Received: 27 June 2020 | Revised: 17 August 2021 | Accepted: 25 August 2021

DOI: 10.1002/hpm.3326

PERSPECTIVE

WILEY

The COVID-19 pandemic in Australia: Public health responses, opportunities and challenges

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Abstract

In responding to the COVID-19 pandemic, each country is presented with both opportunities and challenges, some unique and some shared with the global community. It is important to not only recognize, but to embrace them as drivers of the public to the current pandemic success. In this commentary, we discuss the opportunities and challenges that may affect ongoing public health programming in Australia within the current context of epidemiology. COVID-19 within Australia has to date been effectively suppressed through the implementation of nationally coordinated, in which the state delivered public policy, guidelines and practice, and successful establishment of a comprehensive testing, contact tracing, patient isolation and contact quarantine regime combined with national and state social distancing, hygiene etiquette and movement restrictions. However, despite its success to date great challenges lay ahead for future public health policy with the threat of a second wave, or more likely, multiple smaller outbreaks across various population centres. Therefore, policies that aim to balance the twin socioeconomic and health impacts are crucial. The experience of Australia in managing its COVID-19 response can provide a case study for other countries to reshape or adapt their

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policies and actions in the context of emerging global health crises.

KEYWORDS
Australia, challenges, commentary, COVID-19, opportunities, pandemic, responses

1 | THE COVID-19 PANDEMIC IN AUSTRALIA

The first case of coronavirus disease 2019 (COVID-19) confirmed by the Victoria Health Authorities in 25 January 2020 was linked to an international flight from Wuhan (Guandong) to Melbourne.[1] From 25 January 2020 to 21 February 2021, there have been 28,905 confirmed cases of COVID-19 with 25,668 recoveries and 909 deaths.[2] Australia has experienced two waves of the disease. The first wave began early in 2020 then ended up in April. The second wave emerged from 11 June 2020 was more widespread and more severe with nearly 75% of confirmed cases and 89% death toll due to COVID-19.[2] From 20 October 2020, daily infection rates have remained low with under 30 cases per day.[2] Currently, there are 1872 actives remaining. Daily infection rates have remained low for the past several weeks,[2] although there is a risk of second wave or significant outbreak in the state of Victoria as reported recently.

Figure 1 presents the distribution of daily new cases from the beginning of the Australian pandemic experience (January 25) until 21 February 2021. The COVID-19 pandemic in Australia may be best described in three stages: stable, increasing and peaking, declining and re-stabilization. The first stage, from January 25 to February 29, was considered stable with multiple consecutive days with no new cases reported. The second stage represented a slow increase, jumping sharply from March 18 to the end of March with a peak of 460 cases, followed by a rapid decline in the following days. In the third stage, there was a more gradual decline from 107 cases to 45 cases between April 6 and April 19, reaching a plateau around April 20 and remaining stable until present. In comparison with other high-income countries such as the United States, Italy and United Kingdom, COVID-19 incidence in Australia was much lower with a case-fatality rate of about 1% and little or no community transmission.[3]

2 | AUSTRALIA'S RESPONSES TO COVID-19 PANDEMIC

Despite some common grounds, there are significant variations across countries in the implementation timeline, measures and level of responses, which we believe have contributed to varying degrees of success. In Australia, the government set multiple goals for coping with the pandemic at an early stage, to minimize infections and deaths, ensure the availability and accessibility of healthcare systems for those in need, and provide clear guidelines for the general population to adopt protective behaviours.[4] An Australian Health Protection Principal Committee (AHPPC) including all state and territory chief medical officers[5] had been designated to implement responses. Under the coordination of AHPPC, state and territory governments have worked closely with the Federal government to facilitate the sharing of data and advice, formulate evidence-based policy and practice and deliver consistent and integrated responses throughout the country. At the national level, the Australian government has mobilized a great body of health experts in dealing with this public health crisis.[4]

Government responses included not only establishing such a coordinated system of Federal and state/territory consultation and oversight, but also in developing guidelines and action plans that could be flexibly applied according to local epidemiology, such as the Australian Health Sector Emergency Response.[6] This management and operational plan also included government responses to the issues of people with disabilities. These guidelines and action plans were important to guide both organizations and individuals in responding to COVID-19.[7]

