Submission to the COVID-19 Inquiry – Health Response Measures

1. Introduction

As a few brief words of introduction, I retired in 2017 after a 50 year career with Australia's Defence Science and Technology Group (DSTG). While my major career activities at DSTG 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 these events. This included working closely with scientific and medical staff employed by relevant Australian government agencies and the Australian Defence Force, as well as international and overseas agencies including the World Health Organisation (WHO), INTERPOL, and the Centers for Disease Control and Prevention (CDC) in Atlanta (US). I was also closely involved in the operation of the ANU National Centre for Biosecurity (NCB) which was established in 2007 (including in my role as Chair of the NCB Advisory Board).[1]

In this submission, I briefly describe my observations and reflections on some of the difficulties associated with the way that the Commonwealth Department of Health (DoH) handled the various Health Response Measures, in particular non-pharmaceutical measures, during the early phase of the COVID-19 pandemic (Sections 2 and 3). Based on these difficulties, I recommend that the Inquiry Panel considers several proposals which I consider will improve Australia's preparedness for future pandemics (Section 4).

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

I had been working with officers in the Commonwealth Department of Health (DoH) on a range of 'biosecurity' issues since the early 2000s, in particular, following 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 assisting the DoH in the development of the oversight procedures for Australian laboratories working with Security Sensitive Biological Agents (SSBAs). Based on my experience and expertise in these areas, 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.[2] 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 victims is among the most disruptive events possible'.

There was clearly interest in these future health challenges when I subsequently discussed them with DoH desk-level officers. However, I am unsure of the level of interest or support from senior DoH management, based on their apparent limited appreciation of PPE and quarantine requirements and other necessary protection measures, which was reflected in the limited preparedness within DoH to respond to the COVID-19 pandemic in early 2020 (as discussed in Section 3).

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[1] Unfortunately the NCB ceased to function in 2012 at least in part through lack of support from relevant government agencies.

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

3. Lack of appreciation by DoH of implications of the Aerosol Transmission of SARS-CoV-2

By way of background, it has 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 infectious disease outbreaks, including MERS. Because of the close molecular homology and other similarities between SARS-CoV-1 and SARS-CoV-2, I had no doubt that there would be substantial levels of aerosol transmission of SARS-CoV-2, which would 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 dismayed in early April 2020 when I first heard the DCMO of the DoH say that Australians should not be wearing facemasks and that 'people who wore facemasks could be putting themselves in more danger of contracting the coronavirus by doing so.'[3]

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), *inter alia*, on: the 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; the limited value of the 1.5 metre 'safe-distancing' rule, especially in indoor settings; and the impact of aerosol transmission of SARS-CoV-2 on the city hotel based quarantine facilities established early in the pandemic.[4]

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 members for the ICEG who had 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 taking note of a petition signed by 239 eminent international scientists in early July 2020. This led the Victorian Government to 'go beyond' the advice provided by the DoH and introduce the compulsory wearing of facemasks on 22 July 2020. Other State Governments subsequently followed the lead taken by Victoria by also 'going beyond' the advice provided by the ICEG.

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[3] 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 the advice provided by the DCMO/DoH may have been intended to reduce the likelihood that members of the public would try to obtain these high-quality facemasks leaving them in even shorter supply to health-care and other front-line workers.

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

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. Some health experts have argued that this incorrect advice provided by the DoH and ICEG resulted in considerably greater numbers of infections and casualties within the various sectors, including in the hotel quarantine facilities.

4. Lessons for the Future

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

- The Australian Government to establish an inter-agency working group, with active participation by relevant senior officials from DoH, to keep abreast of advances in 'cutting edge' biological sciences including research on potential pandemic pathogens, and other developments which may indicate the possibility of a future major disease outbreak.
- The Australian government, under the management/oversight 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 and maintain a purpose-built quarantine facility in the vicinity of a major airport in each State and Territory.[5]
- 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 provide the most appropriate responses in the event of a major disease outbreak.
- Review the operation of the DoH Infection Control Expert Group, with the objective of achieving an ICEG that includes a 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 (for example, academics or scientists working in other government agencies) would be able to have input into DoH in-house decisions and the guidance provided either by the DoH in-house experts or from the ICEG.

I would be happy to discuss these proposals in more detail with the Inquiry Panel. I would also be willing to provide copies of the letters that I have written to the DoH and other related correspondence to the Inquiry Panel on request.

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17 December 2023

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