John Curtin Research Centre Submission to the House Standing Committee on Health, Aged Care and Sport Inquiry into Long COVID and Repeated COVID Infections, 18 November 2022

Reasonable, Practicable and Sustainable Prevention

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We are grateful to the committee for the opportunity to testify about long covid and repeated infections.

We assess that in the circumstances established by long covid and repeated infections, it is iniquitous, uneconomical, unsustainable, and inconsistent with multiple government priorities for Australia to continue to not do all that is reasonably and sustainably practicable to reduce the number of Covid infections. We call on Australia to prioritise reasonable and sustainable prevention as part of a national strategy to end the Covid emergency. Our submission establishes a case for change and presents a hierarchy of practicable interventions that governments can reasonably implement. We argue that existing laws oblige the government to do all that is reasonably practicable in that regard. And we demonstrate that doing so is consistent with multiple government priorities and is the most economically sustainable option available to the government:

Prevention does not mean lockdowns or universal mask mandates – sustainable prevention must be sustainably reasonable and practicable. Given Australia's high level of immunisation, we do not propose further consideration of the emergency measures adopted in 2020-2021.

Recommendations:

1. Acknowledge the need/case for change:
    a. Legislation imposes duties of care to ensure all reasonable steps are taken to make workplaces and healthcare safe, and to minimise or eliminate discrimination based on disability, age, and sex.
    b. Sustainable prevention is economically beneficial and aligns with other government priorities.
2. Messaging and communications:
    a. Correct the official public health messaging, especially around transmission mechanisms and advice on prevention and protections.
    b. Ensure messaging is consistent with the legislative hierarchy (health guidelines do not supersede legislated obligations to protect the public from harm).
    c. Establish a local-level traffic light warning system based on user-needs.
    d. Transparency and accountability for advisory groups that provide official health advice to government.
3. Establish Indoor Air Quality as national priority legislation and investment:
    a. Best practice case study: Belgium
    b. Direct investments in filters or ventilation in public venues
    c. Ensure low-cost air filters and high-quality ventilators are easily available
    d. Improve face masks, with 'public adoption' as a design objective
    e. Establish air quality standards in building codes
4. Infectious disease leave:
        i. 20 days sick leave for infectious diseases
        ii. establish a Casuals Wages Insurance Scheme for Infectious Diseases, funded by a dedicated casual salary loading

The world cannot remain in a state of permanent crisis response, but few countries if any are yet to develop a response that is sustainable. At one extreme are countries where the burden of disease is unsustainable, while at the other is China where the cost of prevention is unsustainable. People long to put Covid behind us, but truly doing so requires a sustainable solution. This submission focuses on practical steps that can reasonably be done, support government priorities and benefit the economy. At all times, the intention is to reduce the net burden on the public, not to increase it.

The need: a case for change

The case for change is based on three critical facts. First, the mounting evidence of Long-Covid and post-covid sequelae means that the impacts of Covid on individuals are now known to be much greater than was earlier predicted.[1] Second, evidence that repeated infections are not uncommon and result in compounding risk and severity mean that the burden of disease can always get worse if we continue to allow Covid to spread unchecked. Third, it is clear that Covid discriminates against protected populations including based on disability, age, and sex. That discrimination manifests as a disproportionately high prevalence of repeated infections and long covid, and a disproportionate prevalence of severe long covid.

That Covid is more harmful than predicted and that every infection makes the situation worse means that prevention always results in an absolute improvement in ultimate public health outcomes, and that the improvement is more significant than previously imagined. That Covid discriminates means that existing anti-discrimination legislation imposes on government obligations to minimise discriminatory outcomes as far as practicable based on a risk management approach.

It is important for government to properly understand these two points. There is a misleading idea that has been promoted by responsible authorities including Chief Health Officers that contracting Covid is inevitable but will only happen once, and therefore all that can be done is to ensure people are maximally immune when they do eventually meet Covid. But there is nothing inevitable about being infected five or 10 times: the number of infections each person experiences depends on our behaviour. Fewer infections is always preferable to more infections, and fewer infections each year mean fewer in total over a life time. Reducing the number of infections from each wave matters, not just for the burden placed on health systems but also for the final burden of disease. It is not clear that governments have understand this point, and it is critical to informing our proper response.

That Covid discriminates against protected groups is also critical for government to understand because it implies that governments are subject to particular legal obligations. Our submission outlines several preventative measures and demonstrates that they can only be described as reasonable in the circumstances. Because such reasonable preventative measures are available, governments have obligations as regulators and as employers to adopt these and other reasonable measures as far as is practicable. Failure to do so would leave government in a state of non-compliance with multiple Acts, as outlined below.

[1] This information has been available for many months, and all levels of government had an obligation to act on it following the precautionary principle much earlier than now. But now, the evidence has become incontrovertible, and government's non-compliance is unquestionable.

Government regulators are required to take actions to drive compliance with relevant legislation. This begins with clarity around those rules, communication and education, enforcement as a deterrent, consequences / penalties as a deterrent (perception of getting caught etc – increased communication around rules and compliance).

Covid discriminates

There is clear evidence that the prevalence and severity of long covid and repeated infections discriminates against protected groups, including based on disability status, age, and sex. The US CDC Household Pulse Survey reports the prevalence of long covid in the US.[2] Some of the data (as of 6-10-2022) from their survey is summarised below:

	Prevalence: Those who ever experienced long covid as % of		Severity: % of all adults whose covid caused		% of adults who ever had covid
	all adults	adults who ever had Covid	any limitations	significant limitations	
Nationally	14.2	29.6	5.9	1.8	48.2
By Age:					
18-29 years	14.9	27.1	5.1	1.2	55.4
30-39 years	16.0	28.7	6.1	1.5	55.9
40-49 years	17.6	31.9	7.0	2.4	55.6
50-59 years	16.0	33.9	7.3	2.3	47.5
60-59 years	11.4	29.6	5.3	1.7	39.0
70-79 years	8.1	25.3	4.3	1.7	32.4
80 years and above	6.4	20.4	-	-	31.8
By sex:					
Female	17.3	35.1	7.1	2.1	49.5
Male	10.9	23.5	4.7	1.6	46.9
By education:					
Not finished high school	18.6	42.5	9.0	5.0	45.0
High school	12.9	29.2	5.0	1.6	44.9
Some college	17.2	34.8	7.3	2.1	49.7
Bachelor's or higher	11.5	22.6	4.7	1.1	50.9
By Disability status:					
With disability	22.4	48.6		5.2	46.2
Without disability	12.2	25.7		1.1	47.6

Source: CDC Long Covid, Household Pulse Survey, phase 3.6

Because long covid discriminates, governments must consider anti-discrimination obligations in determining the appropriate response to Covid. These are discussed in the following sections with respect to disability, age and sex.