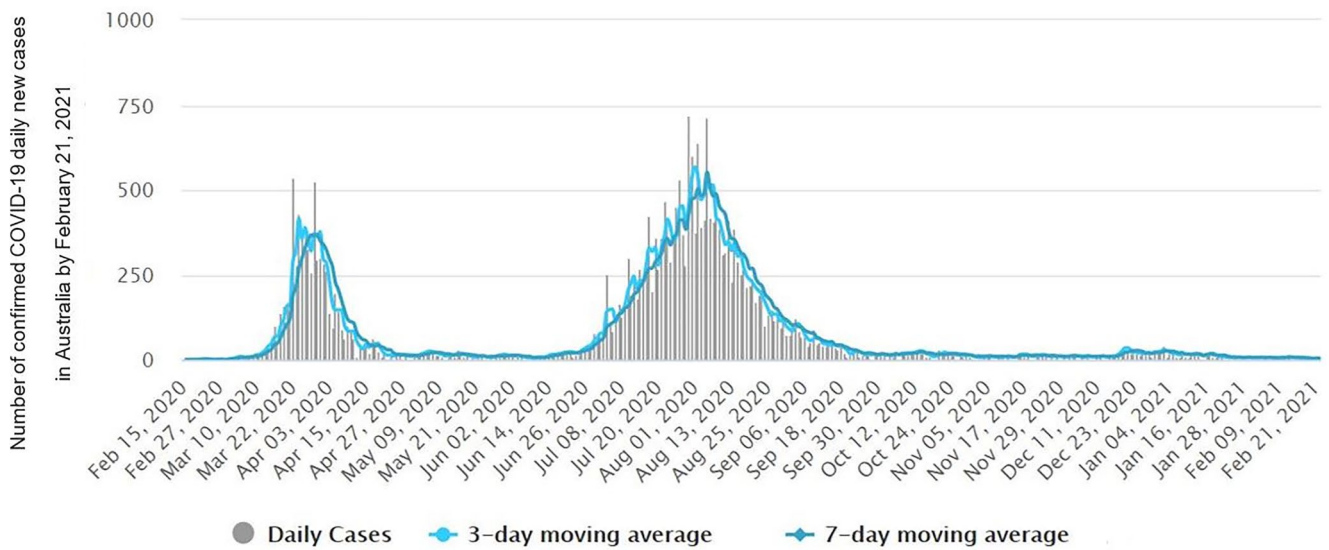

FIGURE 1 Number of confirmed COVID-19 daily new cases in Australia by 21 February 2021[2] [Colour figure can be viewed at wileyonlinelibrary.com]

Travel restrictions and border control have been the focus of these responses. A travel ban from China was implemented on 1 February 2020, and subsequently included other countries such as Iran (February 29), South Korea (March 5) and Italy (March 10).[3] Government travel advice and border restrictions were regularly reviewed and adapted to the evolving situation with all overseas arrivals required to self-quarantine for 14 days announced on March 13, culminating in a complete border closure to all non-citizen/non-resident international arrivals and outgoing international travel by Australians on March 20. This policy was guided by the model developed by Valentina et al., indicating that travel restrictions would reduce approximately 85% of the total COVID-19 cases and deaths.[3] All returning Australian travellers were required for a mandatory 14 days quarantine, which was further tightened on March 29.[4] Given the overwhelming proportion of infections that have been overseas in origin and detected in returning travellers, the rapid and strong quarantine strategy imposed at the border has been considered the most significant contributor to the effective control of the virus spread to date.

Such responses have been carried out at different levels of government. At the national level, economic support packages have been released to promote business investment and secure jobs. Financial support packages for the delivery and upgrading of healthcare services, including health packages, the establishment of a network of COVID-19 testing centres within general practice, Medicare-subsidized telehealth service, and financial support for expanded mental health services, were also implemented. Furthermore, the Federal government has sought to ensure adequate medical supplies for outbreak prevention and up-to-date information on COVID-19 to the public.[4] At the state and territory levels, these responses include testing of all suspected viral infections with progressively widening criteria for test eligibility based on changing epidemiology, daily monitoring of the majority of COVID-19 cases within a 'virtual ward' in the home, thorough contact tracing and regulated quarantine (in the home) of close contacts of the confirmed cases. Travel restrictions between a number of states have been carried out, again driven by the unique epidemiology situation within each state and the needs of particular vulnerable populations such as remote indigenous communities. State and territory states were responsible for establishing additional testing clinics—'fever' clinics to offer testing to persons experiencing COVID-19 like symptoms to ensure early detection, isolation, management and further contact tracing.[4]

