

# Commonwealth Government COVID-19 Response Inquiry

## AIOH Submission

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### Acknowledgements

The AIOH Council acknowledges the work of members who contributed to this submission: External Affairs Committee: Kate Cole OAM (Chair), Professor Dino Pisaniello, Professor Deborah Glass, Tracey Bence, Jeremy Trotman, Peter Knott, Dr Sharann Johnson AM and Shelley Rowett; Co-opted AIOH members: Jane Whitelaw, Mark Reggers, Dr Laurie Glossop. *Enquires related to this submission should be directed to the Chair of the AIOH External Affairs Committee at [REDACTED]*

### Who we are

Occupational hygienists are the main frontline professionals who assess worker exposure to health hazards to prevent ill health through science-based investigation and testing of the efficacy of risk controls.

The [Australian Institute of Occupational Hygienists Inc](#) (AIOH) is the largest professional body for the scientists and engineers dedicated to protecting the health of workers in Australia. Established more than 40 years ago our members are at the coal face of health and safety assessment and risk reduction, working in metropolitan, rural and remote locations. We are in a unique position to understand the often complex nature of workplace health hazards and the efficacy of the protection against occupational illness provided to Australian workers.

Our mission is to promote healthy workplaces and protect the health of workers through the advancement of the knowledge, practice and standing of occupational health and occupational hygiene. The AIOH is a founding member of the International Occupational Hygiene Association and many Australian occupational hygienists are engaged in occupational hygiene research with international collaborators. The AIOH brings world-wide experience and insights on a range of traditional and emerging occupational hygiene issues.

Occupational hygienists have a detailed understanding of air contaminants, including bioaerosols, their aerodynamic behaviour, associated worker exposures and control measures, including bioaerosols, ventilation, air treatment and personal protection. The "[Role of the Occupational \(Industrial\) Hygienist in a Pandemic](#)" was originally published in 2006 and many recommendations were implemented during COVID-19.

### Our Submission

The AIOH bring the following specific items to the attention of the inquiry for future learnings:

1. The need for occupational hygiene expertise in multi-disciplinary advisory bodies.
2. The need for improved processes for the importation and approval of respiratory protection.
3. The opportunity to leverage learnings from industry.

#### *Occupational Hygiene Expertise*

Occupational hygienists are a key group in infection prevention under elimination and containment strategies. They have unique interdisciplinary knowledge of airborne transmission and respiratory protection and effectively interact with engineers, healthcare professionals and others. For example, the AIOH supported the Australian Commission on Safety and Quality in Health Care National Clinical Taskforce through provision of expertise to review and enhance the existing National Safety and Quality Health Service Preventing and Controlling Healthcare-Associated Infection Standard, released in 2021. Numerous AIOH members supported federal and state governments in their response to COVID-19, including taskforces established to address the safety of healthcare workers and those in managed quarantine, including the National COVID-19 Clinical Evidence Taskforce Infection Prevention and Control (IPC) Panel. In addition, the AIOH delivered several webinars on relevant topics including respiratory protection and managing ventilation and infection risk.

Quarantine hotels were used in the initial COVID-19 response. Disease transmission within the hotels was related to ventilation, and pressure differentials between rooms and corridors. Occupational hygienists demonstrated the issue of unwanted air movement and the WA response included a [hotel risk rating by a certified occupational hygienist](#). This subsequently expanded to hospitals and prisons, and operation centres of FMG and Rio Tinto. In situations where it is difficult/impossible to provide adequate air exchange, the use of mobile/supplementary HERA filter systems was an option in filtering air of the virus. [ASHRAE 241 Control of Infectious Aerosols](#) is a direct consequence of this new knowledge of aerosol transmission, and enhanced ventilation is being explored in the ARC funded [Industrial Transformation Training Centre, led by QUT](#).

In addition, during the pandemic there was a lack of understanding of the difference between a surgical mask, a cloth mask and respiratory protective devices. A surgical mask is [not intended to provide respiratory protection](#) to the wearer. This lack of understanding was most evident in the community and, to some extent, in healthcare despite well-developed science applied in industrial settings. There was general resistance in healthcare to the need and [importance to conduct fit testing](#) in line with Australian and international respiratory protective device standards. Most previously had a position that a fit check was equivalent to a fit test which is not the case. Healthcare was very resistant to accepting guidance and scientific evidence from other professional fields such as occupational hygiene.

What was clear during participation in these numerous committees and groups, was the prior absence, and the value of, deep expertise in practical strategies to protect the health of workers during pandemic response planning.

