

## Written Submission and Evidence (COVID-19 Response Inquiry)

### Australia would benefit from a stronger, well-coordinated public health surge capacity

The COVID-19 pandemic has underscored the importance of a well-prepared and adaptable public health workforce to manage the complexity of contemporary public health emergencies. During the pandemic, the capacity to rapidly scale the public health response was stretched or exceeded at all levels. This reinforces the necessity of an ongoing program of training and investment in public health workforce development to maintain high levels of preparedness and response capabilities to current and future threats in Australia and the region.

Many professional disciplines are required to maintain a strong public health response capacity. A well-established example is Australia's only field epidemiology training program, known as the Master of Philosophy in Applied Epidemiology (MAE), at the Australian National University (ANU), which is an applied 'learning-by-doing' practitioner training program. The MAE program is accredited by the [TEPHINET](#) (Training Programs in Epidemiology and Public Health Interventions Network) and is part of a global network of approximately 100 field programs strengthening public health systems across more than 200 countries and territories. The MAE collaborates with and complements national, state and territory health department initiatives to enhance workforce skills, health system performance and the evidence base for policies, programs, and practice.

Established in 1991, the MAE program is modelled on the highly regarded Epidemic Intelligence Service (EIS) at the US Centers for Disease Control and Prevention. In addition to responding to Australian public health emergencies, MAE graduates, students, and teaching staff frequently play critical roles in the coordination and field response to international events, including severe acute respiratory syndrome (SARS, 2002–2003), H1N1 influenza (2009), Middle East Respiratory Syndrome Coronavirus (MERS-CoV, 2012–ongoing), Typhoon Haiyan in the Philippines (2013), Ebola virus disease in West Africa (2014–2016), Cyclone Winston in Fiji (2016), and the COVID-19 pandemic (2020–ongoing).

A [recent publication](#) highlights that Australian field epidemiology staff, alumni and students were involved in a wide range of COVID-19 pandemic response activities, indicating that the MAE program is essential to the health response workforce in Australia and internationally. Of the 66 survey respondents, 90% were involved in COVID-19 response activities in Australia; within this group, 61% reported working for state or territory government departments, 10% for a federal government department, and 3% for a local government department. Other workplaces included nongovernmental agencies (5%), universities (21%), and Aboriginal and Torres Strait Islander health services and organisations (3%), with some respondents reporting multiple workplaces. Seven respondents (11%) reported working internationally on the COVID response. When information was sought on 43 COVID-19-related response activities, 98% reported their involvement in at least 1 listed activity and 55% in more than 5

activities. Eighty-two percent of respondents were involved in surveillance, 80% in reporting of data, and 71% in incident command.

### **ACDC could support and coordinate Australian workforce development**

Globally, field epidemiology training is mostly embedded in and/or closely affiliated with national government agencies. Of the 80 currently active programs around the world listed on the [TEPHINET website](#), 73 (91%) are affiliated with a national/federal government department with the majority of them being the Ministry of Health of the concerned countries. Such examples are drawn from both high-income countries (e.g., Canada, Germany, Japan, Singapore, UK, and USA) and the Asia-Pacific regional partners (e.g., Cambodia, China, Indonesia, Lao PDR, Malaysia, Papua New Guinea, Philippines, South Korea, and Vietnam).

To ensure a well-prepared Australian workforce for future public health events, training should be auspiced and funded or co-funded by a centralised governing agency. With the establishment of the Australian Centres for Disease Control (ACDC) in 2024, it is very timely to apply the lessons learned during the COVID-19 pandemic through the national coordination of public health workforce training. The MAE program was originally conceived and funded by the Commonwealth Department of Health in 1991 as a national resource, however it has since transitioned to a jurisdictional user-pays model due to shifts in policy, which has resulted in administrative barriers to rapid mobilisation and redeployment for cross-jurisdiction events, such as the COVID-19 pandemic. A return to nationalised funding and coordination would yield immediate and long-term benefits, and ensure better preparedness for future significant public health events.

A key strength of the MAE program is that it operates within the National Centre for Epidemiology and Population Health (NCEPH). NCEPH is a high performing, interdisciplinary, research and graduate teaching school of 200 staff across six diverse centres and departments. These broadly cover First Nations well-being, health economics and policy, applied epidemiology and linked data analysis, population mental health, and health workforce, with high-level partnerships with government and organisations in Australia and internationally. This provides both academic rigour, and a recognised accreditation pathway for graduates of the program. NCEPH manages the administrative and coursework aspects of the program which in partnership with ACDC will prove to be an efficient use of expertise.

### **The MAE is a model for other disciplines**

The 'learning-by-doing' model of the MAE program could be an example for other on-the-job training programs suitable for public health emergency response capacity, building on the work in other disciplines by groups such as the Public Health Laboratory Network (PHLN), and the Australasian College for Infection Prevention and Control (ACIPC). By effectively supporting apprenticeships in a range of core disciplines, the Australian public health system can be better prepared for future emergencies.

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