[2] CDC, National Center for Health Statistics, Household Pulse Survey: Long Covid, https://www.cdc.gov/nchs/covid19/pulse/long-covid.htm#technical_notes

Government exposure to compliance risk

Existing laws and regulatory instruments at both state and federal levels impose powers and obligations on Australian governments and companies in regard to the mitigation of Covid. We consider some of the nationally consistent powers and obligations arising under the following:

1. Australian Charter of Healthcare Rights
2. Work Health and Safety Act 2011
3. Disability Discrimination Acts 1992
4. Aged Discrimination Acts 2004
5. Sex Discrimination Act 1984

Australian Charter of Healthcare Rights

The Australian Charter of Healthcare Rights (the Charter) establishes that all people in all places where health care is provided in Australia have a right to:

- receive safe and high-quality health care that meets national standards, and
- be cared for in an environment that is safe and makes them feel safe.[3]

The Charter is determined by the Australian Commission on Safety and Quality in Health Care (the Commission), which is a Commonwealth entity that is accountable to the Commonwealth Minister for Health and Aged Care.

The Commission was established by the *National Health Reform Act 2011*[4]. These Acts require the Commission to formulate, promote, support, encourage, and monitor the implementation of standards, guidelines and indicators relating to health care safety. The Commission developed National Safety and Quality Health Service (HSQHS) Standards, which require health service organisations to use a charter of rights consistent with the Australian Charter of Healthcare Rights. All partnering healthcare providers are required to conform with the Commission's guidelines.

The Commission's established guidelines on infection prevention and control systems require that:

> *Evidence-based systems are used to mitigate the risk of infection. These systems account for individual risk factors for infection, as well as the risks associated with the clinical intervention and the clinical setting in which care is provided. A precautionary approach is warranted when evidence is emerging or rapidly evolving.*
>
> *Patients, consumers and members of the workforce with suspected or confirmed infection are identified promptly, and appropriate action is taken. This includes persons with risk factors for transmitting or acquiring infection or colonisation with an organism of local, national or global significance.*

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[3] Australian Commission on Safety and Quality in Health Care, Australian Charter of Healthcare Rights, second edition, https://www.safetyandquality.gov.au/sites/default/files/2019-06/Charter%20of%20Healthcare%20Rights%20A4%20poster%20ACCESSIBLE%20pdf.pdf

[4] National Health Reform Act 2011 (Cth) https://www.legislation.gov.au/Details/C2022C00237

> *The health service organisation is clean and hygienic and has well-maintained and configured engineering systems for the delivery of effective models of care.* [5]

Action 3.13 of the guidelines requires that health service organisations have processes to maintain safe environments, respond to environmental risks (including novel infections), require appropriate cleaning and disinfection, provide access to training on cleaning processes (including for novel infections), audit the effectiveness and compliance of those processes, and use the results of their audits to improve their processes.

In short, Australian hospitals are required by the Commission to mitigate infection risks, account for individual risk factors, adopt a precautionary approach, act promptly and maintain well engineered systems for effective care. In the context of Covid, the Commission's guidelines clearly require basic precautions such as the use of ventilators and air filters throughout healthcare settings. Under the Act, the Commission is required to promote and monitor the implementation of these obligations and to report to the health minister.

The National Safety and Quality Health Service Standards also impose obligations toward employees. Action 3.16 states that Health Service Providers are required to promote non-attendance at work and avoid visiting or volunteering when infection is suspected or actual, to "manage and support employees who need to isolate following exposure to infection, monitor for and manage outbreaks, , and plan for continued service provision during pandemics of periods of increased risk of transmission of infection.

There is widespread evidence on the public record that many if not all health service providers are non-compliant with these guidelines, and that decisions by health ministers are themselves non-compliant and therefore unlawful.

The Commission has also formulated the *Australian Guidelines for the Prevention and Control of Infection in Healthcare*[6]. Those guidelines identify separate Covid specific resources regarding PPE produced by the Commission itself, but also indicate that information relevant to Covid for health and other care settings should be found in advice from the Infection Control Expert Group (ICEG).

ICEG have endorsed a set of Covid guidance for health workers that the Commission indicates must be complied with.[7]

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[5] Australian Commission on Safety and Quality in Health Care, National Safety and Quality Health Service (NSQHS) Standards: Preventing and Controlling Infections Standard, https://www.safetyandquality.gov.au/standards/nsqhs-standards/preventing-and-controlling-infections-standard

[6] National Health and Medical Research Council, Australian Commission on Safety and Quality in Health Care, Australian Guidelines for the Prevention and Control of Infection in Healthcare, 2019, https://www.safetyandquality.gov.au/sites/default/files/2022-09/australian_guidelines_for_the_prevention_and_control_of_infection_in_health_care_-_current_version_-_v11.13_19_september_2022.pdf

[7] Australian Government, Department of Health and Aged Care, ICEG-endorsed resources for infection prevention and control, https://www.health.gov.au/resources/collections/iceg-endorsed-resources-for-infection-prevention-and-control