**We recommend that the Federal Government include the requirement for expertise from a Certified Occupational Hygienist in multi-disciplinary advisory bodies.**

#### *Register for approved respiratory protection*

There was a surge in demand to use respiratory protection against the transmission of viruses such as COVID-19. That demand created a number of issues including:

- Uncertified and non-fit-for-purpose products flooding the international marketplace and directly advertising such products to the public;
- Insufficient information being available to support members of the public in how to use face masks correctly. This was further underpinned by frequent images of incorrect usage of face masks across popular media;
- Concerns that use of face masks were appropriate for certain public health hazards, and that their use can actually increase the risk of exposure; and
- A severe shortage of approved products (P2/N95) for those at high risk such as firefighters and health care workers.

There was a flood of non-compliant products into the country registered by the TGA as therapeutic devices prior to the market surveillance process being implemented. No central body could provide confidence that products sold in Australia met the Australian standard and had to rely on claims and documents from PRE distributors and manufacturers. This left the door open for many smaller and unknown manufacturers with dubious claims/performance, as, for many, it was the only option to select for the industry. Lobbying by the AIOH in 2020 into counterfeit products lead to a probe by the [NSW Health Minister](#) with over 1300 products being withdrawn.

Hospitals require that respirators all be ARTG registered products, which limits the range and accessibility of products, whereas the majority of countries treat it all as PPE, reducing barriers to accessibility. There is provision to select PPE not on the ARTG based on a risk assessment, but most were reluctant to do this.

[There was a lack of national standards and approach to respirator use](#), with each state doing their own thing, with the best intentions. This created inconsistencies in state health guidelines and recommendations and did not follow a precautionary approach in protecting healthcare workers. The wearing of P2/N95 respirators seemed to apply only for “aerosol generating procedures”.

The first scientific papers describing [a large scale quantitative respiratory fit testing program for health care workers](#), and [associated organisation issues](#), were co-and principally-authored, by a certified occupational hygienist in 2010. It addressed an influenza pandemic but was heavily cited in a [2020 MJA article](#) in the context of the COVID-19 pandemic. We submit that there is much to learn and many opportunities for improvement in the way that respiratory protection is approved for use in Australia’s workplaces.

**We recommend that the Federal Government allocate funds for the development of improved processes surrounding the importation and approval for the use of respiratory protection in Australian workplaces.**

#### *Leveraging off industry knowledge*

We know from a [2022 report](#) on real-world network data collected in Bucharest, that common transmission chains started with infected individuals who held jobs in the private sector and connected with non-active alters. Occupational transmission has been well publicised (e.g. [meatworks](#)), but not rigorously analysed to optimise future preventive efforts.

While the Australian government had disaster and emergency management systems in place pre-COVID-19, we note that government-run pandemic exercises were rarely run at scale ([Operation Cumpston in 2006](#)), and even more rarely involved industry. Thus, from an operational perspective, essential industries had to rely on internal health expertise for their continuity and response. Indeed, a number of industries, especially multinationals, rapidly generated best practice for disease prevention.

Many occupational hygienists work in industry and have provided feedback on the early adoption of comprehensive systems and processes to protect the health of their workforce in the peak of the pandemic. Most Australian operations of large industrial businesses had set up their crisis response teams in January 2020 when COVID-19 had emerged in the USA. Global companies often had large clinical teams, in-house medical practitioners, health promotion specialists, occupational hygienists and sometimes epidemiologists and infectious disease specialists who had worked through Ebola, avian influenza and SARS CoV1 epidemics. Industry has decades of experience in health and safety risk management and were adept at applying consequence v likelihood to maintain productivity when face to face work was still required.

Large businesses in resource and construction sectors were deemed essential services and the drive to keep providing energy and other commodities of high value meant the effort to innovate and develop best practices was well spent. One notable best practice in a [global energy company](#) whose scientists were quick to recognize airborne route as a viable source of SARS-CoV2 transmission. By July 2020 it had expanded its layers of safeguards for COVID from the typical approach of 4 x Ws (Wash hands, wear mask, watch your distance, work from home) to include 2 x Vs (vaccination, ventilation). Ventilation risk assessments were rolled out across its global onshore and offshore operations and meeting indoor air quality standards became part of pre-conditions for worksites to keep their employees at work or allow them to return to work.

For future pandemics, it would be beneficial to engage with, and utilise expertise from occupational hygienists and the experience from global companies. Australia has a number of “industry towns” where the supporting industry resources are crucial. It is well known that the loss of scarce healthcare personnel in remote communities leads to breakdown of health systems. Pandemic planning needs to identify the availability of remote industry resources.

**We recommend that the Federal Government look outwards to industry for examples of best practice for workplace health and safety.**