3 | OPPORTUNITIES

Responding to the COVID-19 pandemic has created both opportunities and challenges. The level of commitment, coordination across levels of government and public sectors and early action, particularly in regulating border and quarantine control has contributed to the current level of success for Australia. Given the current context of, and recent responses to, the pandemic in Australia, there are several important opportunities. Firstly, similar to other countries such as New Zealand[8] and Vietnam,[9] Australia developed an early action plan and a rapid response strategy. Built upon its robust and well-funded healthcare system, the country had already prepared a comprehensive strategy to respond to various outbreaks, including COVID-19.[10] Although COVID-19 is an emerging disease, strategies responding to it had been rapidly developed via adaptation of pre-existing plans and previous simulation exercises for pandemic influenza.[11] The Australian Government has issued an Emergency Response Plan with very specific objectives before the World Health Organization announced it as a public health emergency of international concern. One of the most critical objectives was to engage and empower the public with large scale community participation,[11] similar to what occurred in several other countries.[9]

Second, there has been a strong political and government commitment in the implementation of action plans and strategies advised by public health,[11] as evidenced by Australia's multi-sectoral coordination with the health sector, under the direction of AHPPC (Figure 2).[11] At daily AHPPC meetings, the risk of COVID-19 spread and the impact of current responses was assessed to guide crucial decisions on public health actions and to provide updated information to the public promptly. There is a daily and weekly epidemiology report system providing the most up-to-date and