For instance, ICEG's *Guidance on the use of personal protective equipment (PPE) for health care workers in the context of Covid-19*[8] outlines the minimum national standard for PPE for health care workers in the context of Covid. It advises that workers in a high-risk zone should use respirators:

> *healthcare workers providing direct care or working within the patient / client / resident zone for individuals where assessment suggests a high-risk of transmission, should use P2/N95 respirators rather than face masks, along with the other PPE required.*

To determine if a zone is high risk, the guidance indicates that the following factors should be considered:

> *Patient / client / resident pre-existing likelihood of COVID-19 [based on...] Current prevalence and transmission of COVID-19 in the population and whether there are unlinked cases of COVID-19 in the community.*

As there has not been a moment since last August where there were no or few unlinked cases of Covid in the community, Australia has been in a state of constant high risk since that time. Consequently, the official guidance requires healthcare workers to use P2/N95 respirators whenever they are providing direct care or working in a patient / client / resident zone. However, we regularly see evidence that these requirements are not complied with or enforced.

For example, NSW Ambulance workers attending a cruise ship with 800 confirmed cases of Covid were photographed wearing face masks instead of the P2/N95 respirators that the guidelines require for working in a high-risk zone.[9] It may be that the workers themselves acted against instructions, but much more likely is that they have not been instructed to wear P2/N95 respirators or adequately trained on appropriate use of PPE in the context of Covid, as is required. The most likely explanation is that NSW Ambulances is in non-compliance with the guidelines, in part because the Commission is failing to promote or monitor compliance, as required by the Act.

Non-compliant ministerial decisions

Recently, some Australian states have made ministerial decisions to stop taking reasonable actions to ensure health care is safe or that it is offered in a safe environment. In particular, decisions by some states to no longer require that facemasks are worn in healthcare settings cannot be described as consistent with the Australian Charter of Healthcare Rights.

The decision of National Cabinet to rescind isolation requirements with no alternative protection (despite more sustainable measures being available) appears to be inconsistent with government obligations to public safety. We discuss some of those measures in our recommendations section below, but in brief: it was open to National Cabinet to establish a system of infectious disease sick

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[8] Australian Government Department on Health and Aged Care, Guidance on the use of personal protective equipment (PPE) for health care workers in the context of COVID-19, https://www.health.gov.au/resources/publications/guidance-on-the-use-of-personal-protective-equipment-ppe-for-health-care-workers-in-the-context-of-covid-19

[9] Tweet: @BreezieLT, 9:51 AM · Nov 12, 2022, https://twitter.com/BreezieLT/status/1591202008803217410?s=20&t=Z_FNGn1BnYIPoS_3sSeC7Q

leave to replace compulsory paid isolation. Such a system would have significantly reduced the health and economic burden of disease while satisfying the need for fiscal responsibility.

Similarly, states have made little effort to install air filters in hospitals or other healthcare environments. Air filters are cheap to buy and install and are highly effective. The Australian Charter of Healthcare Rights clearly establishes a positive legal obligation on governments to ensure hospitals are safe environments. In the context of Covid, that means at a minimum: installing air filters in all hospital wards and regularly checking the air safety in healthcare settings. Governments should also ensure that GPs, dentists, and other healthcare providers are providing appropriately safe environments. The cost of air filters should be borne by state governments and compliance should be enforced.

This raises questions as to whether responsible commissions, departments, or other groups are appropriately advising ministers. Ministerial decisions that directly contradict legislated obligations and official guidance suggests a widespread breakdown in governance processes. It is likely that the only way to re-establish responsibility and accountability is through a Royal Commission.

The Prime Minister has previously been asked about the prospect for a Royal Commission. His response, and that of other public figures, indicated that such an inquiry should occur *after* the pandemic is resolved. This misunderstands of the nature of Covid: the pandemic will never be complete. The right time for a comprehensive Royal Commission into Australia's response to Covid is now. But the Australian government should not wait for a Royal Commission to instruct it to return to compliance with legislated obligations. That should occur immediately.

Work Health and Safety Act 2011

References to the Act in this section refer to the Commonwealth Work Health and Safety Act 2011 (see Appendices for relevant text).[10]

Since work health and safety legislation is approximately nationally consistent, the analysis will focus on the commonwealth Act but the logic applies similarly to all states.

The Act clearly establishes that anyone conducting a business or undertaking, anyone who manages or controls a workplace, or any officers of such a person all have a duty of care. It further imposes penalties for reckless non-compliance up to $600,000, 5 years imprisonment or both if a person with a duty of care "engages in conduct that exposes an individual to whom that duty is owed to a risk of death or serious injury or illness". It would be impossible to argue that failing to take reasonable precautions to reduce the risk of exposure to Covid in the workplace did not recklessly impose a risk of death or serious illness.

A best practice approach to the proportionate management of harm from Covid is a risk-based approach. The WHS Act provides a risk-based framework to reduce the harm of Covid to workers and the public. This involves an assessment of the risk posed by Covid, considering the likelihood of catching covid and consequences of having Covid.

The level of risk is then compared to levels risk tolerance - the acceptable level of harm to workers and the public. If the risk is higher than tolerance levels, then further mitigation/protection

[10] Work Health and Safety Act 2011 (Cth) https://www.legislation.gov.au/Details/C2011A00137

measures are required until the risk/level of harm is lowered to acceptable levels. If the risk is lower than tolerance levels, mitigation measures may be removed.

