DoH desk-level officers, but apparently less interest from senior DoH management, based on the limited preparedness within DoH to respond to a major disease outbreak.

3. Apparent lack of appreciation within DoH of the Aerosol Transmission of Respiratory Viruses

By way of background, it had been known for decades within the Biological Defence and Disarmament communities that airborne (aerosol) transmission is a major route for infection by respiratory viruses. And this information became very clear to the medical and other health experts working on the SARS-1 outbreak in 2003 and with more recent infections, including MERS. So I had no doubt that there would be substantial levels of aerosol transmission of SARS-CoV-2, which would

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1 "Global Trends 2030: Alternative Worlds, a publication of the National Intelligence Council", December 2012, p.13. [www.dni.gov/files/documents/GlobalTrends_2030.pdf].

result in large numbers of infections unless appropriate Health Response Measures were adopted taking the aerosol infection route fully into account.

So I was very surprised when I first heard medical experts from DoH, including the DoH Infection Control Expert Group (ICEG), advising the public that there was no aerosol transmission of COVID-19 (except during certain medical procedures, such as intubation). And I was horrified in April 2020 when I first heard the DCMO of DoH advise the public not to wear facemasks as 'they are of no benefit and could be dangerous'.[2]

This led to what turned into a letter writing campaign by me to Mr Hunt and the DoH (nine letters between April 2020 and September 2021) on various aspects of the aerosol transmission of SARS-CoV-2, the important role of facemasks as part of the overall Infection Minimisation Strategy, the impact of aerosol transmission of SARS-CoV-2 on the effectiveness of various types of facemasks in different risk settings, and the impact of aerosol transmission of SARS-CoV-2 on the city hotel based quarantine facilities established early in the pandemic.[3]

For example, in a letter that I wrote to Mr Hunt in September 2020, I suggested that it would be useful for the DoH to recruit additional ICEG members with expertise in aerosol science and PPE, and for the ICEG to then review its recommendations with respect to aerosol transmission of SARS-CoV-2, the wearing of particular types of facemasks in different risk settings, and the aerosol precautions that would be necessary for a safe and effective quarantine facility. My suggestion was ignored by the DoH.

Fortunately, when I wrote to the Victorian Department of Health and Human Services about these matters in late June 2020, the Victorian officials did listen to my views and also to the similar views that had been provided by a number of internationally recognised Australian academic scientists, as well as a recently published petition signed by 239 eminent international scientists. This led the Victorian Government to 'go beyond' the advice provided by the DoH and introduce the compulsory wearing of facemasks on 22 July 2022. Other State Governments subsequently followed the lead taken by Victoria by also going beyond the advice provided by the ICEG.

However, the apparent lack of awareness or appreciation of the airborne (aerosol) transmission of SARS-CoV-2 by the ICEG resulted in the ICEG continuing to provide inappropriate advice, guidance and recommendations regarding the wearing of respirators and facemasks by the health-care workers, aged care workers, and the general community, which some experts have argued resulted in considerably greater numbers of infections within the various sectors, including in the hotel quarantine facilities.

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[2] I was subsequently advised by a former Canberra colleague that in March 2020 there was a shortage of high quality P2/N95 facemasks in the National Medical Stockpile, as most of these masks had been used during the bushfires in late 2019/early 2020, and that this advice may have been intended to reduce the possibility that members of the public would try to obtain these high-quality facemasks leaving them in even shorter supply to front-line health care workers.

[3] The decision to use hotels in the central business districts as quarantine facilities was taken during the early phase of the pandemic before the State Governments had become aware that aerosol transmission is a major COVID-19 transmission/infection route. Had the Premiers and their advisors realised the importance of aerosol transmission as an infection route, at least some of the State Governments may have made additional or alternative arrangements to better meet their quarantine requirements.

4. Lessons for the Future

Based on the handling of the Health Response Measures by DoH during the early phase of the COVID-19 pandemic, as outlined in Sections 2 and 3 above, I recommend that the Enquiry Panel considers the following proposals:

- The Australian Government to establish an inter-agency working group to keep abreast of advances in 'cutting edge' biological sciences and other developments which may indicate a future major disease outbreak.
- The Australian government, under the management of the DoH, to establish and maintain the capability to produce sufficient numbers of the various types of PPE (including N95/P2 quality facemasks) that would be necessary during a future major disease outbreak.
- The DoH, in coordination with the States and Territories governments, to establish a purpose-built quarantine facility in the vicinity of a major airport in each State and Territory.[4]
- A comprehensive review be undertaken of those parts of DoH which would have responsibilities in the management of a future major disease outbreak. A key objective of this review would be to make recommendations that would result in the development and maintenance of in-house expertise within DoH of all aspects of the Health Response Measures necessary to response to a major disease outbreak.
- Review the operation of the DoH Infection Control Expert Group, with the objective of achieving an ICEG with much broader range of expertise so that all relevant aspects of Infection Control can be considered by the Expert Group.
- Develop a formal process in which external experts (either academics or scientists working in other government agencies) would be able to have input into DoH in-house decisions and guidance provided either by the DoH in-house expertise or from the ICEG.

I would be happy to discuss these proposals in more detail with the Enquiry Panel.

With my best wishes,

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15 December 2023

[4] As suggested in a letter that I wrote to Premier Andrews in December 2020, these quarantine facilities could be designed in such a way, and be located close to public transport, so that they could be used as budget priced tourist accommodation when not required for quarantine purposes. They would not need to be 'white elephants'.