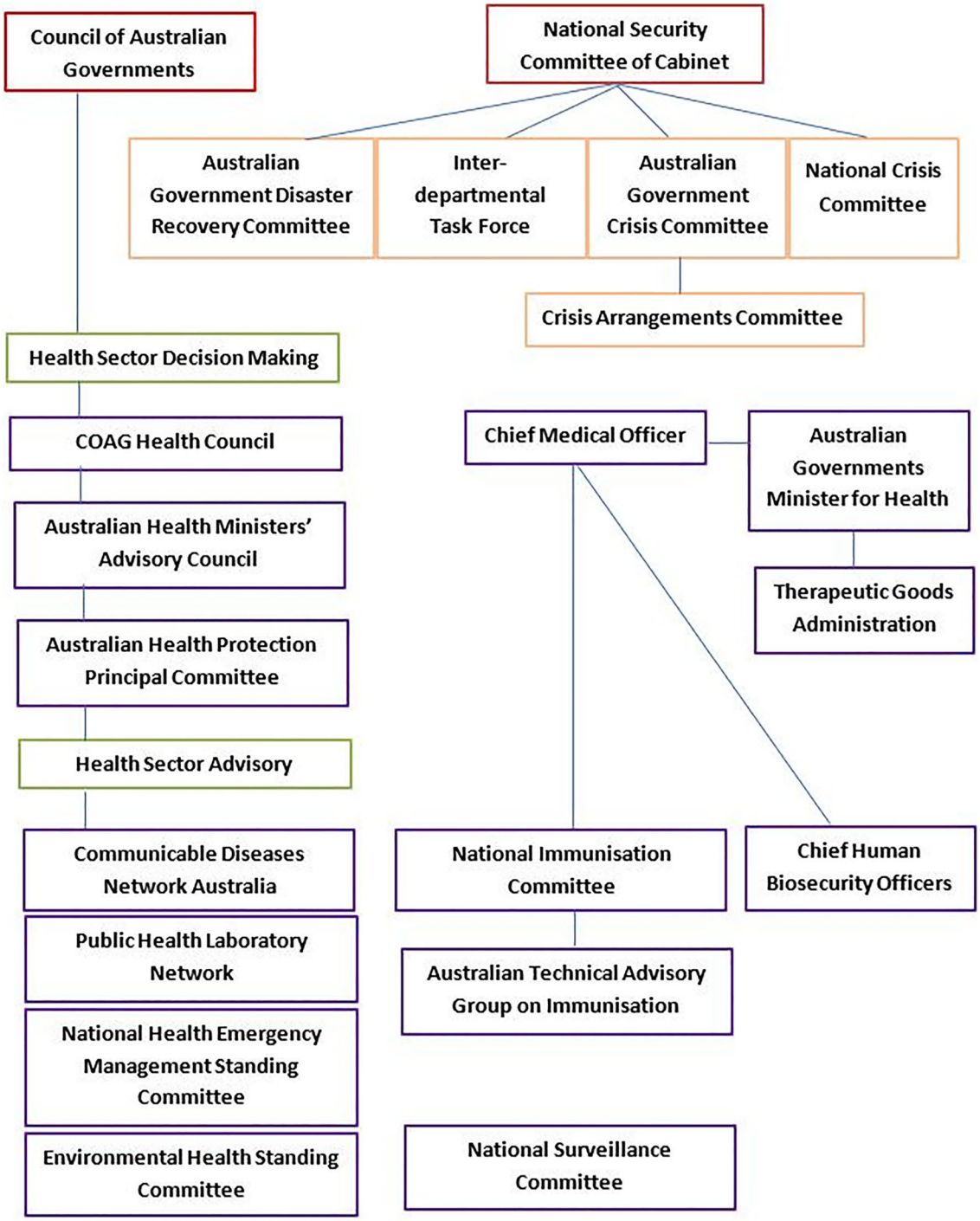

FIGURE 2 The structure of government and key stakeholders involved in decision making for a novel coronavirus outbreak[11] [Colour figure can be viewed at wileyonlinelibrary.com]

comprehensive information on the COVID-19 epidemic to the AHPPC, so evaluation can be made of the impact of policies and guidance as to necessary adjustments for future plans.

Importantly, the Australian health sector's emergency response plan for COVID-19 has also provided a useful framework for collecting essential information to support decision making for different public health measures for each state and territory. In addition, the country has utilized the Oxford COVID-19 Government Response Tracker tool developed by the University of Oxford[12] as another framework for comparison and sharing experiences with other countries' response plans.

At the national level, the government has established a three-step framework to gradually remove restrictions and ensure Australia is COVID-19 safe. The requirement for each relaxation is that for all activities, social distancing must be maintained as regulated through the 4 square metre rule.

To reduce the risk of spreading, facilities for prevention, care and treatment have been expanded. Virtual care, telehealth services, education and training of healthcare workers, 24-h health advice, community-based clinics, and protection for remote and vulnerable communities in response to COVID-19 have been utilized and enhanced.[13] Multiple telehealth initiatives have been launched and funded by the government through the Australia's Medicare Benefits Schedule. A National Call Center was also established to provide free medical information for patients and advice on COVID-19 laboratory test. Respiratory or 'Fever' clinics have been set up nationwide to guide testing and referral of those who test positive promptly into home-based isolation and virtual care where appropriate, or directly to hospital if clinically required. Distance learning for key health workers contributes to the improved knowledge and practice in treatment for COVID-19.[14] Efforts have been made to keep Australians informed on the evolving health epidemiology situation, through regular government briefings, media campaigns, and extensive media coverage and to encourage maximum engagement with and by individuals and communities.[14]

4 | CHALLENGES

Despite its rapid response and determination, Australia does face considerable challenges in maintaining this success. As various social distancing and public health measures[15] are simultaneously implemented, it is difficult to evaluate the individual impact of each strategy critical for prioritizing and resourcing strategies into the future. Given the urgency and seriousness of this pandemic, government authorities were compelled to make rapid decisions consistent with the best available health advice at the time.[16] Similarly, the decision to ease restrictions must be made with the best health advice but compounded by social and economic pressures. To sustain preventive efforts over the long term, a balance between public health, social and economic priorities must be sought. The challenge will be to ensure an optimal level of resourcing is invested in the country's testing, contact tracing and quarantine system.