Therefore, all reasonable measures must be taken to reduce the likelihood and consequence of harm from covid. Governments are exposed to risk on multiple fronts:

1. Regarding their legislative objective of securing compliance with their WHS Acts, despite adequate legal powers and compliance frameworks to enforce the law. The legislation has been tested for other workplace risks and has proved adequate to secure protection against many other sources of harm. Reasonably practicable protections that would predictably result in safer work environments are widely known but disregarded by officials.
2. Governments are not fulfilling their duty of care to their workers by complying with their own legislation. For instance, schools and hospitals (where governments are the employer) are workplaces in which masks are not compulsory for all people who may transmit or catch Covid, nor are government employers taking reasonable precautions to ensure work environments have safe air, either by installing filters or improving ventilation. Non-compliance with their own rules sets a wide-spread culture of the acceptance of unacceptable risk that extends beyond government to other sectors, or a perception that the risk is lower than it is in reality. Government also risks their reputation as a regulator and an employer.
3. Governments are not applying the law consistently between sources of harm - Covid is not being mitigated by measures that are proportionate to the likelihood of transmission and the degree and duration of harm to the worker. There are few requirements in workplaces to mitigate Covid, whereas steel cap boots are required to protect workers' toes from bruising, and watering the ground for dust suppression on mine sites reduces damage to workers' lungs, but few measures are being taken to protect workers from the most prevalent risk of death or serious illness, which is Covid.
4. Governments are not applying their own legislative hierarchy correctly - they are applying health policies and guidelines as if they take precedence over legislated obligations in WHS Acts – this is not lawful. This is of significance since the risk tolerance (level of acceptable risk) in WHS Acts (as low as reasonably practicable) is much stricter than that of policies and guidelines that deliver to other government and political objectives. This mistake in law would be a reputation risk to government.
5. Governments are not providing accurate advice, information, education, and training. For instance, the Australian Department of Health currently provides advice about staying Covid free that incorrectly advises: "To stay covid free: wash or sanitise your hands, maintain physical distancing (1.5m), keep your covid vaccinations up to date, stay at home if you're unwell and get tested."[11] This advice is unscientific and should be considered disinformation, placing the Health Department in a state of non-compliance with its obligations. The guidance is contradicted by widely known facts about the transmission mechanisms of Covid including the official positions of the WHO and the Australian

[11] Australian Government Department of Health, Do I need to Wear a Mask? https://www.health.gov.au/sites/default/files/documents/2022/03/coronavirus-covid-19-do-i-need-to-wear-a-mask.pdf

Government. The disinformation promoted by the state health department directly misleads the public and prevents people with a duty of care from discharging their obligations appropriately.

6. The Australian Government is not encouraging unions and employer organisations to take constructive roles that put the protection of the worker at the centre of their priorities, as required by WHS Acts. This engagement would provide fair and effective workplace representation, consultation, co-operation to resolve the issue of Covid risk to a level that is widely acceptable, including by groups that are protected against discrimination.

Disability Discrimination Act

References to the Act in this section refer to the Commonwealth Disability Discrimination Act 1992.[12]

Covid discriminates against people with disabilities. People who have disabilities are around seven times more likely to experience sever limitations due to long covid than are people without disabilities. The risk of death from Covid also disproportionately affects people with certain disabilities, especially immune dysfunction.

The Act obliges government to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community, including by promoting recognition and acceptance of that obligation. Unlawful discrimination includes failing to make reasonable adjustments that would ensure a person is not treated less favourably because of their disability status (s5.2).

Indirect discrimination is also unlawful. This includes situations where someone imposes conditions that would disadvantage a person with a disability to comply with, but where reasonable adjustments would have eliminated the disadvantage (s6.1).

For instance, requiring in-person school attendance or making telehealth unavailable likely constitute indirect discrimination unless reasonable steps are taken to mitigate the risks that disproportionately harm people with disabilities.

In the case of schools, reasonable precautions would include at least:

1. the provision of air filters in every classroom,
2. mask mandates at least when local prevalence of Covid is above a certain (low) threshold
3. Freely available masks and effective tests.
4. The provision of truthful and helpful advice, information, and training.

In the longer term, reasonable precautions at schools may also include improved ventilation and incorporating air safety standards into the building code.

Similar considerations apply to all venues that people with disability may be expected to access, including hospitals, workplaces, and publicly accessible buildings.

[12] Disability Discrimination Act 1992 (Cth) https://www.legislation.gov.au/Details/C2022C00087

The Act also applies to people who are associates of people with disability, for example, children or parents of people with disability. For instance, a hospital that employs staff with disabled children must ensure that the level of infection safety is appropriate for the disabled children, even if those children do not appear at the workplace. Parents must be able to both access their workplace and discharge their obligations as parents without imposing unfavourable outcomes on the children. If hospitals or schools or any workplace are not made sufficiently safe, then they would be unlawfully discriminating against the disabled person indirectly.

Schools are another example where this obligation exists. Neither students nor their family members who may have disabilities may be discriminated against by schools failing to take reasonable steps to ensure that people with disability are not disadvantaged. Because Covid is known to disproportionately harm people with disability, in practice this means that schools and other places are required to take all reasonable steps to minimise the risk of Covid, even if health officials do not actively encourage those steps. Being non-compliant with these obligations establishes a legal liability that would be inconsistent with the obligations of any relevant public employee, for instance.

The prohibition of discrimination in employment also applies to Covid. People with disabilities who have heightened risk of adverse outcomes from repeated Covid infections or Long Covid may not have their employment terminated for seeking to protect their safety.

Aged Discrimination Act

References to the Act in this section refer to the Commonwealth Aged Discrimination Act 2004.[13]

Covid discriminates against people because of their age. Because Covid discriminates, failing to take reasonable adjustments or precautions may constitute unlawful discrimination.

The Act obligates governments to eliminate, as far as possible, discrimination on the ground of age in work, education, access to premises, provision of goods, services, facilities, and accommodation, to ensure as far as practicable that everyone has the same rights before the law regardless of age. To achieve this objective, governments are required to promote recognition and acceptance of the principle that people of all ages have the same fundamental rights and to remove age-related barriers to participation in society.

Covid is the biggest current age-related barrier to participation in society, but Australian governments have done more over the past year to promote the principle that people do not need to remove Covid as a barrier to participation than the opposite. Australian governments are non-compliant and acting unlawfully whenever they promote the idea that we do not need to minimise Covid transmission as much as is practicable.

S15 of the Act further establishes that imposing practices that are not reasonable in the circumstances and are likely to disadvantage people of a certain age constitutes unlawful indirect discrimination. The burden of proving that a practice is reasonable in the circumstances lies on the discriminator.

[13] Age Discrimination Act 2004 (Cth) https://www.legislation.gov.au/Details/C2022C00111

It may be unlawful to prevent younger people from accessing vaccines if the burden of proving that the requirement is reasonable has not been met. In our judgement, ATAGI's advice on the risks of Covid to children under 5 is fatally flawed. Our assessment is that it cannot be considered that withholding vaccines from children under 5 has been proven by ATAGI to be reasonable in the circumstances.

The Age Discrimination Commissioner is doing exemplary work in relation to elder abuse but could be doing more with respect to the discriminatory age component of Covid and protections against Covid. This could include promoting relevant understandings of the Act with respect to Covid, undertaking research and education about the age-discrimination features of Covid and Covid protections, or examining regulations and decisions around Covid protections (especially those such as the removal of isolation requirements or mask mandates in hospitals).

Recommendations: Reasonable, Practicable & Sustainable Prevention

The government is obligated to take reasonable and practicable steps to minimise Covid transmission so as to comply with the Australian Charter of Healthcare Rights, the Work Health and Safety Act, and the Disability, Age and Sex Discrimination Acts. This section identifies a hierarchy of actions that are reasonable and practicable in the circumstances. It also presents a brief program logic for how the proposed intervention would help the government return to compliance while also supporting a range of other government priorities.

1. Highly practicable / quick wins: messaging and communications
    a. Correct public health messaging available from government agencies, especially around transmission mechanisms and advice on prevention and protection
    b. Ensure messaging is consistent with the legislative hierarchy, so that health guidelines are not perceived to take precedence over legislated requirements to protect the public from harm
    c. Include a traffic light warning system at the local level
    d. Transparency & accountability for advisory organisations: groups that provide health advice to government (eg ICEG, ATAGI, AHPPC) must meet proper governance standards
2. Practicable with minor investment: improve air safety
    a. Direct investments in filters or ventilation in public venues
    b. Ensure low-cost air filters easily available
    c. Ensure high-quality masks freely available
    d. Improve face masks, with 'public adoption' as a design objective
3. Achievable with legislation: Infectious disease leave
        i. 20 days sick leave for infectious diseases
        ii. establish a Casuals Wages Insurance Scheme for Infectious Diseases, funded by a dedicated casual salary loading

Highly practicable / quick wins: messaging and communications

Correct public health messaging
The most low-cost high impact improvement available is for health authorities to begin aligning their advice with science, as they are legally required to do. This is most critical around correct acknowledgement of transmission mechanisms, potential consequences of covid, steps that people can take to avoid infection, and a proper application of the precautionary principle.

Ensure messaging is consistent with the legislative hierarchy, so that health guidelines are not perceived to take precedence over legislated requirements to protect the public from harm
Include a traffic light warning system at the local level.

Ensure messaging is consistent with the legislative hierarchy
Currently, health guidelines are being treated as if they take precedence over legislation such as the Occupational Health and Safety Act, or the Age, Sex, or Disability Discrimination Acts. This is not correct and is resulting unlawful conduct under the acts. People with duties of care should be made aware that they face severe penalties up to $600,000 and 5 years in prison if they recklessly expose people to a risk of death or serious injury or illness. And they need to understand that failing to take reasonable precautions to prevent the spread of Covid in workplaces would amount to a reckless noncompliance with their duty of care.

Similarly, regulators need to be reminded that the standards they enforce are their own legislated standards, not the latest announcement from the Chief Health Officer.

Traffic light warning systems
Covid poses different risks to different people, and different people also have different levels of risk tolerance. A traffic warning system needs to be local level and relatively fine-tuned. People at high personal risk may determine that when low to moderate levels of Covid were prevalent, actions such as “going to the supermarket with a mask” or “meeting one friend at an outdoor venue” was safe, but that when high levels of Covid were prevalent then even those actions were unsafe. People at less personal risk are unlikely to take precautions that are not required.

Transparency & accountability for advisory organisations:
Throughout the pandemic, governments have often responded to questions about various decisions, “we follow the health advice”. This effectively shifts decision making onto bodies that lack transparency, are often unchallengeable, and in practice are unaccountable.

Government bodies of various kinds that provide health advice should meet proper governance standards. What is the full range of relevant advisory and regulatory bodies? Who is appointed to these bodies? On what basis and under what terms? What is the process of reviewing their advice? If their advice is bad, how can it be over-turned? If their members are routinely providing bad advice, who is responsible for holding them to account? Does their advice necessarily become government policy or is it balanced against other advice or interests?

Independent agencies such as the Reserve Bank of Australia (RBA) make a single decision on a regular schedule and are subject to extreme scrutiny. But bodies such as the Infection Control Expert

Group (ICEG), Australian Technical Advisory Group on Immunisation (ATAGI), the Australian Health Protection Principals Committee (AHPPC) and others make potentially far more consequential decisions, yet very few Australians have so much as heard of them. This is not suitable in a well-functioning Westminster system of government and may have resulted in some inadequate advice.

For instance, on 29 September 2021, ATAGI offered different advice to individuals in greater Sydney because of then-current outbreaks relative to other adults, who it wrongly assessed were at lower risk.[14] The then-low risk was known to be temporary and a result of emergency interventions. ATAGI seemingly did not consider that vaccination needs to happen before exposure to the virus, not after. That they advised withholding vaccines from certain groups on the basis that the current risks of infection were low demonstrated a fundamental misunderstanding of either the crisis itself or of risk analysis.

Chief Health Officers of some States on some occasions have declared that it is essential that everyone becomes infected with Covid. This tragically irresponsible advice seems to be based on the unscientific view that Covid is a one-time infection. The reality of multiple infections strongly refutes any notion that infection is inevitable and so should be embraced at a point of high immunity. Instead, the number of infections strongly influences the risk to health, and so Covid should always be avoided and minimised, even by people who have already been immunised or infected or both.