Despite some similarities with other respiratory infections such as influenza and SARS, COVID-19 is a new communicable disease with no pre-existing community immunity. COVID-19 also differs from SARS with respect to the transmission period. SARS-CoV-2 can be transmitted from human to human in the pre-clinical phase of the disease when cases are pre-symptomatic or even asymptomatic in contrast to the SARS coronavirus, which is only transmitted during the symptomatic phase. Thus, SARS-CoV-2 is able to spread rapidly and widely, with the potential for extensive and undetected community transmission, punctuated by identified outbreaks of symptomatic COVID-19 disease. Consequently, a lack of high-quality surveillance, through widespread testing and rapid contact tracing, and a lack of social distancing and hygiene etiquette will facilitate further transmission and result in a significant escalation of infection. The sudden change in infection rates for Singapore provides an example of how fluid the situation remains, where 'the price of peace is eternal vigilance'. Singapore, for weeks considered the model of success, has since experienced a dramatic spike in the number of infections—a 60% jump in new daily infections—and has announced a further tightening of restrictions.[17] Similar patterns can be seen in South Korea. Pakistan was another example showing the impact of policy approaches from the country against the pandemic.[18–20] Periods of uncertainty facilitated by rapidly

changing circumstances and data can fuel public confusion and inconsistent messaging by various public health and government authorities seeking to manage an escalating situation.

Supplies of medical resources such as PPE (personal protection equipment) and testing equipment, vulnerable to disruptions in international supply chains, need to be prioritized for local manufacture or sourced from multiple suppliers to ensure a level of future redundancy.[21]

Geographically situated as a large island without a direct border with other countries, Australia was ideally advantaged to effectively control the spread of the pandemic by responding early and decisively. It shares this advantage with other current success stories such as New Zealand, Taiwan and a number of Pacific nations.[22] However, border closures and restricting international travel have posed considerable economic threat to Australia as a country highly dependent upon international trade of resources, services and tourism.[17] Aside from the economic losses to tourism and the international education sector, the reduction in immigration to the country carries significant risk to the internal economy, particularly in the area of construction.

Although a population-wide health and economic strategy for COVID-19 has been implemented, its impact may not be equitable across the country, particularly in regional and rural areas. Geographic and socioeconomic differences across the population may impede the implementation or reduce the impact of such strategies, especially among more disadvantaged, marginalised and vulnerable communities.[23] Under the current Australian Government policy, the emergency economic support package is available only to Australians. Foreigners, including international students and workers, are more likely to lose their jobs during the pandemic, to struggle without economic support, and to potentially find it more difficult to abide by social distancing regulations, particularly in crowded accommodation.[24] Their particular vulnerability will need to be considered in future responses.[25] Given its higher proportion of older people and those with multiple comorbidities, particularly indigenous Australians, Australia will face great challenges if future outbreaks cannot be contained.[26]

Finally, as a democratic nation where individual autonomy is central, Australia shares with other liberal democracies, the ethical and legal dilemma of imposing severe restrictions of movement and free assembly. Effective responses to the pandemic require direct, though temporary, challenges to particular rights considered fundamental to democracy.[27] Recent protest rallies in support of the '*Black Lives Matter*' movement and challenging the injustice of indigenous incarceration have brought this ethical conundrum of competing rights and priorities into sharp focus.

5 | CONCLUSIONS

Success depends not only on recognizing, but on knowing how to embrace opportunities. Currently, the COVID-19 pandemic in Australia is under control. Recognizing that this unique moment in history, and the level of threat it presents at all levels of society, Australia endeavours to remain alert and pro-active in its response, reflected through broad policy initiatives and practices. However, given the unpredictability of this infection and the significant implications of any missteps, the country faces numerous challenges in implementing and sustaining its public health response into the future. Given the integral success played by border control, the pressure to reopen an economy of an island nation, so dependent on international movement, will pose serious dilemmas for governments and the health and economic advisors. To date, the country has managed to choreograph a delicate dance between public health and the economy, with the first one leading. Keeping both partners in synch will become more challenging in the future. Nonetheless, the characteristics of Australia's COVID-19 response may provide some real-time experiences for other countries to reshape their policies and action plans in the era of emerging global health crises.

ACKNOWLEDGEMENTS

We appreciate all colleagues who gave some sort of support, but are not authored in this paper.

CONFLICT OF INTEREST

We declare no competing interest in our commentary.

ETHICAL APPROVAL

As this study was conducted in the form of the review based on the published articles, no ethical approval from an institutional review board is required.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Van Nguyen H, Lan Nguyen H, Thi Minh Dao A, et al. The COVID-19 pandemic in Australia: public health responses, opportunities and challenges. *Int J Health Plann Manage*. 2022;37(1):5-13. https://doi.org/10.1002/hpm.3326