More recently, both commonwealth and state departments of health have been wrongly advising that "the best way to prevent Covid is to wash your hands." This advice demonstrates a fundamental miscomprehension of the transmission mechanism of SARS-CoV02. It is based on the belief that fomites are a significant vector of transmission: they are not. The advice is unscientific and causes Australians to be needlessly vulnerable to death or severe harm to health.

Reviewing the governance architecture of health advice and holding advisory groups accountable for unscientific advice should be a priority of the government as it seeks to manage the burden of long covid and repeated infections.

Practicable with moderate effort: improve air safety

Indoor air quality standards

The government should aim to improve indoor air quality in enclosed areas accessible to the public. The Kingdom of Belgium has what may be considered best practice legislation toward this goal. Upon request, the Belgian Ministry of Health has provided via their Embassy in Australia, an unofficial translation of the explanatory memorandum of their "Preliminary draft law on the improvement of indoor air quality in enclosed areas accessible to the public", submitted as a separate attachment.

1 million air filters for public indoor spaces

Improving indoor air safety may be the most sustainable and low cost means of lowering the prevalence of long covid.

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[14] Australian Government Department of Health and Aged Care, ATAGI update following weekly COVID-19 meeting – 29 September 2021, https://www.health.gov.au/news/atagi-update-following-weekly-covid-19-meeting-29-september-2021

Commercial air filters retail at a cost of between $200-900. The ABS reports that there are just over 4 million students enrolled across 9,500 schools in Australia.[15] Assuming an average class of 20, we could estimate that there are around 200,000 classrooms or 21 rooms per school. Assuming that the Department of Education is able to procure air filters at a cost of $400 per unit plus $50 per installation it could procure 200,000 air filters to Australian schools at a total procurement cost of $80 million plus $10 million for installation, making a total program cost of $90 million.

In reality, many of the schools would be able to make very effective use of DIY air filters, such as Corsi-Rosenthal Boxes (CI Box). These cost around $200 per unit and can often outperform commercial units. This would especially be true at primary schools where the activity would involve an engaging level of craftwork. If half of the 200,000 air filters were DIY versions at $200 per unit, and only half were procured at retail values of $400 per unit, the average cost would be $300 per unit, reducing the total procurement cost by 25% and bringing it to $60 million rather than $80 million. It could be lowered further to just $40 million if all 200,000 filters were at the $200 price point. Assuming each unit would still involve $50 in installation costs, the total program cost would be $50 million for 200,000 air filters (21 units for every school in Australia).

Measuring air quality is also important. CO2 meters are the best tool presently available for this purpose, although they are better indicators of ventilation rather than the effectiveness of filtration. Nonetheless, CO2 meters retail for around $800. If each school were provided a single CO2 meter, the total program cost would be around $7.6 million. CO2 monitors provide incredibly detailed data that would provide astounding material for students to use in practicing data analytics, learning about the physics of aerosol dynamics and other related subjects. Because the data is directly relevant to their own health and is determined by their own actions, it could be expected to be atypically engaging.

A more widespread program that incorporated all public rooms in Australia could also be considered. For non-school contexts, DIY versions are less appealing. A program of procuring 1 million air filters at $800 per unit would cost $800 million. Assume an additional $50 per installation bringing the total program cost to $850 million.

Maintenance can be required, including regularly replacing filters. Filters that are used 8-10 hours per day may need to be replaced every 6 months at a procurement cost of around $25 per replacement, meaning the sustainment could involve an additional cost of around $50 million per year in replacement parts and $100 million in maintenance work. On those assumptions, maintenance of the program would cost $150 million per year, or $525 million over four years (assuming 7 replacement cycles).

[15] Australian Bureau of Statistics (2021), Schools, https://www.abs.gov.au/statistics/people/education/schools/latest-release#schools

A program of this scale could have a significant impact on the reproductive rate of Covid across the country, but the benefits would not be contained only to Covid: all other infectious respiratory diseases would also be reduced by such an investment.

On top of the impact on public health, improving air quality could have a meaningful impact on Australia's total productivity. Every office worker in Australia is familiar with the slump in alertness that occurs toward the end of the day. It may be that this is caused by spending too many consecutive hours in insufficiently oxygenated indoor air.

Recent studies have demonstrated that CO2 levels of 1,800 ppm in classrooms are correlated with a 24% fall in student cognitive function compared to 600ppm.[16] Put another way, reducing the CO2 level from 1,800ppm to 600ppm is associated with a 16% increase in cognitive function. Were this to replicated in offices across Australia, it could have a significant impact on the productivity and mood of Australian workers.

Improving air-safety is a reasonable and practicable measure that would lower governments' exposure to risk and support a number of other government priorities. For instance, improved air safety would reduce barriers to workforce participation that disproportionately affect people with disabilities and women. Improved air quality would reduce the number of people out of work due to illness, which is a significant drag on productivity. For instance, the Treasurer reported that 31,000 Australians were out of work on any given day during the recent Omicron wave.[17] The Brookings Institution has estimated the number of Americans out of the workforce due to long Covid to be significantly higher, reporting as many as 4 million Americans too sick to work due to long Covid in August 2022.[18] And improved air quality would reduce the number of people succumbing to long Covid in each wave, meaning fewer newly chronically ill people each year and therefore fewer over all.

Ignoring this priority has the potential that long Covid sufferers eventually need support along the lines of the NDIS. If 5% of infections result in long Covid and we continue adding around 1 million infections every month as has happened this year, Australia could see over 500,000 newly disabled people every year, with no reason to assume that the number would reduce over time unless we reduce the rate of Covid infection.

Ensure low-cost air filters easily available

Safe air should not only be available for public spaces – employers have a duty of care to their employees under WHS Legislation and the home is known to be one of the main venues for covid transmission. Australia should have a well-supplied market for air filters. Local production and

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[16] Brink et al, "Classrooms indoor environmental conditions affecting the academic achievement of students and teachers in higher education: a systematic literature review", Indoor Air, 31(2), March 2021, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7983931/

[17] Catie McLeod, "Treasurer reveals extent of long Covid among Australian workers", 26 August 2022, https://www.news.com.au/lifestyle/health/health-problems/treasurer-reveals-extent-of-long-covid-among-australian-workers/news-story/38fadb5efde0484e6960980b2cf6c282

[18] Katie Bach, New data shows long Covid is keeping as many as 4 million people out of work, Brookings Institution, 24 August 2022, https://www.brookings.edu/research/new-data-shows-long-covid-is-keeping-as-many-as-4-million-people-out-of-work/

commercial innovation could see production costs fall further or an increase in the applicability of products to specific Australian contexts.

The Australian government should support the establishment of local production of air filters and support wide-spread private use of filters. Air filters should be exempt from GST as an essential item. Government should target private purchases of 10 million air filter units across the country by 2024.

Major retailers should be engaged to deliver this program.

Ensure high-quality respirators freely available
Respirators remain the most basic form of self-protection against Covid and other respiratory diseases. Unfortunately, mask mandates have come to be relatively unpopular. Instead of mandating masks, government should act to minimise the effort involved in obtaining high quality respirators by ensuring they are easily and recognisably available at public transport hubs.

Improve face masks, with 'public adoption' as a design objective
The Australian government should seek to encourage industry to improve the design of high-quality respirators with 'public adoption' as a key design objective.

There are a number of barriers to widespread adoption high quality respirators other than availability. There is a level of confusion about best options and matters of comfort and appearance also act to reduce interest in compliance. Currently, most respirators are designed with the assumption that they will be used in hospital or industry contexts. They are designed purely for function and on the assumption that the decision to wear a respirator or not has already been made. However, there are a wide range of fashionable masks available in many countries, especially around Asia. These have the benefit of appealing to the public (especially kids), and improving the overall adoption rate, which is a critical variable from a public health perspective.

Masks should not be thought of as a temporary oddity of life during the Covid pandemic. Other respiratory diseases, bushfire smoke, seasonal pollen and other environmental health hazards mean that there will likely be cause for the public use of respirators for many years. Improving public acceptance of the use of respirators as a deliberate design feature should be a high priority.

Achievable with some investment: Infectious disease leave

20 days sick leave for infectious diseases
In September and October, National Cabinet ended the policy of compulsory paid isolation during infectious periods. By early November, Australia had begun another major wave of Covid, with multiple variants spreading uncontrolled through the community.

Isolation is the most ancient and scientifically sound method of infection control. Its effectiveness is well understood, based the Germ Theory of Disease and direct empirical observation of hundreds of millions of cases over thousands of years. The more people isolate while they are infectious, the fewer people will become infected. National Cabinet made a wrong decision in ending the protection afforded by compulsory isolation during the full infectious period for Covid. The mistake was compounded by not replacing the removed protection with a substitute protection.

We now propose substitute to act as an alternative to compulsory paid isolation.

Australia should legislate at the Commonwealth level to require all permanent employees be entitled to 20 days per year of paid infectious disease leave. This should be separate to any existing sick leave and paid for by the employer. Such a measure would have direct savings to employers: having one worker take leave is a far lower cost than having all workers become sick. It would also have a major impact on public health, national accounts, and Australia's productivity. This should be made the top priority legislative objective for the first sitting period of parliament in 2023.

Establish an infectious disease leave scheme for casual employees

Associated with the previous recommendation, we propose the establishment of a national infectious disease leave scheme for casual employees. The scheme would be funded by a dedicated and compulsory casual salary loading and would operate as a national insurance program to ensure that casual employees are able to afford to take leave while infectious. Any casual employee with a confirmed diagnosis of a disease that is infectious within the context of a workplace should automatically be entitled to up to 20 days capped wage insurance.

Infectiousness should be relevant within the context of a workplace – for instance, sexually transmitted diseases are infectious, but not in the context of a typical workplace. Airborne respiratory diseases such as Covid or flu, or other highly contagious diseases such as, chicken pox, monkey pox, measles etc are likely to be the most relevant diseases.

Such a program would have a significant impact on current and future epidemics, with major benefits for a range of government priorities including public health, workplace productivity, cost of living, and inclusion, while having no impact (or positive indirect impacts) on public finances.

Appendix A: Work Health and Safety Act 2011[19]

Objectives of the Act:

1. *The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by—*
    a. ***protecting workers and other persons against harm to their health**, safety and welfare through the **elimination or minimisation of risks arising from work** or from specified types of substances or plant, and*
    b. *providing for **fair and effective workplace representation, consultation, cooperation, and issue resolution** in relation to work health and safety, and*
    c. *encouraging unions and employer organisations to take a **constructive role in promoting improvements** in work health and safety practices, and assisting persons conducting businesses or undertakings and workers **to achieve a healthier and safer working environment**, and*
    d. ***promoting the provision of advice, information, education and training** in relation to work health and safety, and*
    e. ***securing compliance** with this Act **through effective and appropriate compliance and enforcement measures**, and*
    f. ***ensuring appropriate scrutiny and review** of actions taken by persons exercising powers and performing functions under this Act, and*
    g. *providing a framework **for continuous improvement** and progressively higher standards of work health and safety, and*
    h. *maintaining and strengthening the national harmonisation of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in this jurisdiction.*
2. *In furthering subsection (1) (a), regard must be had to the principle that workers and other persons should be given **the highest level of protection** against harm to their health, safety and welfare from hazards and risks arising from work or from specified types of substances or plant **as is reasonably practicable**.*

Part 2

Division 2—Primary duty of care
19 Primary duty of care

*(1) A person conducting a business or undertaking **must ensure, so far as is reasonably practicable, the health and safety of:***

*(a) **workers** engaged, or caused to be engaged by the person; and*

(b) workers whose activities in carrying out work are influenced or directed by the person;

***while the workers are at work** in the business or undertaking.*

*(2) A person conducting a business or undertaking **must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work** carried out as part of the conduct of the business or undertaking.*

*(3) Without limiting subsections (1) and (2), a person conducting a business or undertaking **must ensure, so far as is reasonably practicable:***

***(a) the provision and maintenance of a work environment without risks to health and safet**y; and*

(b) the provision and maintenance of safe plant and structures; and

*(c) the **provision and maintenance of safe systems of work**; and*

(d) the safe use, handling and storage of plant, structures and substances; and

*(e) the **provision of adequate facilities for the welfare at work of workers in carrying out work** for the business or undertaking, including ensuring access to those facilities; and*

[19] https://www.legislation.gov.au/Details/C2011A00137

*(f) the **provision of any information, training, instruction** or supervision that is necessary **to protect all persons from risks to their health** and safety arising from work carried out as part of the conduct of the business or undertaking; and*

*(g) **that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness** or injury of workers arising from the conduct of the business or undertaking.*

Appendix B: Disability Discrimination Act 1992[20]

The objects of this Act are:

1. *to eliminate, as far as possible, discrimination against persons on the ground of disability in the areas of:*
    i. *work, accommodation, education, access to premises, clubs and sport; and*
    ii. *the provision of goods, facilities, services and land; and*
    iii. *existing laws; and*
    iv. *the administration of Commonwealth laws and programs; and*
2. *to **ensure, as far as practicable, that persons with disabilities have the same rights** to equality before the law as the rest of the community; and*
3. *to **promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights** as the rest of the community.*

According to section 5.2 of the Act, direct disability discrimination occurs when:

1. *the discriminator does not make, or proposes not to make, reasonable adjustments for the person; and*
2. *the **failure to make the reasonable adjustments has**, or would have, **the effect that the aggrieved person is, because of the disability, treated less favourably** than a person without the disability would be treated in circumstances that are not materially different.*

According to section 6.1 of the Act, indirect disability discrimination occurs when:

(2)

a) *because of the disability, the aggrieved person would comply, or would be able to comply, with the requirement or condition only if the discriminator **made reasonable adjustments** for the person, **but the discriminator does not do so** or proposes not to do so; and*
b) *the failure to make reasonable adjustments has, or is likely to have, the effect of disadvantaging persons with the disability.*

Appendix C: Age Discrimination Act 2004[21]

The objects of this Act are:
a) to eliminate, as far as possible, discrimination against persons on the ground of age in the areas of work, education, access to premises, the provision of goods, services and facilities… the administration of Commonwealth laws and program…; and
b) to ensure, as far as practicable, that everyone has the same rights to equality before the law, regardless of age, as the rest of the community; and …
d) to promote recognition and acceptance within the community of the principle that people of all ages have the same fundamental rights; and
e) to respond to demographic change by:
removing barriers to older people participating in society, particularly in the workforce;

[20] https://www.legislation.gov.au/Details/C2022C00087
[21] https://www.legislation.gov.au/Details/C2014C00009

bearing in mind the international commitment to eliminate age discrimination reflected in the Political Declaration adopted in Madrid, Spain on 12 April 2002 by the Second World Assembly on Ageing.

Section 15 of the Act defines the concept of indirect discrimination on the grounds of age:

1. For the purposes of this Act, a person discriminates against another person on the ground of the age of the aggrieved person if:
a) the discriminator imposes, or proposes to impose, a condition, requirement or practice; and the condition, requirement or practice ***is not reasonable in the circumstances****; and*
b) the condition, requirement or practice has, or ***is likely to have, the effect of disadvantaging persons of the same age*** *as the aggrieved person.*

Appendix D: Sex Discrimination Act 1984[22]

The objects of this Act are:

a) *to give effect to certain provisions of the Convention on the Elimination of All Forms of Discrimination Against Women and to provisions of other relevant international instruments; and*
b) ***to eliminate, so far as is possible, discrimination against persons on the ground of sex****, sexual orientation, gender identity, intersex status, marital or relationship status, pregnancy or potential pregnancy or breastfeeding* ***in the areas of work, accommodation, education, the provision of goods, facilities and services****, the disposal of land****, the activities of clubs and the administration of Commonwealth laws and programs****; and*

   ba) ***to eliminate, so far as possible, discrimination on the ground of family responsibilities in the area of work****; and*
c) *to eliminate, so far as is possible, discrimination involving sexual harassment in the workplace, in educational institutions and in other areas of public activity; and*
d) *to* ***promote recognition and acceptance within the community of the principle of the equality of men and women****.*
e) ***to achieve, so far as practicable, equality of opportunity between men and women****.*

5 Sex discrimination

1. *For the purposes of this Act, a person (the discriminator) discriminates against another person (the aggrieved person) on the ground of the sex of the aggrieved person if the* ***discriminator imposes, or proposes to impose, a condition, requirement or practice that has, or is likely to have, the effect of disadvantaging persons of the same sex as the aggrieved person****.*

7B Indirect discrimination: reasonableness test

1. *A person does not discriminate against another person by imposing, or proposing to impose, a condition, requirement or practice that has, or is likely to have, the disadvantaging effect mentioned in subsection 5(2), 5A(2), 5B(2), 5C(2), 6(2), 7(2) or 7AA(2)* ***if the condition, requirement or practice is reasonable in the circumstances****.*

[22] https://www.legislation.gov.au/Details/C2021C00420

2. *The matters to be taken into account in deciding whether a condition, requirement or practice is reasonable in the circumstances include:*
   (1) *the* ***nature and extent of the disadvantage resulting from the imposition, or proposed imposition, of the condition, requirement or practice****; and*
   (2) ***the feasibility of overcoming or mitigating the disadvantage****; and*
   (3) ***whether the disadvantage is proportionate to the result sought by the person who imposes, or proposes to impose, the condition, requirement or practice****.*